UNIT -1:
Lesson 1

MICROSOFT OFFICE AND MS WORD BASICS

1.0 OBJECTIVE

The main objective of this lesson is to explain what MS Office is and what comprises MS office. It also explains some basics about how to work with MS WORD. After completing this lesson you will be able to learn

- Basics of Microsoft Word and
- You can create documents using MS Word.

STRUCTURE

1. **Introduction**

    1.1   **Word**

    1.2   **Excel**

    1.3   **PowerPoint**

    1.4   **Outlook/Entourage**

    1.5   **Microsoft Access**

    1.6   **Common features of various versions of MS Office**

    1.7   **File Formats, Meta Data and Extensibility**

2. **MS Word: Getting Familiar with MS Word 2007 for Windows**

    2.1   **The Microsoft Office Button**

    2.2   **The Quick Access Toolbar**

    2.3   **The Title Bar**

    2.4   **The Ribbon**

    2.5   **The Ruler**

    2.6   **The Text Area**

    2.7   **The Vertical and Horizontal Scroll Bars**

    2.8   **The Status Bar**

3. **Understanding Document Views**

4. **Create Sample Data and Select Text**

5. Execute Commands with Keyboard Shortcuts

1. INTRODUCTION

Microsoft Office is a proprietary commercial office suite introduced by Microsoft in the year 1989. It is available for the Windows and Macintosh platforms. The first version of Office contained Microsoft Word, Microsoft Excel, and Microsoft PowerPoint. Microsoft Office is reported to be used by over a billion people worldwide. The current version in the market is Office 2013 for Windows, released on October 11, 2012. Brief description of the components of MS Office Suite is given below.

1.1 Word

Microsoft Word is a word processor and was previously considered the main program in Office. The first version of Word, released in the autumn of 1983, was for the MS-DOS operating system. It's proprietary .DOC format is considered a *de facto* standard, although Word 2007 can also use a new format called .DOCX. Word for Macintosh was released in 1985. Word for Macintosh was the first graphical version of Microsoft Word. Word is used for Scripts and other writing pieces. Microsoft Word is a word processing software package, which can be used to type letters, reports, and other documents.

1.2 Excel

Microsoft Excel is a spreadsheet program. It is available for the Windows and OS X platforms. Microsoft released the first version of Excel for the Macintosh OS in 1985, and the first Windows version in November 1987. It is used to organize data into rows and columns. It is also used to perform mathematical calculations.

1.3 PowerPoint

Microsoft PowerPoint is a presentation program for Windows and OS X. It is used to create slide shows, composed of text, graphics, and other objects, which can be displayed on-screen and shown by the presenter or printed out on transparencies or slides.

1.4 Outlook/Entourage

Microsoft Outlook is a personal information manager and an e-mail communication software. It includes an e-mail client, calendar, and task manager and address book. On the Mac OS, Microsoft offered several versions of Outlook in the late 1990s, but only for use with Microsoft Exchange Server. In Office 2001, it introduced an alternative application with a slightly different feature set called Microsoft Entourage. It reintroduced Outlook in Office 2011, replacing Entourage.

1.5 Microsoft Access

It is also known as Microsoft Office Access. It is a database management system from Microsoft . It is a member of the Microsoft Office suite of applications, included in the Professional and higher editions or sold separately. The current version, Microsoft Access 2013 was released by Microsoft with Office 2013. Microsoft Access stores data in its own format based on the Access Jet Database Engine. It can also import or link directly to data stored in other applications and databases.

1.6 Common features of various versions of MS Office

Most versions of Microsoft Office (including Office 97 and later) use their own tool kit set and do not exactly match the native operating system. This is most apparent in Microsoft Office XP and 2003, where the standard menus were replaced with a colored flat looking, shadowed menu style. The user interface of a particular version of Microsoft Office often heavily influences a subsequent version of Microsoft Windows. For example, the toolbar, colored buttons and the gray-colored '3D' look of Office 4.3 were added to Windows 95, and the Ribbon, introduced in Office 2007, has been incorporated into several applications bundled with Windows 7.

1.7 File Formats, Meta Data and Extensibility

Microsoft Office prior to Office 2007 used proprietary file formats. This forced users who share data to adopt the same software platform. Starting with Office 2007, the default file format has been a version of Office Open XML. In 2008 Microsoft made the entire documentation for the binary Office formats freely available. The Office 2010 and Service Pack 2 for office 2007 support the Open Document Format (ODF) for opening and saving documents. Microsoft also provides the ability to remove metadata from Office documents as an integrated feature of Office 2007 called the Document Inspector. Another major feature of MS Office Suite is the ability for users to write add-ins (plug-ins) that extend the capabilities of an application by adding custom commands and specialized features.

2.   MS WORD: GETTING FAMILIAR WITH MS WORD 2007 FOR WINDOWS

Microsoft Word is a word processing software package. You can use it to type letters, reports, and other documents. This lesson teaches Microsoft Word 2007 basics. It will introduce you to the Word window. You use this window to interact with Word. To begin this lesson, switch on computer, click start button, go to programs, select Microsoft office and double click on Microsoft Word 2007. The Microsoft Word window appears and your screen looks similar to the one shown here.
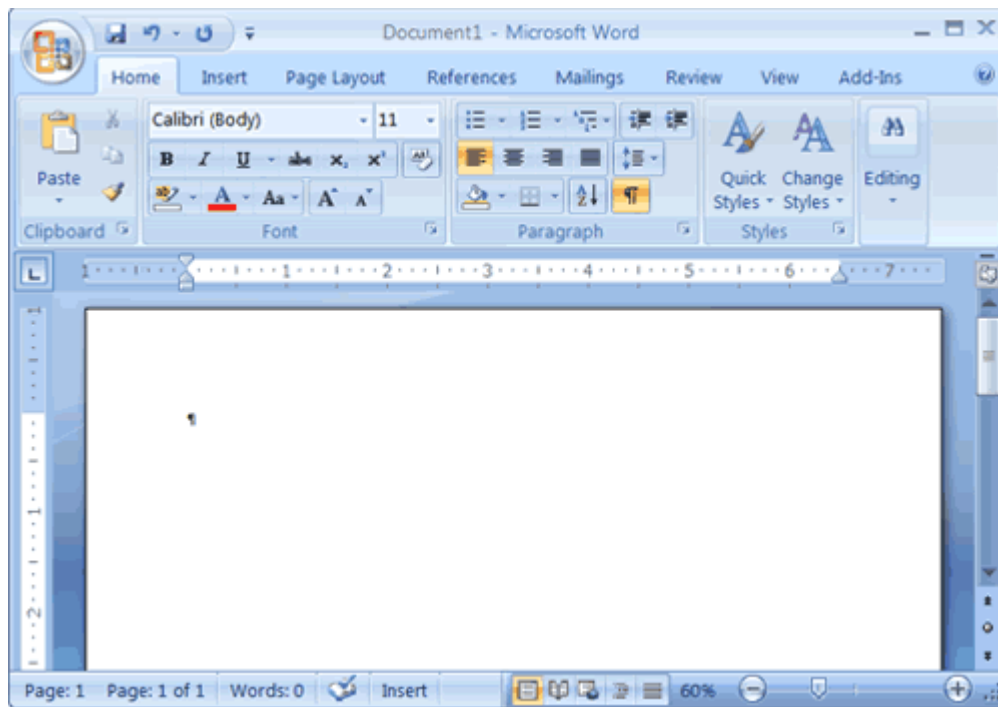
2.1 The Microsoft Office Button:

In the upper-left corner of the Word 2007 window is the Microsoft Office button. When you click the button, a menu appears. You can use the menu to create a new file, open an existing file, save a file, and perform many other tasks. The following figure shows you the Microsoft Office Button.

2.2 The Quick Access Toolbar:

Next to the Microsoft Office button is the Quick Access toolbar. The Quick Access toolbar provides you with access to commands you frequently use. By default Save, Undo, and Redo appear on the Quick Access toolbar. You can use Save to save your file, Undo to rollback an action you have taken, and Redo to reapply an action you have rolled back. You can add any other commands which you need to use frequently. Following figure shows the Quick access toolbar.

2.3 The Title Bar:

Next to the Quick Access toolbar is the Title bar. The Title bar displays the title of the document on which you are currently working. Word names the first new document you open as Document1. As you open additional new documents, Word names them sequentially. When you save your document, you assign the document a new name. Following figure shows the Title bar.

2.4 The Ribbon:

You use commands to tell Microsoft Word what to do. In Microsoft Word 2007, you use the Ribbon to issue commands. The Ribbon is located near the top of the screen, below the Quick Access toolbar. At the top of the Ribbon are several tabs; clicking a tab displays several related command groups. Within each group are related command buttons. You click buttons to issue commands or to access menus and dialog boxes. You may also find a dialog box launcher in the bottom-right corner of a group. Clicking the dialog box launcher gives you access to additional commands via a dialog box.
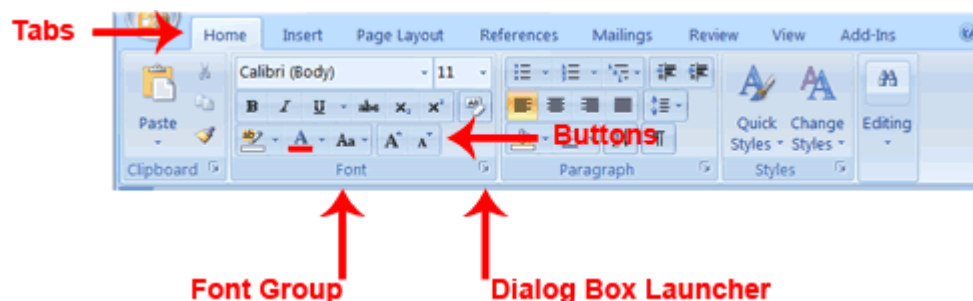
2.5 The Ruler:

The ruler as shown below is found below the Ribbon.

You can use the ruler to change the format of your document quickly. If your ruler is not visible, follow the steps listed here:
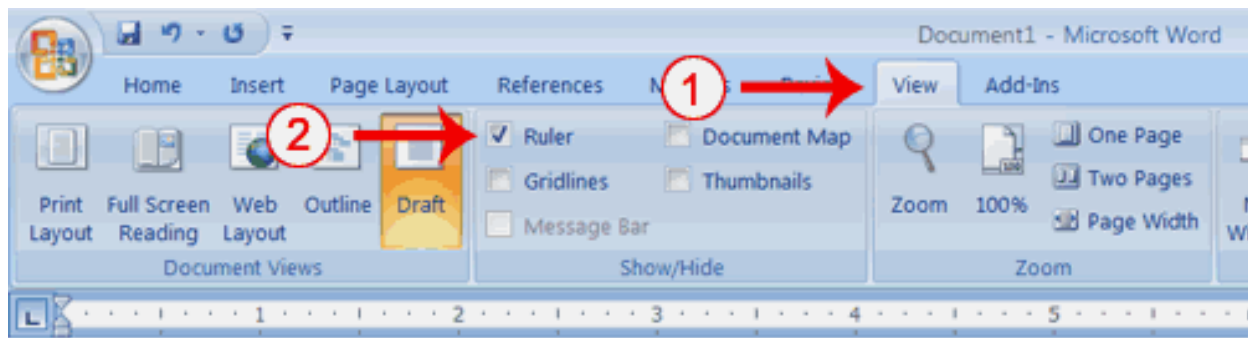
1. Click the View tab to choose it.
2. Click the check box next to Ruler in the Show/Hide group. The ruler appears below the Ribbon.

2.6 The Text Area:

Just below the ruler is a large area called the text area. You type your document in the text area. The blinking vertical line in the upper-left corner of the text area is the cursor. It marks the insertion point. As you type, your text displays at the cursor location. The horizontal line next to the cursor marks the end of the document.
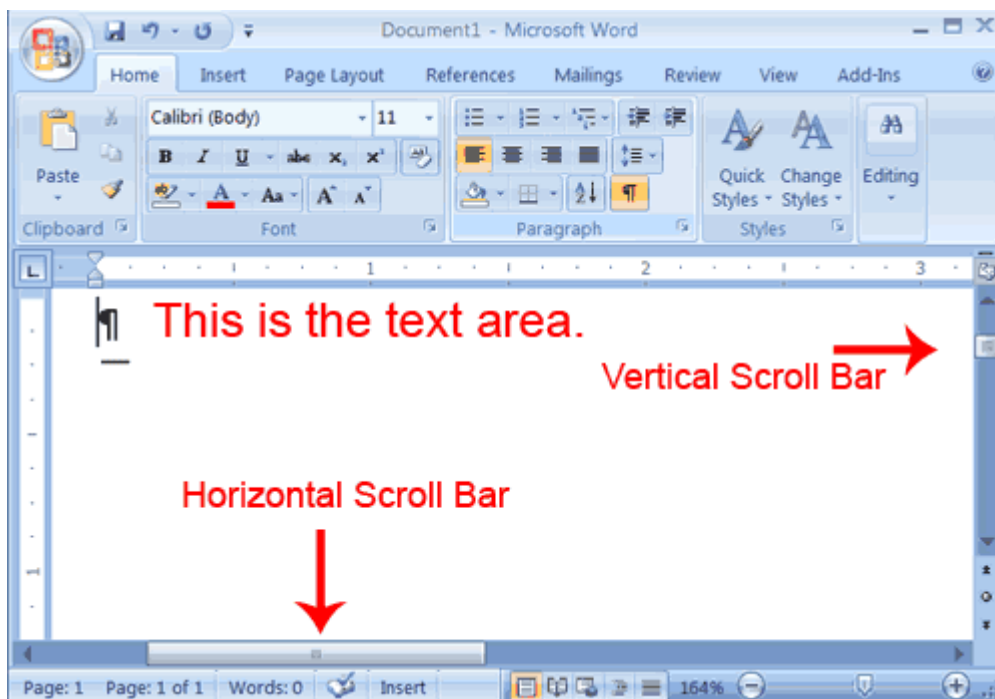

2.7 The Vertical and Horizontal Scroll Bars: The vertical and horizontal scroll bars enable you to move up, down, and across your window simply by dragging the icon located on the scroll bar. The vertical scroll bar is located along the right side of the screen. The horizontal scroll bar is located just above the status bar. To move up and down your document, click and drag the vertical scroll bar up and down. To move back and forth across your document, click

and drag the horizontal scroll bar back and forth. You won't see a horizontal scroll bar if the width of your document fits on your screen.

2.8 The Status Bar:

The Status bar appears at the very bottom of your window and provides such information as the current page and the number of words in your document. You can change what displays on the Status bar by right-clicking on the Status bar and selecting the options you want from the Customize Status Bar menu. You click a menu item to select it. You click it again to deselect it. A check mark next to an item means it is selected.
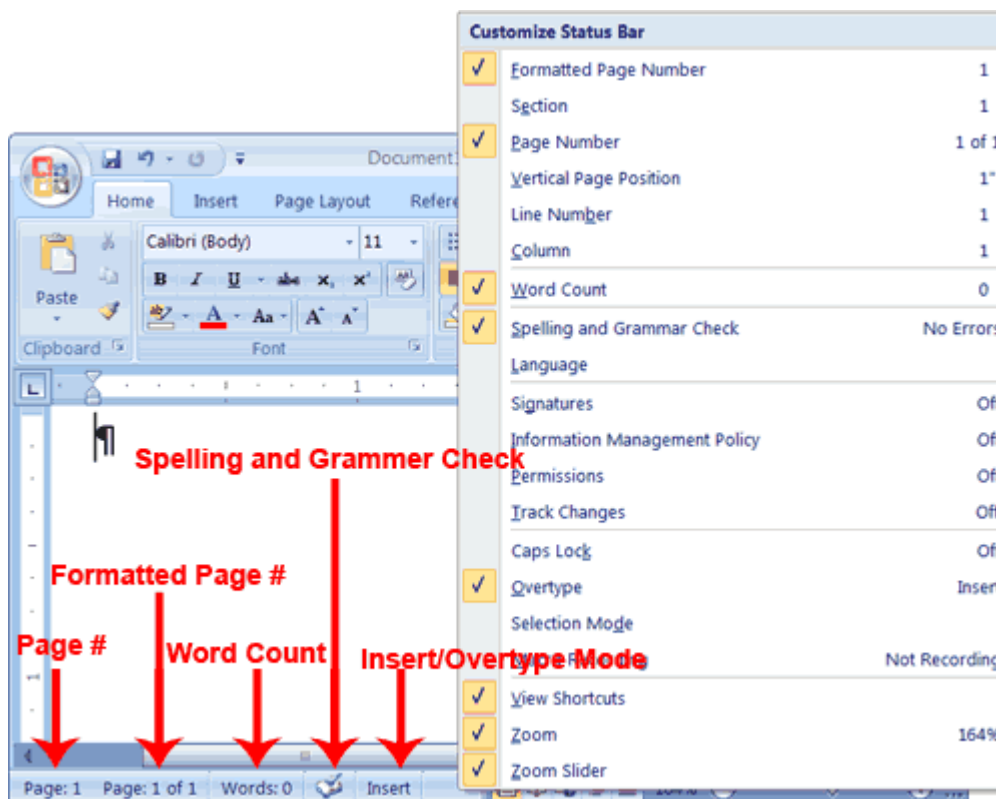
3. Understanding Document Views:

In Word 2007, you can display your document in one of five views: Draft, Web Layout, Print Layout, Full Screen Reading, or Outline Layout.

Draft View: Draft view is the most frequently used view. You use Draft view to quickly edit your document.

Web Layout: Web Layout view enables you to see your document as it would appear in a browser such as Internet Explorer.

Print Layout: The Print Layout view shows the document as it will look when it is printed.

Reading Layout: Reading Layout view formats your screen to make reading your document more comfortable.

Outline View*:* Outline view displays the document in outline form. You can display headings without the text. If you move a heading, the accompanying text moves with it.
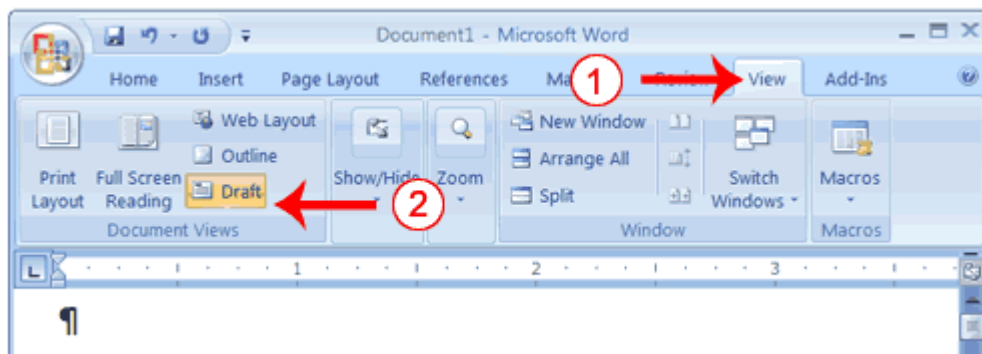
1. Click the View tab.
2. Click Draft in the Document Views group. When the Draft option is selected it appears in a contrasting color.

Click: During the lessons that follow, you will be asked to "click" items and to choose tabs.

When asked to click:

1. Point to the item.
2. Press your left mouse button once.

If you are asked to double-click an item:

1. Point to the item.
2. Quickly press your left mouse button twice.

If you are asked to right-click:

1. Point to the item.
2. Press your right mouse button.

If you are asked to choose a tab, click the tab.
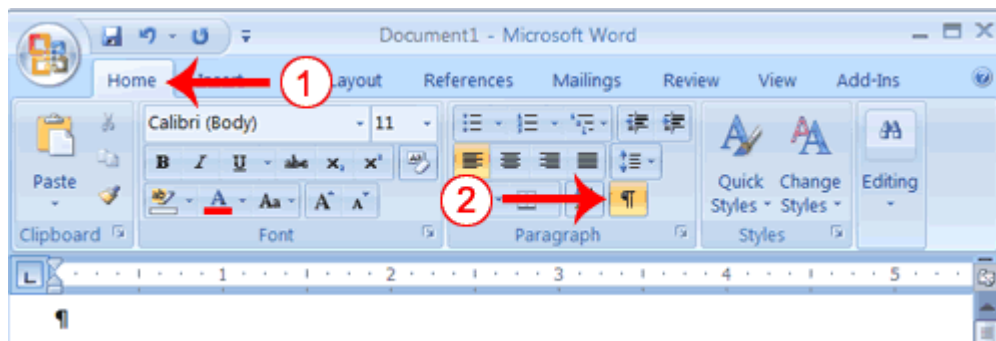
1. Choose the Home tab.
2. Click the Show/Hide button ¶ in the Paragraph group. The Show/Hide button appears in a contrasting color, when it is selected.

4. Create Sample Data and Select Text

If you type =rand() in your Word document and then press Enter, Word creates three paragraphs. You can use these paragraphs to practice what you learn. Throughout these lessons, you will be asked to select text. The following exercise teaches you how to create data and how to select data. You can select by using the arrow keys or by clicking and dragging. When using the arrow keys, use the up arrow to move up, the down arrow to move down, the left arrow to move left, and the right arrow to move right. When using the mouse, press the left mouse button and then drag in the direction you want to move.

EXERCISE 1

Create Sample Data

1. Type **=rand()**.
2. Press Enter. Three paragraphs appear in your document.

Select with the Shift and Arrow Keys

1. Place your cursor before the word "On" in the first paragraph.
2. Press and hold down the Shift key, which serves as an "anchor" showing where text you wish to select begins or ends.
3. Press the right arrow key until the first line of text is highlighted.
4. Press the down arrow key until the first paragraph is highlighted.
5. Click anywhere outside the highlighted area to remove the highlighting.

Select with the Mouse

1. Place your cursor before the word "You" in the second paragraph.
2. Press and hold down the left mouse button.
3. Drag the mouse until you have highlighted the second paragraph.
4. Click anywhere outside the highlighted area to remove the highlighting.

Place the Cursor

During the lessons, you will often be asked to place the cursor at a specific location (the insertion point) on the screen. You place the cursor by moving the cursor to the specified location and pressing the left mouse button or by using the arrow keys to move to the specified location.

EXERCISE 2

The Arrow Keys

1. Use the down arrow key to move down your document.
2. Use the right arrow key to move to the right.
3. Use the up arrow key to move up.
4. Use the left arrow key to move to the left.

Cursor

1. Move around you document by using you mouse and clicking in a variety of location.
2. Click in a location and type. Note what happens.

5. Execute Commands with Keyboard Shortcuts

There are many methods you can use to accomplish tasks when using Word. Generally, you choose an option by clicking the option on the Ribbon. However, you can also use shortcut keys. A key name followed by a plus and a letter means to hold down the key while pressing the letter. For example, Ctrl+b means you should hold down the Ctrl key while pressing "b." A shorthand notation of the above would read as follows:
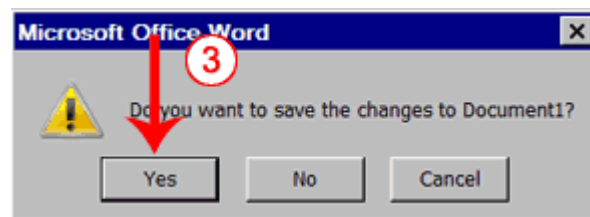
Press Ctrl+b

Start a New Paragraph

When you type in Microsoft Word, you do not need to press a key to move to a new line. To start a new paragraph, press the Enter key. You can save your work and exit word.
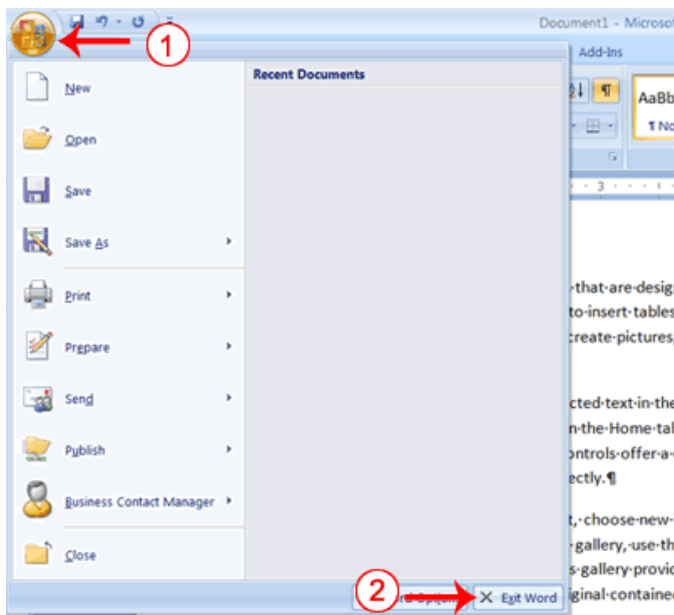
1. Click the Microsoft Office button. A menu appears.
2. Click Exit Word, which you can find in the bottom-right corner.

3. You are prompted: "Do you want to save changes to Document1?" To save your changes, click Yes. Otherwise, click No. If you click Yes, the Save As dialog box appears.
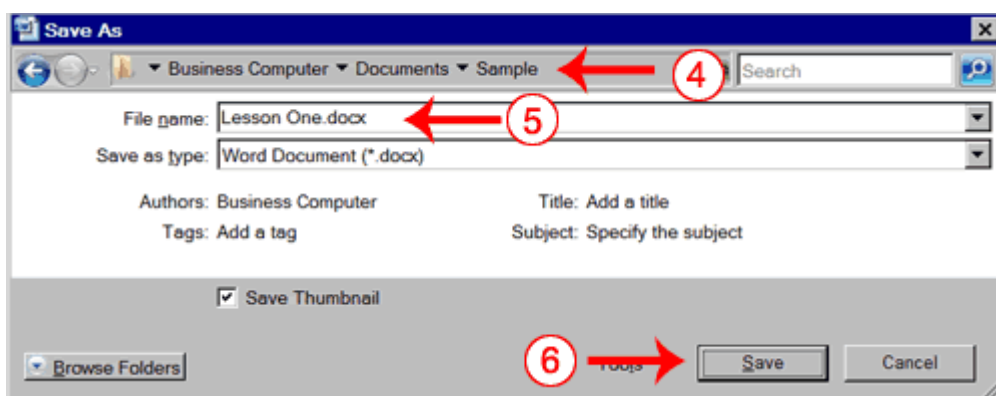
4. Move to the correct folder.
5. Name your file by typing **Lesson One.doc** in the File Name field.
6. Click Save. Word saves your file.

LESSON 2

MICROSOFT WORD 2007 BASIC FEATURES

2.0 Objective

Previous Lesson familiarized you with the Microsoft Word window. You are now ready to learn how to create a Word document. This lesson covers the functions of typing, using the Backspace key, Delete key, inserting text, bolding, underlining, and italicizing.

After studying this lesson you will be able to

- create a document by typing
- edit the text
- format the text

Structure

1. **Type, Backspace, and Delete**

2. **Insert and Overtype**

3. **Bold, Italicize, and Underline**

4. **Underline with the Dialog Box Launcher**

5. **Save a File and Close Word**

1. Type, Backspace, and Delete

In Microsoft Word, you create documents by typing them. For example, if you want to create a report, you open Microsoft Word and then begin typing. You do not have to do anything when your text reaches the end of a line and you want to move to a new line. Microsoft Word automatically moves your text to a new line. If you want to start a new paragraph, press Enter. Microsoft word creates a blank line to indicate the start of a new paragraph. To capitalize, hold down the Shift key while typing the letter you want to capitalize. If you make a mistake, you can delete what you typed and then type your correction.

You can use the Backspace key to delete. Each time you press the Backspace key, Microsoft Word deletes the character that precedes the <u>insertion point</u>. The insertion point is the point at which your mouse pointer is located. You can also delete text by using the Delete key. First, you select the text you want to delete; then you press the Delete key.

EXERCISE 3

Type and Backspace

1. Type the following sentence:
   We are the students of M.L.I.Sc. class.
2. Delete the word "class." Using either the arrow keys or the mouse, place the cursor between the period and the "s" in "class."
3. Press the Backspace key until the word "class" is deleted.
4. Type Course. The sentence should now read:
5. We are the students of M.L.I.Sc. Course.

Delete

Delete the word "the" from the sentence you just typed.

1. Select the word "the." You can place the cursor before the "t" in the word "the," press and hold down the Shift key, and then press the right arrow key until the word "the" is highlighted.
2. Press the Delete key. The sentence should now read:
   We are students of M.L.I.Sc. Course.

2. Insert and Overtype

While creating your document, you may find you need to place new text between existing text. Suppose, you type the sentence, "We are students of M.L.I.Sc. Course." After typing it, you decide you want to change the sentence to "We are *girl* students of M.L.I.Sc. Course." With Microsoft Word, inserting a word, phrase, or even several paragraphs is easy. Alternatively, you may want to replace old text with new text. For example, suppose you type the sentence, " We are *girl* students of M.L.I.Sc. Course." After typing it, you decide you want to change the sentence to "We are *male* students of M.L.I.Sc. Course." With Microsoft Word, overtyping the word '*girl*' with the word '*male*' is also easy. Before you attempt to insert or overtype, you should check the mode you are in "Insert or Overtype". You right click the Status bar and then use the Customize Status Bar menu to place the Insert/Overtype button on the Status bar. You can then use the Insert/Overtype button to switch between Insert and Overtype mode. When you are in Insert mode, you can insert text. When you are in Overtype mode, you can overtype text. By default, Microsoft Word is in the Insert mode.

EXERCISE 4

Placing the Insert/Overtype button on the Status bar

1. Right-click the Status bar. The Customize Status Bar menu appears.
2. Click Overtype. The Insert/Overtype button appears on the Status bar.
3. If the word Insert appears on the Status bar, you are in Insert mode.

4. If the word Overtype appears on the Status bar, click the word Overtype and it will change to Insert, thereby changing Word to Insert mode.

Insert

Make sure you are in Insert mode before proceeding. You are going to insert the word "girl" between the words "are" and "students."

1. Place the cursor after the space between the words "are" and "students."
2. Type the word girl.
3. Press the spacebar to add a space.
4. The sentence should now read:
   "We are girl students of M.L.I.Sc. Course."

Overtype

You can type over the current text (replace the current text with new text) in the Overtype mode. Do the following to change to the Overtype mode.

- Click "Insert" on the Status bar. The word Insert changes to Overtype.

Change the word "girl" to "male."

1. Place the cursor before the letter "g" in "girl."
2. Type the word male.
3. The sentence should now read:
   "We are male students of M.L.I.Sc. Course."

Note: You can overtype text without changing to Overtype mode by selecting the text you want to overtype and then typing on the highlighted area.

3. Bold, Italicize, and Underline

When creating a document, you may need to emphasize particular words or phrases by bolding, underlining, or italicizing. You can bold, underline, and italicize when using Word. When you need to perform a task in Microsoft Word, you can usually choose from several methods. The exercises that follow show you how to bold, underline, or italicize using four different methods: using the launcher, the Ribbon, the Mini-toolbar/context menu, and the keyboard.

EXERCISE 5

Type the following exactly as shown. Remember, pressing the Enter key starts a new paragraph. Press the Enter key at the end of each of the following lines to start a new paragraph.

Launcher: Bold Italicize Underline these words. All three Regular

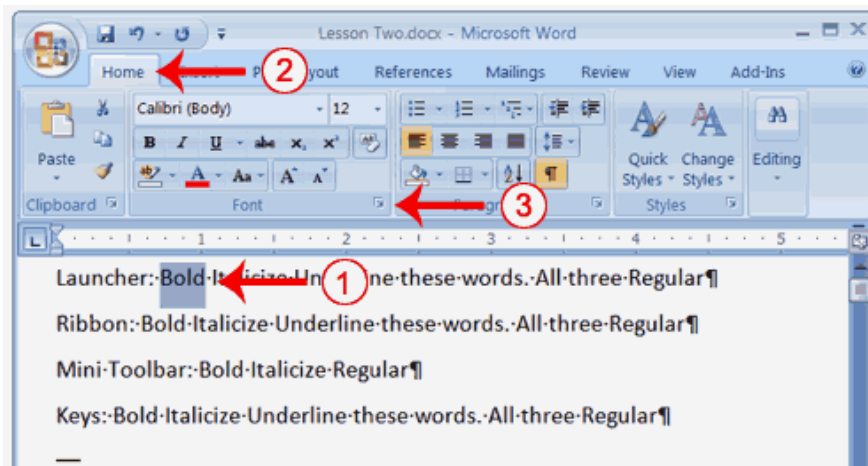**Ribbon: Bold Italicize Underline these words. All three Regular**

Mini Toolbar: Bold Italicize Regular

Keys: Bold Italicize Underline these words. All three Regular
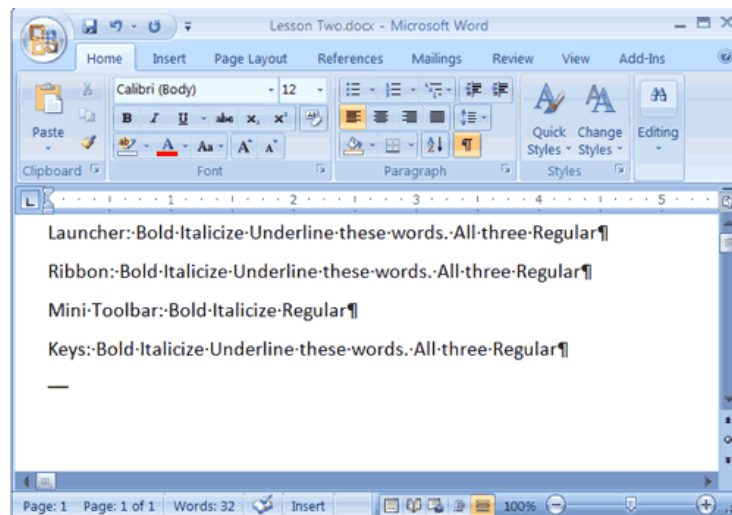

Your screen should look similar to the one shown here.

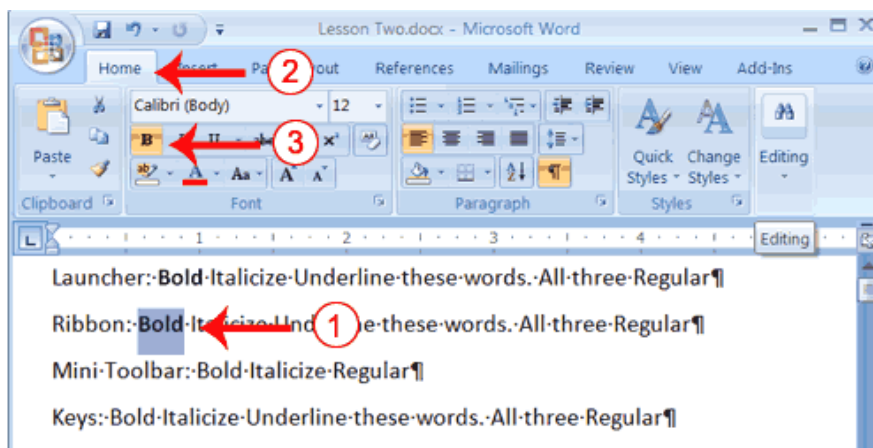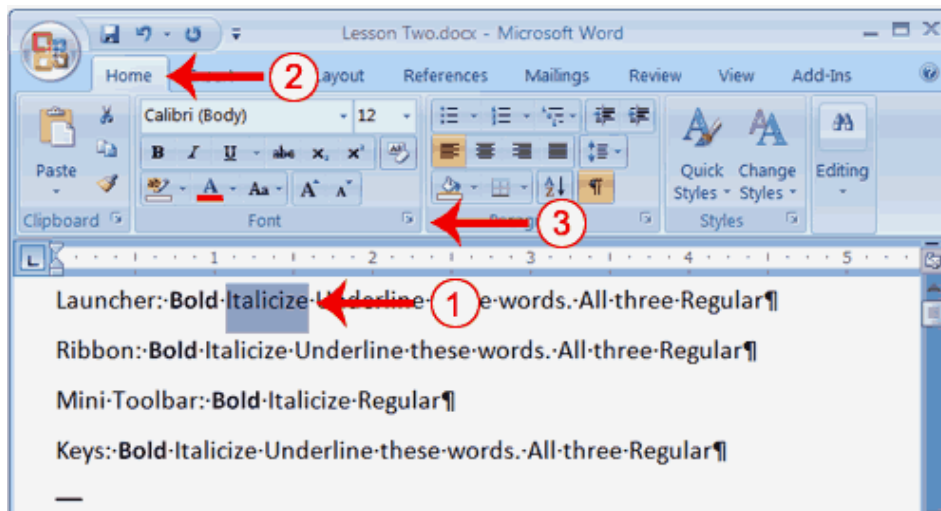**Bold with the Dialog Box Launcher**

1. On the line that begins with Launcher, select the word "Bold." You can place the cursor before the letter "B" in "Bold." Press the Shift key; then press the right arrow key until the entire word is highlighted.
2. Choose the Home tab.
3. Click the dialog box launcher in the Font group. The Font dialog box appears.
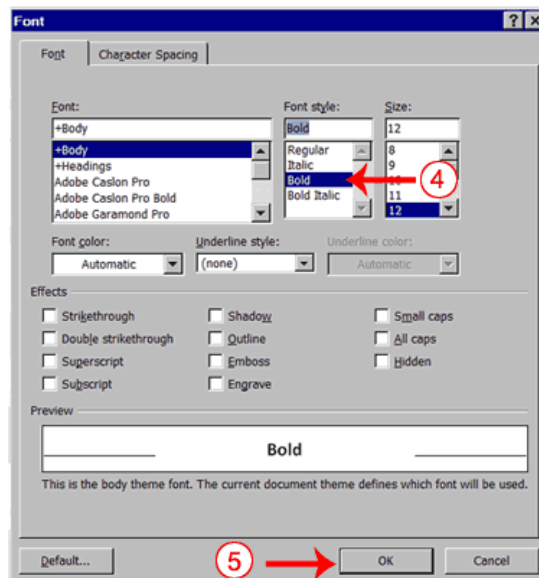
4. Click Bold in the Font Style box.
   Note: You can see the effect of your action in the Preview window. To remove the bold, click Regular.
5. Click OK to close the dialog box.
6. Click anywhere in the text area to remove the highlighting. You have bolded the word bold.

Alternate Method—Bold with the Ribbon

1. On the line that begins with "Ribbon," select the word "Bold." You can place the cursor before the letter "B" in "Bold." Press the Shift key; then press the right arrow key until the entire word is highlighted.
2. Choose the Home tab.
3. Click the Bold button **B** in the Font group. You have bolded the word bold.
   Note: To remove the bold, you can select the text and then click the Bold button **B** again.

4. Click anywhere in the text area to remove the highlighting.

Alternate Method - Bold with the Mini Toolbar
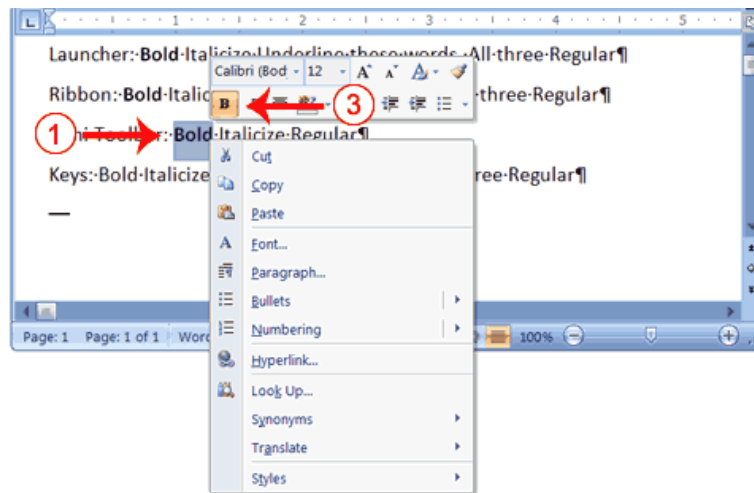
1. On the line that begins with "Mini Toolbar," select the word "Bold." You can place the cursor before the letter "B" in "Bold."Press the Shift key; then press the right arrow key until the entire word is highlighted.
2. Right-click. The Mini toolbar appears.
3. Click the Bold button ⬛. You have bolded the word bold.

Alternate Method—Bold with Keys

1. On the line that begins with "Keys," select the word "Bold." You can place the cursor before the letter "B" in "Bold." Press the Shift key; then press the right arrow key until the entire word is highlighted.
2. Press Ctrl+b (hold down the Ctrl key while pressing b).
   Note: To remove the Bold, press Ctrl+b again. You can also remove formatting by pressing Ctrl+spacebar.
3. Click anywhere in the text area to remove the highlighting.

**Italicize with the Dialog Box Launcher**

1. On the line that begins with Launcher, select the word "Italicize." You can place the cursor before the letter "I" in "Italicize." Press the Shift key; then press the right arrow key until the entire word is highlighted.
2. Choose the Home tab.
3. Click the dialog box launcher in the Font group. The Font dialog box appears.
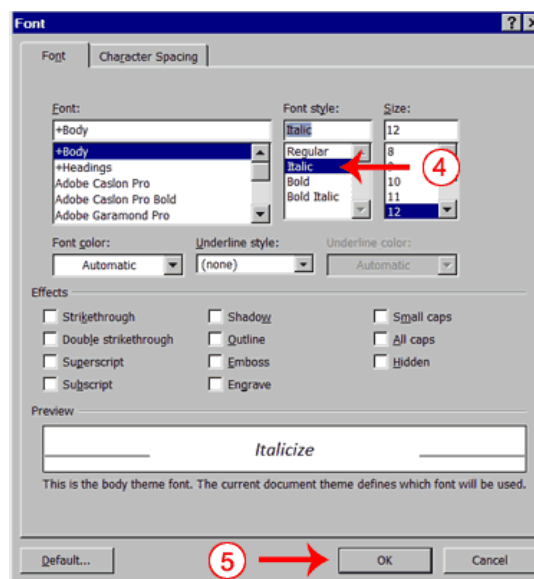
4. Click Italic in the Font Style box.
   Note: You can see the effect of your selection in the Preview window. To remove the italics, click Regular in the Font Style box.
5. Click OK to close the Font dialog box.
6. Click anywhere in the text area to remove the highlighting. You have italicized the word Italicize.

Alternate Method—Italicize with the Ribbon
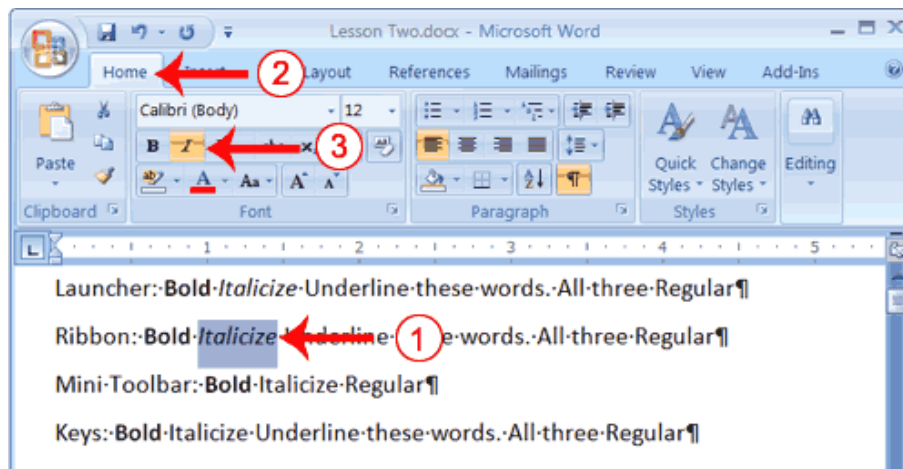
1. On the line that begins with "Ribbon," select the word "Italicize." You can place the cursor before the letter "I" in "Italicize." Press the Shift key; then press the right arrow key until the entire word is highlighted.
2. Choose the Home tab.
3. Click the Italic button I on the Ribbon. You have italicized the word Italicize.

   Note: To remove the italics, select the text and click the Italicize button I again.
4. Click anywhere in the text area to remove the highlighting.

Alternate Method—Italicize with the Mini Toolbar

1. On the line that begins with "Mini Toolbar," select the word "Italicize." You can place the cursor before the letter "I" in "Italicize." Press the Shift key; then press the right arrow key until the entire word is highlighted.
2. Right-click. The Mini toolbar appears.

3. Click the Italic button . You have italicized the word Italicize.

Alternate Method—Italicize with Keys

1. On the line that begins with "Keys," select the word "Italicize." You can place the cursor before the letter "I" in "Italicize." Press the Shift key; then press the right arrow key until the entire word is highlighted.
2. Press Ctrl+i (hold down the Ctrl key while pressing i).
   Note: To remove italics, press Ctrl+i again. You can also remove formatting by pressing Ctrl+spacebar.
3. Click anywhere in the text area to remove the highlighting.You have italicized the word Italicize.

4. Underline with the Dialog Box Launcher

You can underline when using Word. Word provides you with many types of underlines from which to choose.The following are some of the underlines that are available if you use the dialog box launcher:

This·is·an·underline.¶

This·is·a·words·only·underline.¶

This·is·a·double·underline.¶

This·is·a·thick·underline.¶

This·is·a·dotted·underline.¶

This·is·a·dashed·underline.¶

This·is·a·dot-dash·underline.¶

This·is·a·dot-dot-dash·underline.¶

This·is·a·wave·underline.¶

The following illustrates underlining with the dialog box launcher:
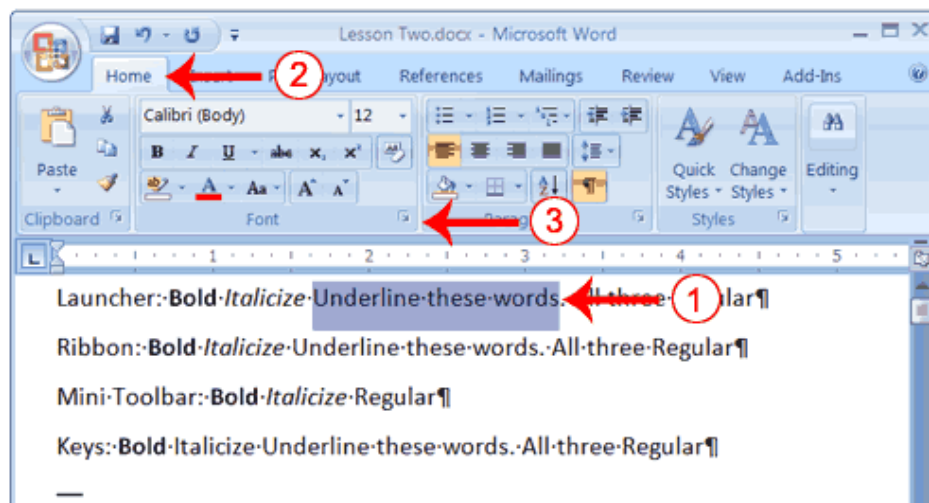
1. On the line that begins with "Launcher," select the words "Underline these words."
2. Choose the Home tab.
3. Click the dialog box launcher in the Font group. The Font dialog box appears.
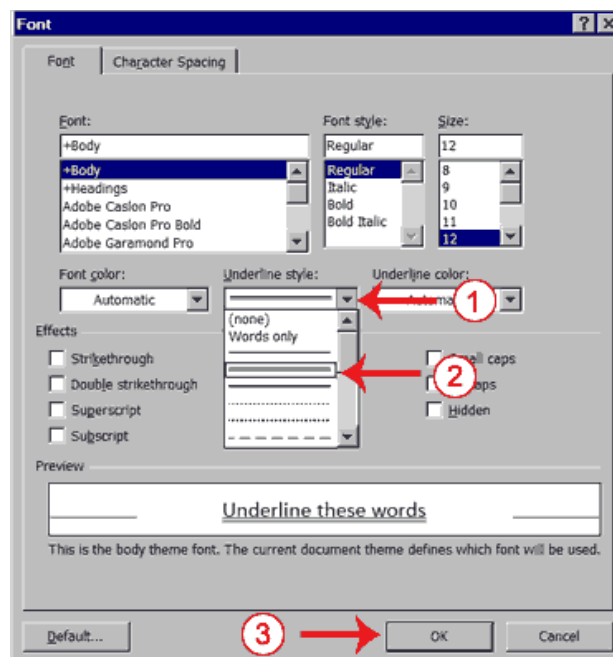
4. In the Underline Style box, click the down arrow to open the pull-down menu.
5. Click the type of underline you wish to use.
   Note: To remove an underline, you select None from the pull-down menu.
6. Click OK to close the dialog box. The underline you selected appears under the words.
7. Click anywhere in the text area to remove the highlighting.

Alternate Method—Underline with the Ribbon
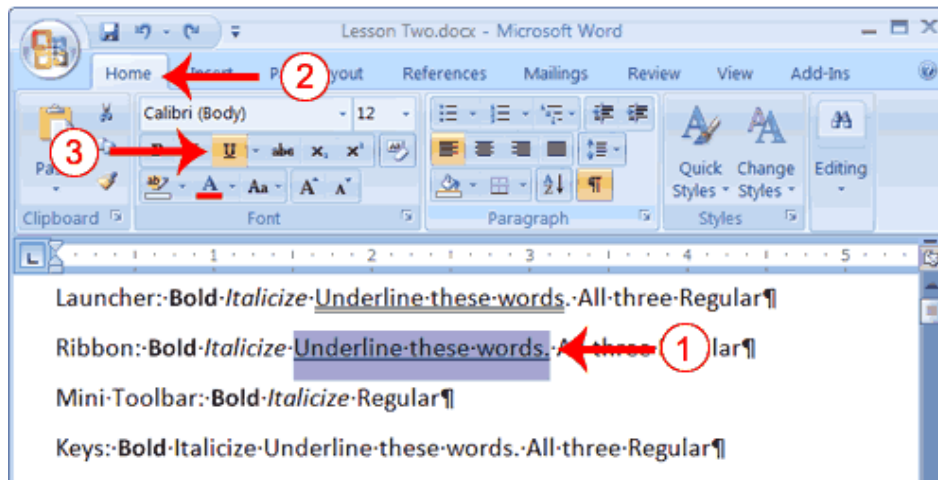
1. On the line that begins with "Ribbon," select the words "Underline these words."
2. Choose the Home tab.
3. Click the Underline button in the Font group . Alternatively, you can press the down arrow next to the underline button and click to choose the type of underline you want.

   Note: To remove the underlining, click the Underline button again.
4. Click anywhere in the text area to remove the highlighting.

Alternate Method—Underline with Keys

1. On the line that begins with "Keys," select the words "Underline these words."
2. Press Ctrl+u (hold down the Ctrl key while pressing u).
   Note: To remove the underlining, press Ctrl+u again.
3. Click anywhere in the text area to remove the highlighting.

All Three with the Dialog Box Launcher

1. On the line that begins with "Launcher," select the words "All three."
2. Choose the Home tab.
3. Click the dialog box launcher in the Font group. The Font dialog box appears.
4. In the Font Style box, click Bold Italic**.**
   Note: You can see the effect of your selection in the preview window. To turn off the Bold Italic, click Regular.
5. In the Underline box, click to open the pull-down menu. Click the type of underline you want to use.
   Note: To remove an underline, select None from the pull-down menu.
6. Click OK to close the dialog box.
7. Click anywhere in the text area to remove the highlighting.

Alternate Method—All Three with the Ribbon

1. On the line that begins with "Ribbon," select the words "All three."
2. Choose the Home tab.
3. Click the Bold button **B** in the Font group.
4. Click the Italic button *I* in the Font group.
5. Click the Underline button U ▾ in the Font group.
6. Click anywhere in the text area to remove the highlighting.

Alternate Method—All Three with Keys

1. On the line that begins with "Keys," select the words "All three."
2. Press Ctrl+b (bold).
3. Press Ctrl+i (italicize).
4. Press Ctrl+u (underline).
5. Click anywhere in the text area to remove the highlighting.

5. Save File and Close Word

You must save your documents if you wish to recall them later. You can use the Save option on the Microsoft Office menu, to save a document. You can also save a document by typing Ctrl+s. The first time you save a document, the Save As dialog box appears. Use the Save As dialog box to locate the folder in which you want to save your document and to give your document a name. After you have saved your document at least once, you can save any changes you make to your document simply by clicking the Save after you click the Microsoft Office button.

The following exercise shows you how to save the file you just created and close Word. You will name your file Lesson Two or with whatever name you can identify the document in future.

EXERCISE 6

Save File—Windows:
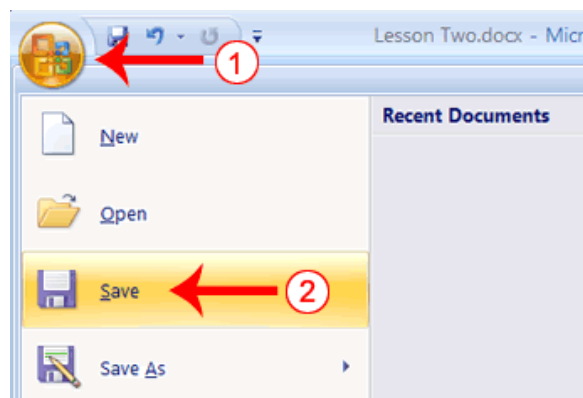
1. Click the Microsoft Office button. A menu appears.
2. Click Save. The Save As dialog box appears, if you are saving your document for the first time.
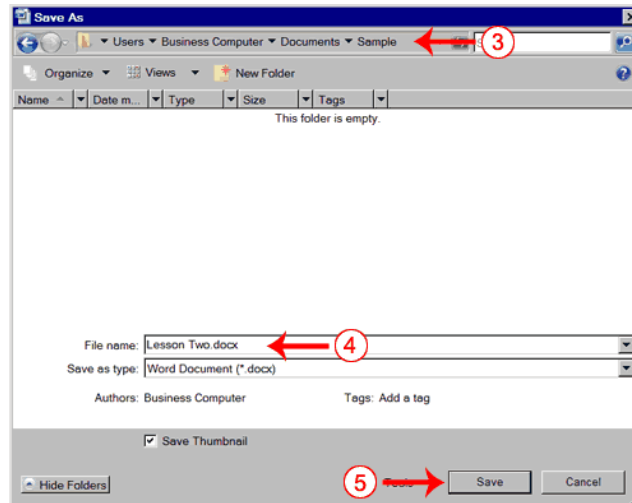
3. Use the Address bar to locate the folder in which you want to save your file.
4. Name your file by typing **Lesson Two.docx** in the File Name box.
5. Click Save.
6. Click the Microsoft Office button. A menu appears.
7. Click Exit Word, which is located in the bottom-right corner of the window. Word closes.

Every time you save your document, you overwrite the previous version of your document. For example, you create a document and save it. Later you delete several passages from the document and then save your changes. The passages from the first draft of the document no longer exist. If you want to save both the original draft of your document and the revised document, you must save the second draft of the document using a different name. To save the document using a different name, click the Microsoft Office button. A menu appears. Click Save As. The Save As dialog box appears. Use the File Name box to give your document a new name.

LESSON 3

MORE BASIC FEATURES OF MS WORD

3.0. Objective

The objective of this lesson is to explain the additional basic features of MS Word to help you in creating and editing documents.

After studying this lesson you can learn to

- edit the document with cut and paste
- spell check the document
- find and replace the words in the text
- to use different fonts

Structure

1. Open a File

2. Cut and Paste

3. Copy and Paste

4. Use the Clipboard

5. Use Spell Check

6. Find and Replace

7. Change the Font Size

8. Change the Font

1. Open a File

When you do not have time to complete your work or when you finish your work, you can save and close your file. After saving a file, you can later open it to revise or finish it. The previous lesson explained you about how to save a file. In the exercises that follow, you can learn how to open the file you saved.

EXERCISE 7

Open a File

1. Open Word 2007.
2. Click the Microsoft Office button. A menu appears.

3. Click Open. The <u>Open dialog box</u> appears.
4. Locate the folder in which you saved the file. The file is named Lesson Two.<u>docx</u>.
5. Click Lesson Two.docx.
6. Click Open. The file you created during the previous lesson appears.

Alternate Method—Opening a File with Keys

1. Open Word 2007.
2. Press Ctrl+o.
3. Locate the folder in which you saved your file. The file is named Lesson Two.docx
4. Click Lesson Two.docx.
5. Click Open. The file you created during the previous lesson appears.

2. Cut and Paste

You can use Word's **Cut** feature to remove information from a document. Then you can use the **Paste** feature to place the information you cut anywhere in the same or another document. In other words, you can move information from one place in a document to another place in the same or different document by using the **Cut** and **Paste** features. The Office Clipboard is a storage area. When you cut, Word stores the data you cut on the Clipboard. You can paste the information that is stored on the Clipboard as often as you like.
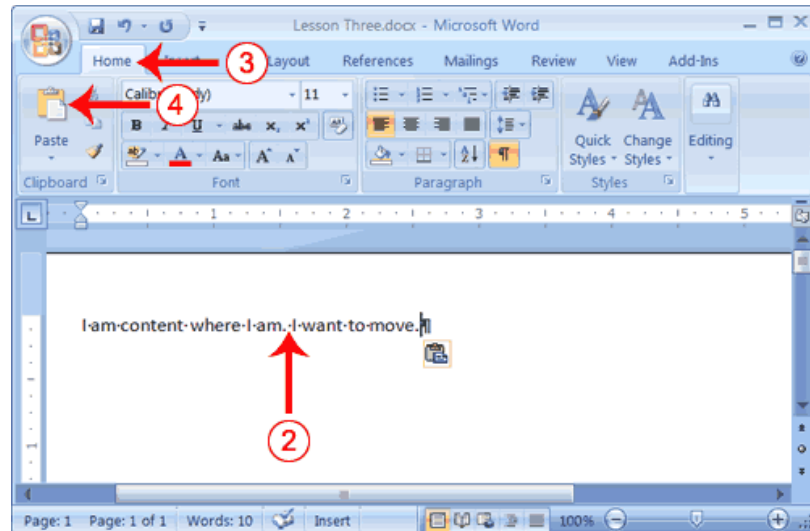
EXERCISE 8

Cut with the Ribbon
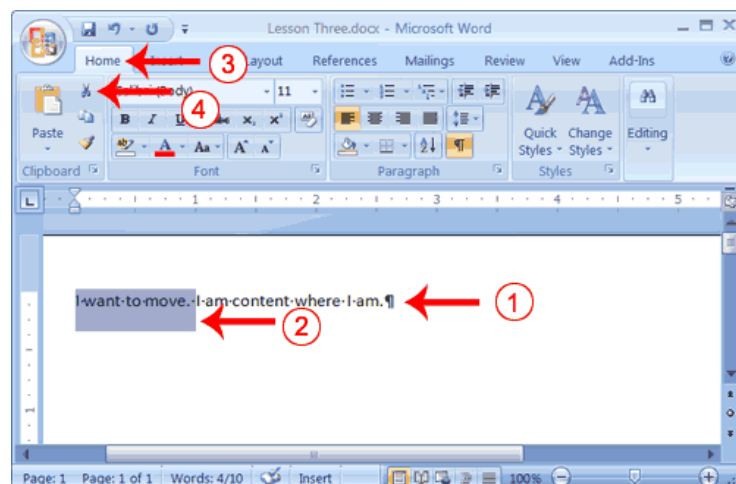
1. Type the following:
   I want to move. I am content where I am.
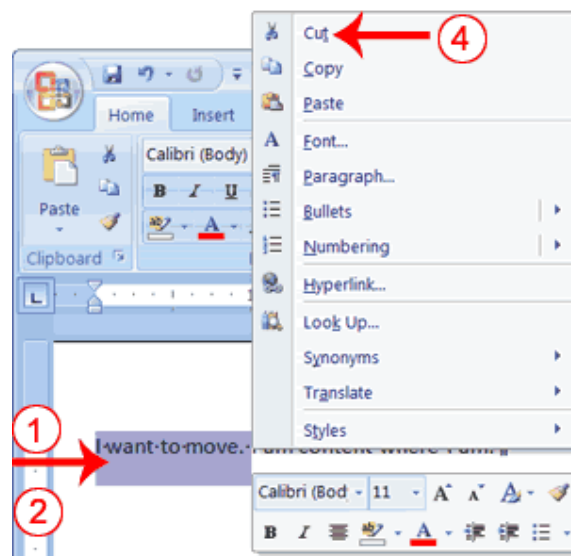2. Select "I want to move."
3. Choose the Home tab.

4. Click the Cut button in the Clipboard group. Word cuts the text you selected and places it on the Clipboard. Your text should now read:
"I am content where I am.”
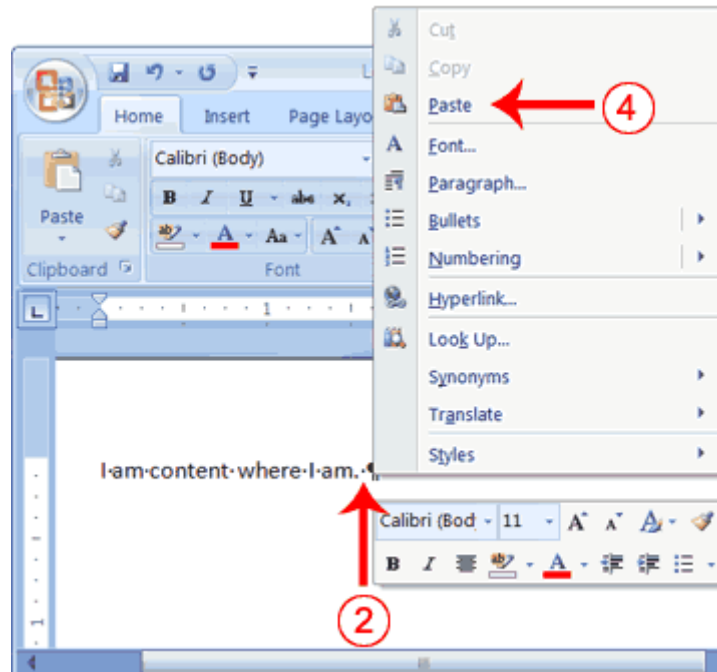
Paste with the Ribbon

1. Place the cursor after the period in the sentence **"I am content where I am."**
2. Press the spacebar to leave a space.
3. Choose the Home tab.
4. Click the Paste button in the Clipboard group. Word pastes the text on the Clipboard. Your text should now read:
   "I am content where I am. I want to move."

Alternate Method—Cut with a Context Menu

1. Type the following:
   I want to move. I am content where I am.
2. Select "I want to move."
3. Right-click. The Mini toolbar and a context menu appear.
4. Click Cut on the menu. Your text should now read:
   "I am content where I am."

Alternate Method—Paste with a Context Menu

1. Place the cursor after the period in the sentence
   "I am content where I am."
2. Press the spacebar to leave a space.
3. Right-click. A Mini toolbar and a context menu appear.
4. Click Paste. Your text should now read:
   "I am content where I am. I want to move."

Alternate Method—Cut with Keys

1. Type the following:
   I want to move. I am content where I am.
2. Select "I want to move."
3. Press Ctrl+x.
4. Your text should now read:
   " I am content where I am."

Alternate Method—Paste with Keys

1. Place the cursor after the period in the sentence: "I am content where I am."

2. Press the spacebar to leave a space.
3. Press Ctrl+v.
4. Your text should now read:
    "I am content where I am. I want to move."

3. Copy and Paste

In Microsoft Word, you can copy information from one area of a document and place the information you copied anywhere in the same or another document. In other words, after you type information into a document, if you want to place the same information somewhere else, you do not have to retype the information. You can copy it and then paste it in the new location. As with cut data, Word stores copied data on the Clipboard.
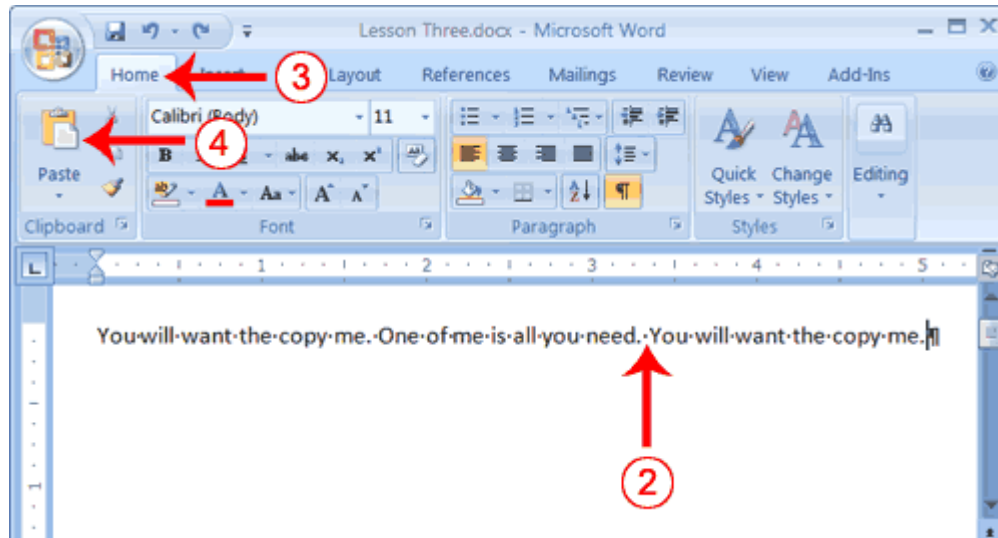
EXERCISE 9

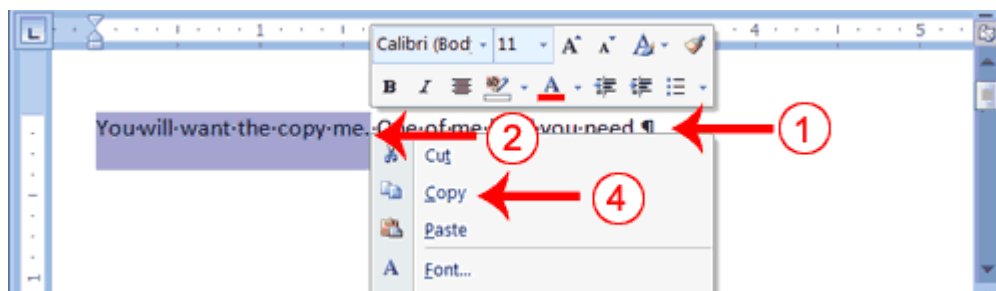**Copy with the Ribbon**
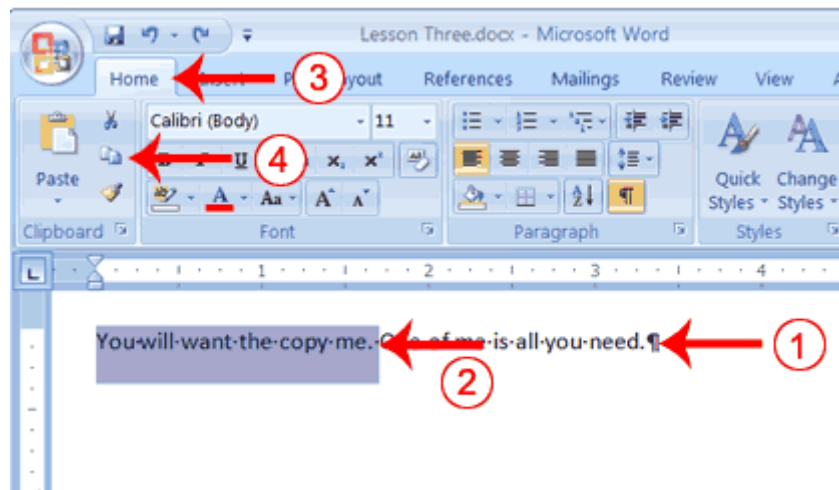
1. Type the following:
    You will want to copy me. One of me is all you need.
2. Select "You will want to copy me."
3. Choose the Home tab.
4. Click the Copy button in the Clipboard group. Word copies the data you selected to the Clipboard.
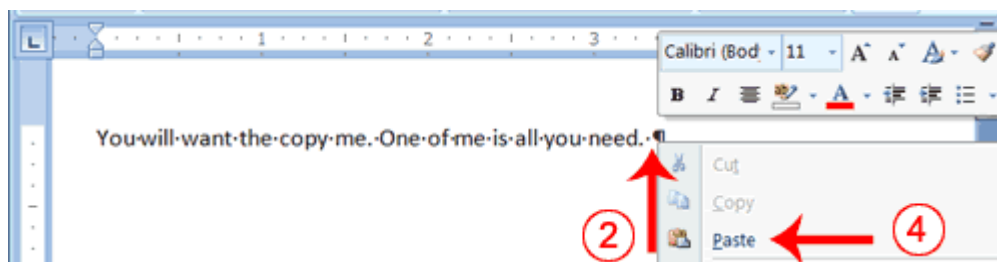
Paste with the Ribbon

1. Place the cursor after the period in the sentence: "One of me is all you need."
2. Press the spacebar to leave a space.
3. Choose the Home tab.
4. Click the Paste button in the Clipboard group. Word places the data you copied at the insertion point. Your text should now read: "You will want to copy me. One of me is all you need. You will want to copy me."

Alternate Method—Copy with a Context Menu

1. Type the following:
   You will want to copy me. One of me is all you need.
2. Select "You will want to copy me."
3. Right-click. A Mini toolbar and a context menu appear.
4. Click Copy. Word places the data you copied at the insertion point. Your text should now read: "You will want to copy me. One of me is all you need. You will want to copy me."

Alternate Method—Paste with a Context Menu

1. Place the cursor after the period in the sentence: "One of me is all you need."
2. Press the spacebar to leave a space.
3. Right-click. A context menu appears.
4. Click Paste. Word pastes the information on the Clipboard into the document.

Alternate Method—Copy with Keys

1. Type the following:
   You will want to copy me. One of me is all you need.
2. Select "You will want to copy me. "
3. Press Ctrl+c. Word copies the information you selected to the Clipboard.

Alternate Method—Paste with Keys

1. Place the cursor after the period in the sentence "One of me is all you need."
2. Press the spacebar to leave a space.
3. Press Ctrl+v.
4. Your text should now read:
   "You will want to copy me. One of me is all you need. You will want to copy me."

4. Use the Clipboard

As you cut or copy, Word can store the information you have cut or copied on the Clipboard in a hierarchy. Then each time you cut or copy, the data you just cut or copied moves to the top of the Clipboard hierarchy and the data previously at the top moves down one level. When you choose Paste, the item at the top of the hierarchy is the item Word pastes into your document. The Clipboard can store up to 24 items. You can paste any item on the Clipboard into your document by placing your cursor at the insertion point, displaying the Clipboard pane, and then clicking the item. The Clipboard pane includes an Options button. You can click the Options button to set the Clipboard options described in the following table:

Option	Description
Show Office Clipboard Automatically	Shows the Clipboard automatically when you copy items.
Show Office Clipboard When Ctrl+c Pressed Twice	Shows the Clipboard when you press Ctrl+c twice.
Collect Without Showing Office Clipboard	Copies to the Clipboard without displaying the Clipboard pane.
Show Office Clipboard Icon on Taskbar	Displays the Clipboard icon on your system taskbar.
Show Status Near Taskbar When Copying	Displays the number of items copied on the taskbar when copying.

EXERCISE 10

Use the Clipboard
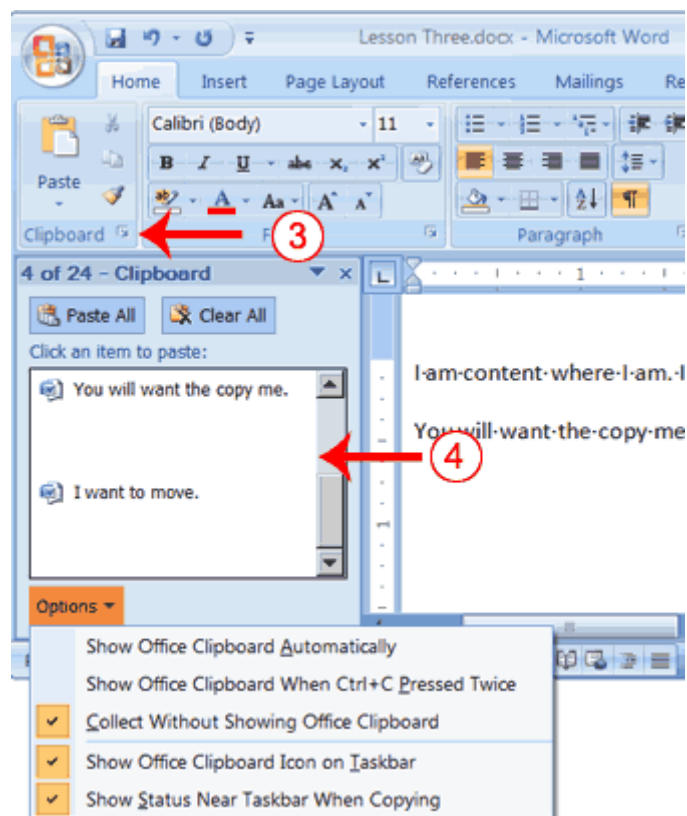
1. Place the cursor at the point at which you want to insert your text.
2. Choose the Home tab.
3. Click the Clipboard dialog box launcher to open the Clipboard.

4. Click the item on the clipboard you want to insert into your document. Word pastes the Clipboard item into your document at the insertion point.

Create AutoText

Cut and Copy both store information on the Clipboard. Information you store on the Clipboard is eventually lost. If you want to store information permanently for reuse, use AutoText. AutoText permanently stores information for future use.

EXERCISE 11

Create AutoText
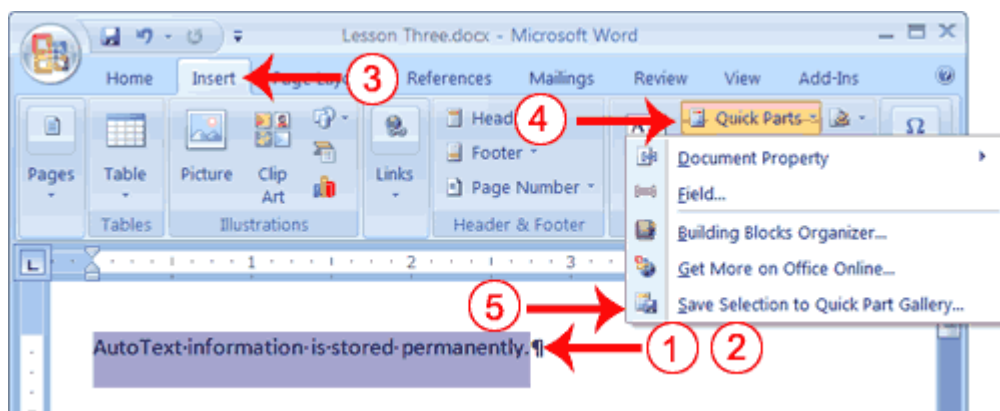
1. Type the following:
   AutoText information is stored permanently.
2. Select "AutoText information is stored permanently."
3. Choose the Insert tab.
4. Click Quick Parts in the Text group. A menu appears.
5. Click Save Selection to Quick Part Gallery. The Create New Building Block dialog box appears.
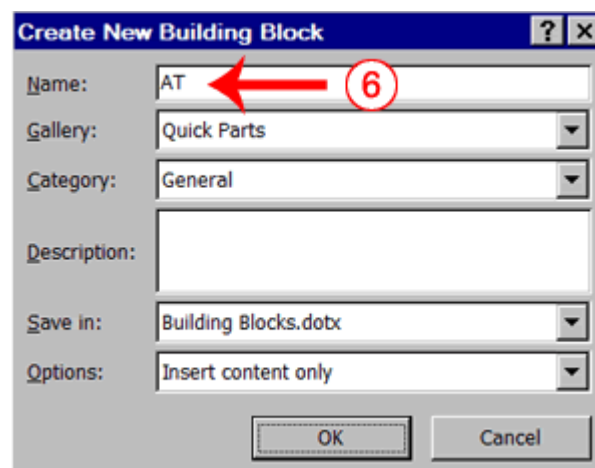
6. Microsoft Word suggests a name. Change the name by typing **AT** in the Name field.
7. Click OK. The dialog box closes.
8. Click anywhere in the text area to remove the highlighting.
9. Place the cursor between the period in the sentence you just typed and the paragraph marker (¶).
10. Press the spacebar to leave a blank space.
11. Type **AT**.
12. Press F3. Your text should now read:
    "AutoText information is stored permanently. AutoText information is stored permanently."

    Note: Whenever you need the text, simply type the name (AT) and then press F3.

5. Use Spell Check

Word checks your spelling and grammar as you type. Spelling errors display with a red wavy line under the word. Grammar errors display with a green wavy line under the error. In Word 2007, you can use the Review tab's Spelling & Grammar button to initiate a spell and grammar check of your document.

EXERCISE 12

Use Spell Check
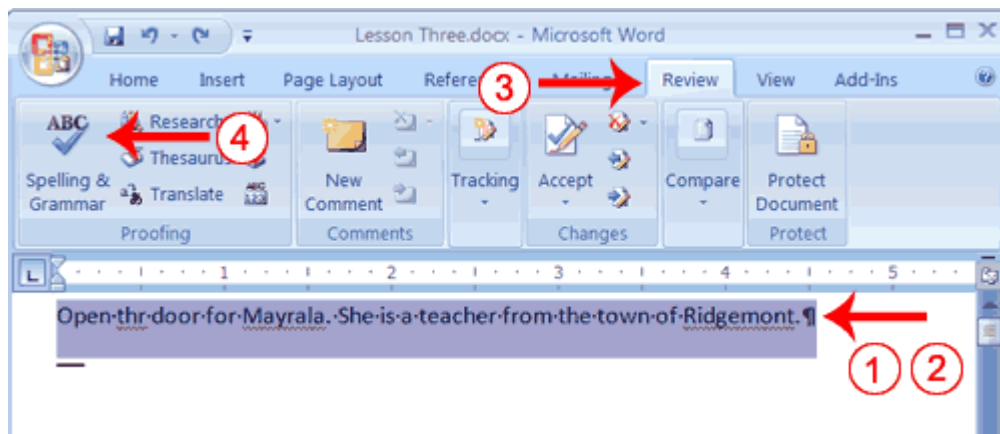
1. Type the following exactly as shown. Include all errors.
   Open thr door for Mayrala. She is a teacher from the town of Ridgemont.
2. Select: "Open thr door for Mayrala. She is a teacher from the town of Ridgemont."
3. Choose the Review tab.
4. Click the Spelling & Grammar button. The Spelling and Grammar dialog box appears.
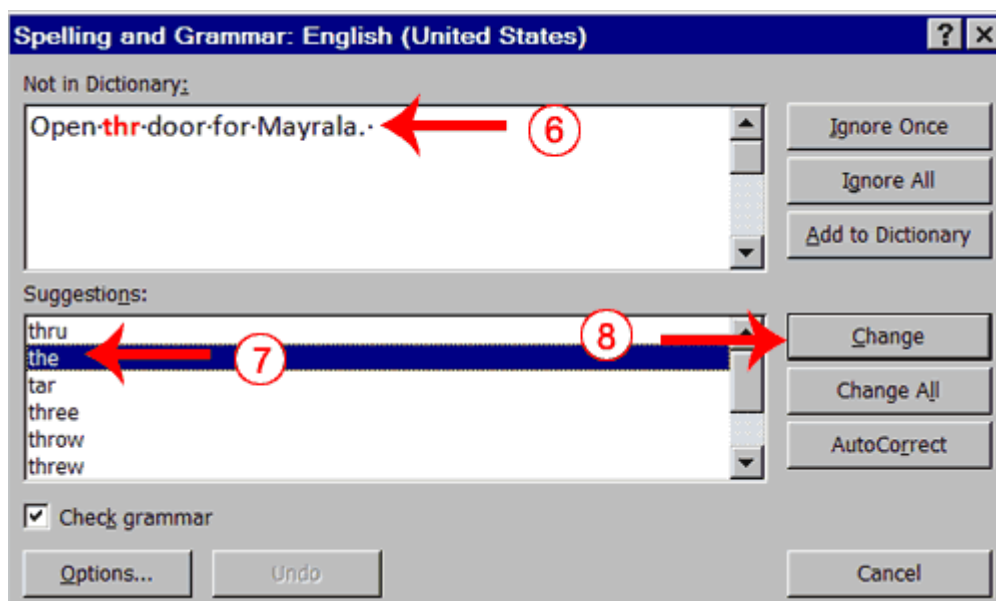
6. "The" is misspelled, so it is highlighted on the screen and noted in the Not in Dictionary box. Word suggests correct spellings. These suggestions are found in the Suggestions box.
7. Click "the" in the Suggestions box.
8. Click Change.
   Note: If the word is misspelled in several places, click Change All to correct all misspellings.
9. The name "Mayrala" is not in the dictionary, but it is correct. Click Ignore Once to leave "Mayrala" in the document with its current spelling.
   Note: If a word appears in several places in the document, click Ignore All so you are not prompted to correct the spelling for each occurrence.
10. "Ridgemont" is not found in the dictionary. If you frequently use a word not found in the dictionary, you might want to add that word to the dictionary by clicking the Add to Dictionary button. Word will then recognize the word the next time it appears. Click Add to Dictionary.
11. The following should appear on your screen: "Word finished checking the selection. Do you want to continue checking the remainder of the document?"
12. Click No or Yes depending on your requirement.

    Note: You can also press F7 to initiate a spelling and grammar check. If you don't have anything selected, Word checks the entire document.

6. Find and Replace

If you need to find a particular word or phrase in your document, you can use the Find command. This command is especially useful when you are working with <u>large files</u>. If you want to search the entire document, simply execute the Find command. If you want to limit your search to a selected area, select that area and then execute the Find command.

After you find the word or phrase you are searching for, you can replace it with new text by executing the Replace command.

EXERCISE 13

Use Find with the Ribbon
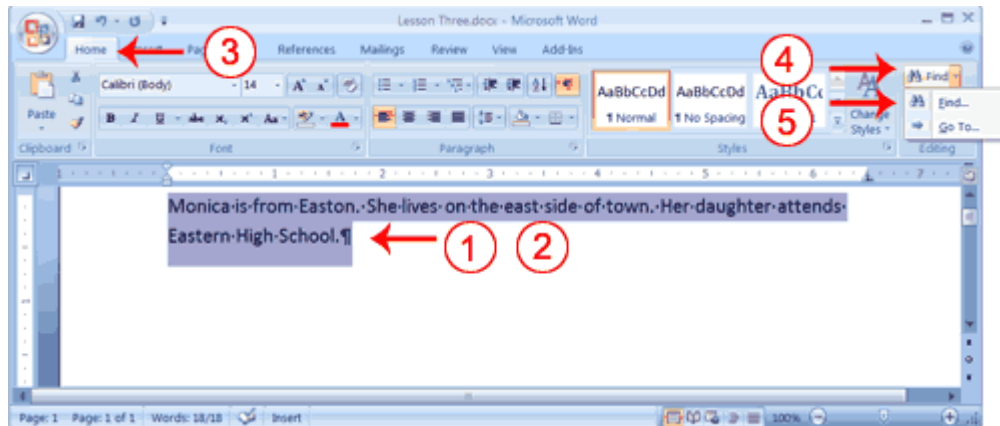
1. Type the following:
   Monica is from Easton. She lives on the east side of town. Her daughter attends Eastern High School.
2. Select: "Monica is from Easton. She lives on the east side of town. Her daughter attends Eastern High School."
3. Choose the Home tab.
4. Click Find in the Editing group. A menu appears.
5. Click the Find option on the menu. The Find and Replace dialog box appears.
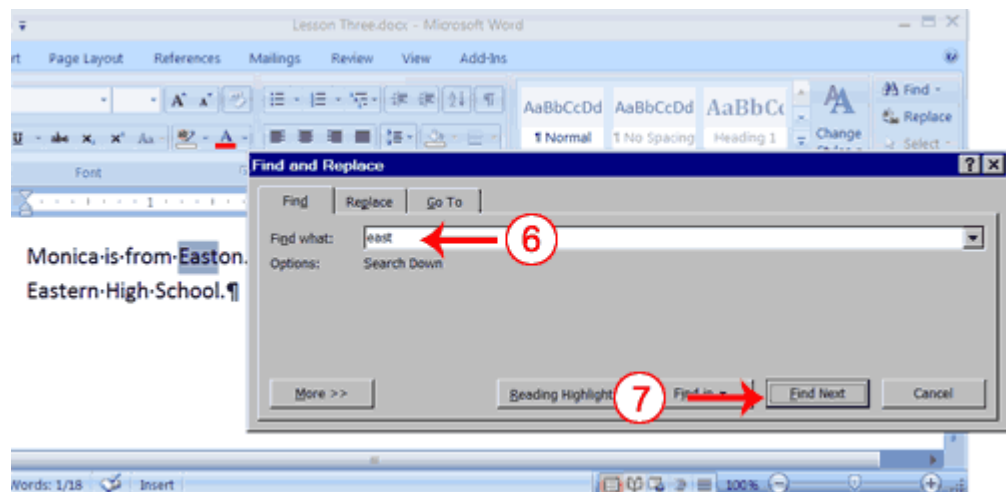
6. Type **east** in the Find What field.
7. Click Find Next.
   Note that the "East" in Easton is highlighted.

8. Click Find Next again.
   Note that "east" is highlighted.
9. Click Find Next again.
   Note that the "East" in Eastern is highlighted.
10. Click Find Next. The following message should appear: "Word has finished searching the selection. Do you want to search the remainder of the document?"
11. Click No.
12. Click Cancel.

Alternate Method—Find with Keys

1. Select: "Monica is from Easton. She lives on the east side of town. Her daughter attends Eastern High School."
2. Press Ctrl+f.
3. Follow steps 6 through 12 in the preceding section.

Use Replace with the Ribbon
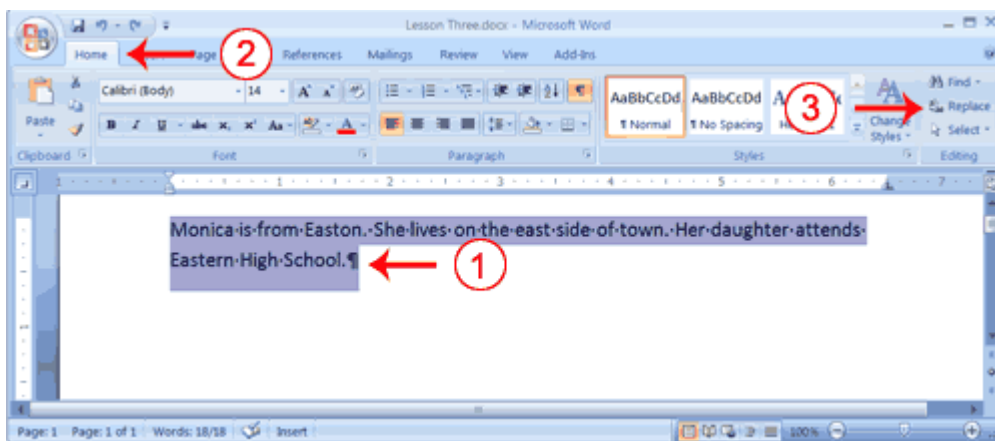
1. Select "Monica is from Easton. She lives on the east side of town. Her daughter attends Eastern High School."
2. Choose the Home tab.
3. Click Replace in the Editing group. The Find and Replace dialog box appears.

4. Type **east** in the Find What box.
5. Type **west** in the Replace With box.
6. Click Find Next. The East in Easton is highlighted.
7. Click Replace. Word replaces the "East" in "Easton" with "West" and then highlights the word "east."
8. Click Replace. Word replaces the word "east" with "west" and then highlights the word "Eastern."
9. Click Close. Do not replace the "East" in "Eastern" with "West."
10. Your text should now read,
    "Monica is from Weston. She lives on the west side of town. Her daughter attends Eastern High School."
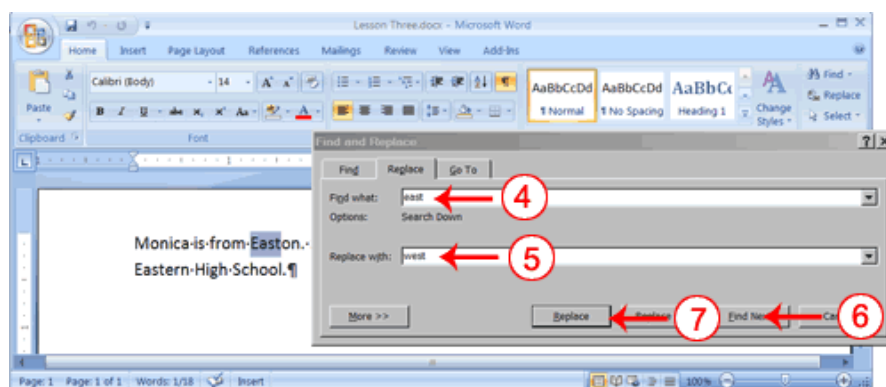
Alternate Method—Replace with Keys

1. Select "Monica is from Easton. She lives on the west side of town. Her daughter attends Western High School."
2. Press Ctrl+h.
3. Follow steps 4 through 11 in the preceding section.

7. Change the Font Size

A font is a set of characters (text) represented in a single typeface. Each character within a font is created by using the same basic style. In Microsoft Word, you can change the size of your font. The following exercise illustrates changing the font size.

EXERCISE 14

Change the Font Size
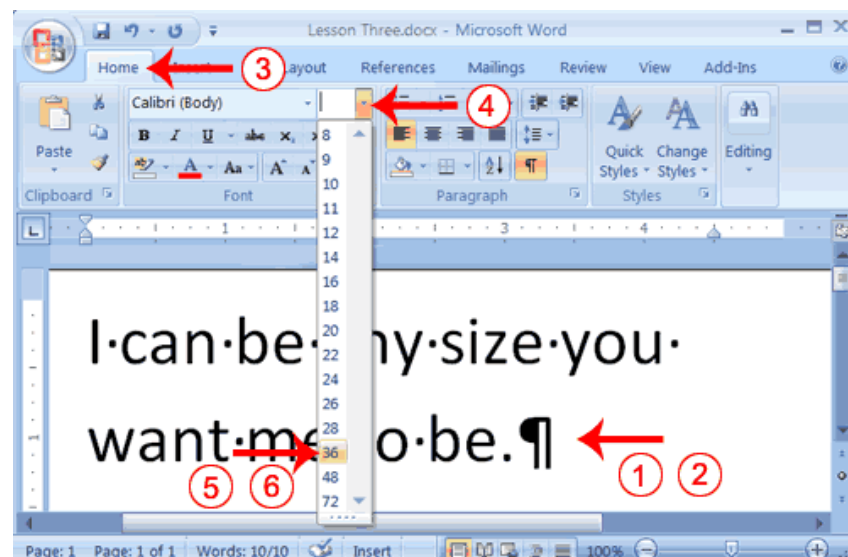
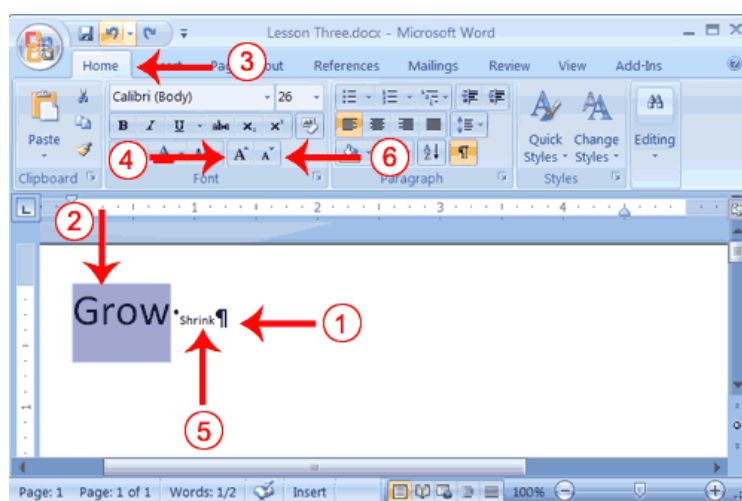1. Type the following:
   I can be any size you want me to be.
2. Select "I can be any size you want me to be**.**"
3. Choose the Home tab.
4. In the Font group, click the down arrow next to the Font Size box. A menu of font sizes appears.
5. Move your cursor over the menu of font sizes. As you do, Word 2007 provides a live preview of the effect of applying each font size.
6. Click 36 to select it as your font size.

Note: If you know the font size you want, you can type it in the Font Size field.

Alternate Method—Change the Font Size with Grow Font and Shrink Font

You can also change the size of your font by clicking the Grow Font and Shrink Font buttons. Selecting text and then clicking the Grow Font button makes your font larger. Selecting text and then clicking the Shrink Font button makes your font smaller.

1. Type the following:
   Grow Shrink
2. Select "Grow"
3. Choose the Home tab.
4. Click the Grow Font button several times. You font becomes larger
5. Click the Grow Font button several times. You font becomes larger.
6. Select Shrink.
7. Click the Shrink Font button several times. Your font becomes smaller.

8. Change the Font

In Microsoft Word, you can change the font (the "family" of type you use for your text). This feature is illustrated in the following exercise:

EXERCISE 15

Change the Font with the Ribbon
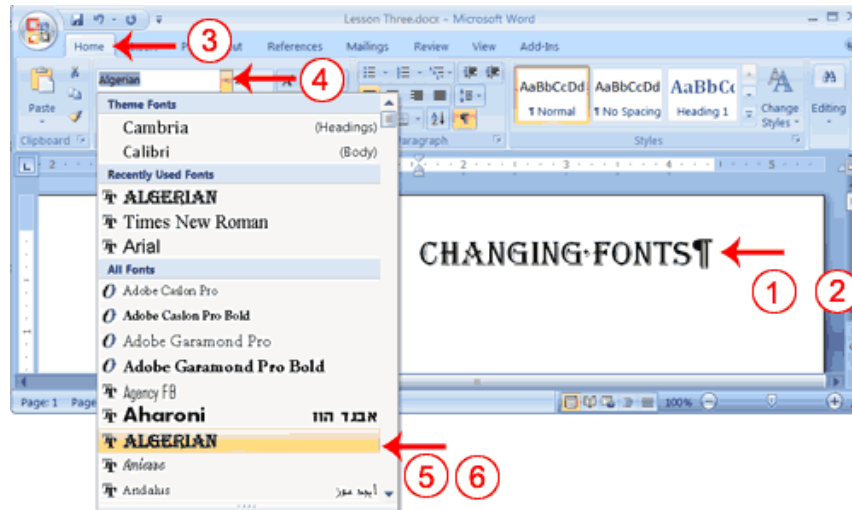
1. Type the following:
   Changing fonts
2. Select "Changing fonts."
3. Choose the Home tab.
4. Click the down arrow next to the Font field. A menu of fonts appears.
5. Move the cursor over the list of fonts. Word 2007 provides a live preview of what the font will look like if you select it.
6. **Click the font name to select the font you want.**
7. **Alternate Method—Change the Font with the Mini Toolbar**
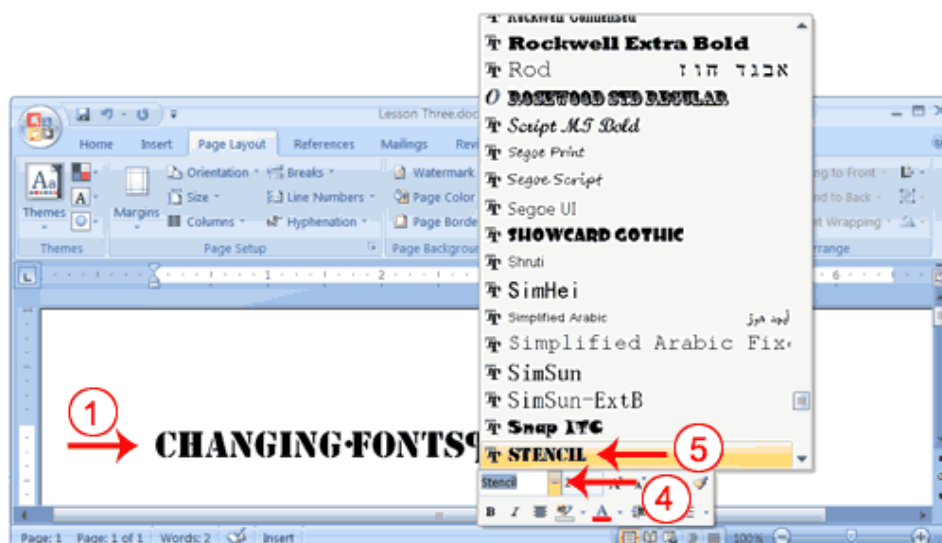
1. Select "Changing fonts."
2. Right-click. The Mini toolbar and a menu appears.
3. Move to the Mini toolbar.
4. Click the down arrow next to the Font field. A menu of fonts appears.
5. Click the name of the font you want.

Save Your File

You can save your file with name and close Word.

LESSON 4

FORMATTING PARAGRAPHS AND WORKING WITH STYLES

4.0. Objective

The objective of this lesson is to explain different commands and features available to create and format paragraphs with different styles.

After studying this lesson you will be able to
- format paragraphs in the text
- apply different styles to the document

Structure

1. Introduction

2. Creating Paragraph

3. Change Line Spacing

4. Indentation

5. Align Paragraphs

6. Choose a Style Set

1. Introduction

When you type information into Microsoft Word, each time you press the Enter key Word creates a new paragraph. You can format paragraphs. For example, you can indent the first line of a paragraph, you can set the amount of space that separates paragraphs, and you can align a paragraph left, right, center, or flush with both margins. Styles are a set of formats you can quickly apply to a paragraph. For example, by applying a style, you can set the font, set the font size, and align a paragraph all at once. In this lesson, you will learn about the various formats you can apply to a paragraph and about styles.

When you are formatting a paragraph, you do not need to select the entire paragraph. Placing the cursor anywhere in the paragraph enables you to format it. After you format a paragraph, pressing the Enter key creates a new paragraph in the same format.

2. Creating Paragraph

Open a Blank Document

To begin this lesson, open a blank document in Microsoft Word.

EXERCISE 1
Open a Blank Document
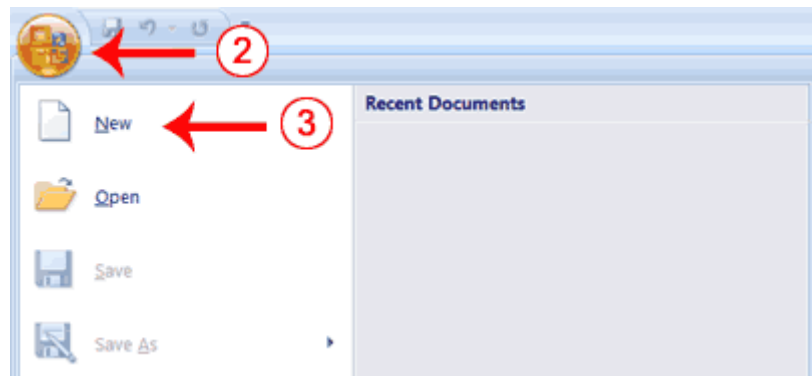
1. Open Word 2007.
2. Click the Microsoft Office button. A menu appears.
3. Click New. The New Document dialog box appears.
4. Click Blank Document.
5. Click Create. A new blank document opens.
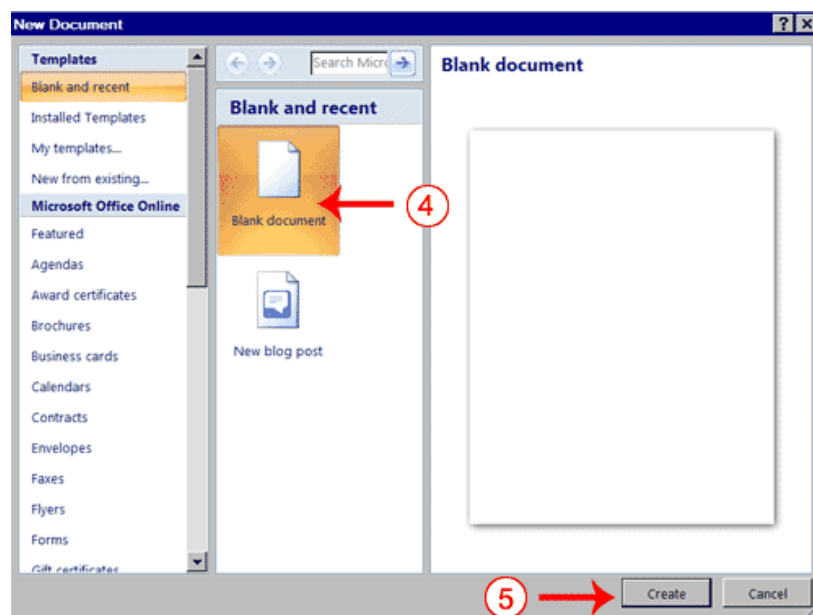
Add Sample Text

This lesson uses sample text provided by Microsoft for training and demonstration purposes. You can type the text; however, there is a quicker way. You can use the rand function. Functions are used to obtain information. You tell the function what you want and the function returns that information to you. By default, in Word, when you type the rand function, Word returns three paragraphs. When working with functions, you use arguments to be specific about what you want the function to return. There are two arguments you can use with the rand function. The first one tells Word how many paragraphs you want, and the second one tells

Word how many sentences you want in a paragraph. You place arguments between the parentheses and you separate them with a comma. For example, if you type =rand() and then press Enter, word returns three paragraphs. To tell Word you want two paragraphs with three sentences in each paragraph, you type =rand(2,3).

EXERCISE 2

Add Sample Text

1. Type =rand().
2. Press the Enter key. The following text appears:

> On the Insert tab, the galleries include items that are designed to coordinate with the overall look of your document. You can use these galleries to insert tables, headers, footers, lists, cover pages, and other document building blocks. When you create pictures, charts, or diagrams, they also coordinate with your current document look. ¶
>
> You can easily change the formatting of selected text in the document text by choosing a look for the selected text from the Quick Styles gallery on the Home tab. You can also format text directly by using the other controls on the Home tab. Most controls offer a choice of using the look from the current theme or using a format that you specify directly. ¶
>
> To change the overall look of your document, choose new Theme elements on the Page Layout tab. To change the looks available in the Quick Style gallery, use the Change Current Quick Style Set command. Both the Themes gallery and the Quick Styles gallery provide reset commands so that you can always restore the look of your document to the original contained in your current template. ¶

Add Space Before or After Paragraphs

When creating a document, space is often used to clearly identify where each paragraph begins and ends. By default, Word may place slightly more space between paragraphs than it does between lines in a paragraph. You can increase or decrease the amount of space that appears before and after paragraphs by entering amounts in the Before and After fields in the Paragraph section of the Page Layout tab. Use the up arrows next to the Before and After fields to increase the amount of space before or after each paragraph; use the down arrows to decrease the amount of space before or after each paragraph. The following illustrates:

EXERCISE 3

Add Space Before or After Paragraphs
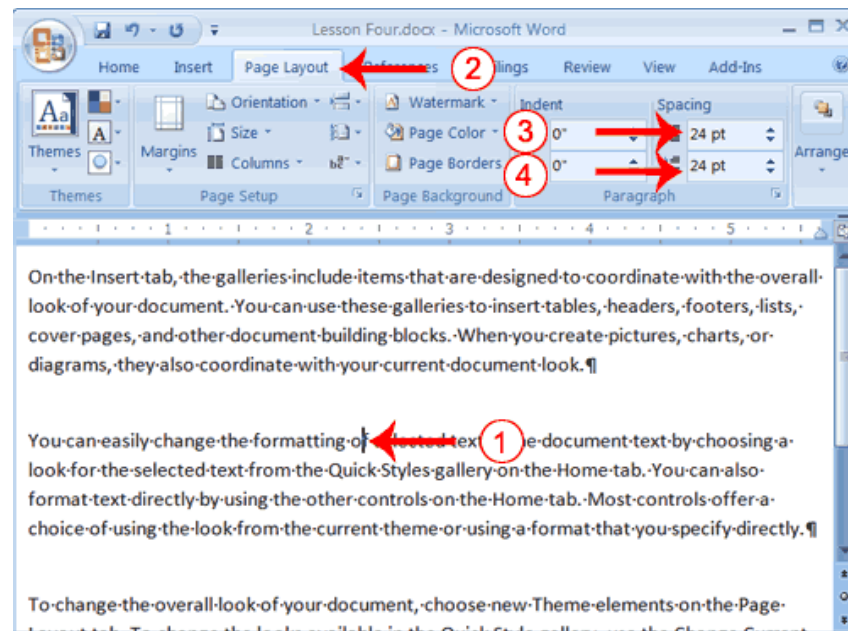
1. Place your cursor anywhere in the second para of the sample text you created in Exercise 2.
2. Choose the Page Layout tab. The default spacing appears in the Spacing Before field.
3. Click the up arrow next to the Spacing Before field to increase the space before the paragraph.
4. Click the up arrow next to the Spacing after field to increase the amount of space after the paragraph.

Note: You can click the down arrows next to the Spacing Before and the Spacing After fields to decrease the amount of space before or after a paragraph. You can also type the amount of space you want to use directly into the fields. Space is measured in points. There are 72 points to an inch.

3. Change Line Spacing

Line spacing sets the amount of space between lines within a paragraph. The spacing for each line is set to accommodate the largest font on that line. If the lines include smaller fonts, there will appear to be extra space between lines where the smaller fonts are located. At 1.5, the line spacing is set to one-and-a-half times the single-space amount. At 2.0, the line spacing is set to two times the single-space amount (double space).

EXERCISE 4

Change Line Spacing
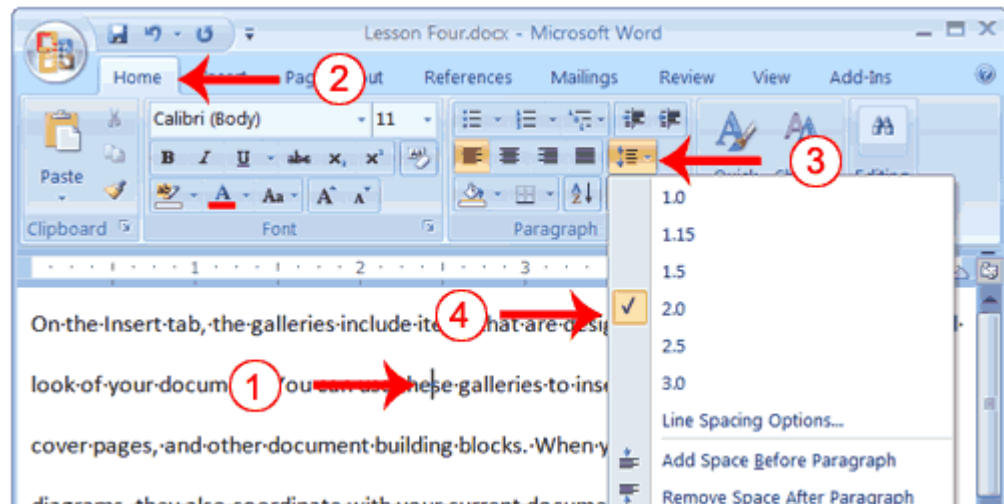
1. Place your cursor anywhere in the first paragraph of the sample text you created in Exercise 2.
2. Choose the Home tab.
3. Click the Line Spacing button in the Paragraph group. A menu of options appears.
4. Click 2.0 to double-space the first paragraph.

4. Indentation

Create a First-Line Indent

Some people and organizations delineate the start of a new paragraph by indenting the first line. If you want to indent the first line of your paragraphs, you can use the Paragraph dialog box to set the amount by which you want to indent. In the Special Field of the Paragraph dialog box, you tell Word you want to indent the first line by choosing First Line from the menu options. In the by field, you tell Word the amount, in inches by which you want to indent.

EXAMPLE: First-line Indent

On the Insert tab, the galleries include items that are designed to coordinate with the overall look of your document. You can use these galleries to insert tables, headers, footers, lists, cover pages, and other document building blocks. When you create pictures, charts, or diagrams, they also coordinate with your current document look.

EXERCISE 5

Create a First-line Indent
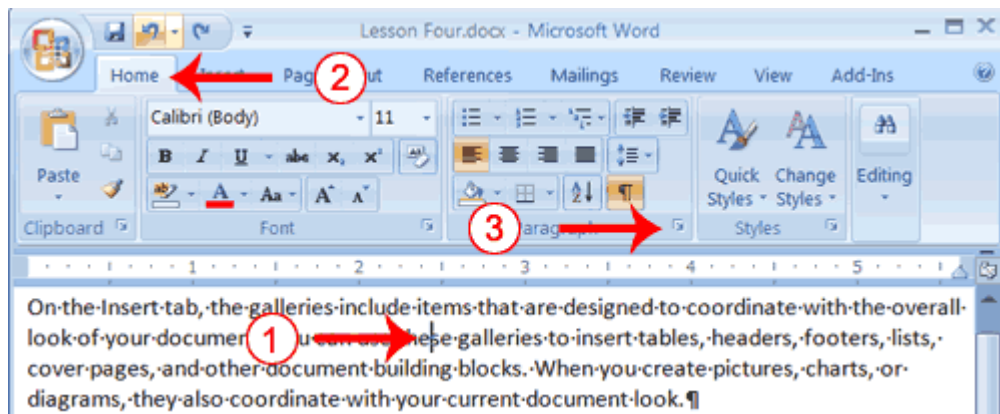
1. Place your cursor anywhere within the first paragraph of sample text you created in Exercise 2.
2. Choose the Home tab.
3. In the Paragraphs group, click the launcher. The Paragraph dialog box appears.
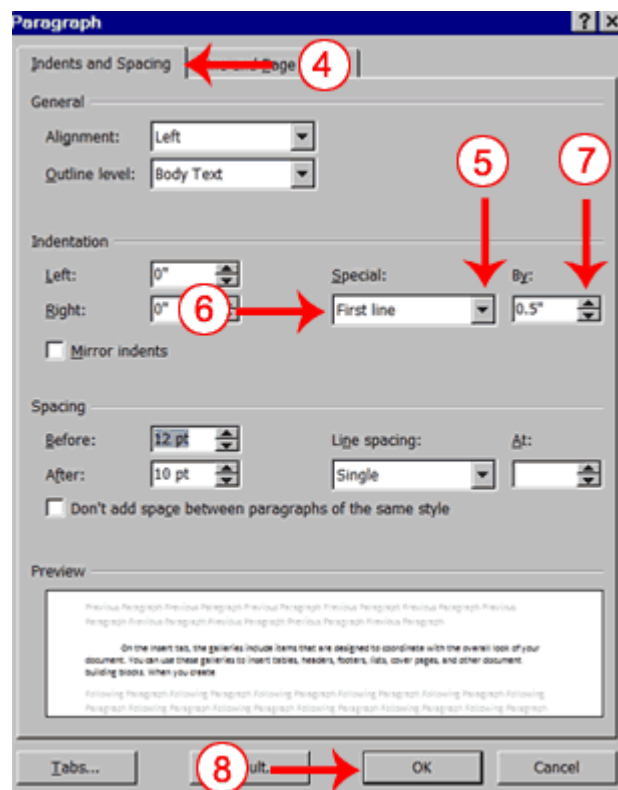
4. Choose the Indents and Spacing tab.
5. Click to open the drop-down menu on the Special field.
6. Click First Line.
7. Enter 0.5" in the By field.
8. Click OK. The first line of your paragraph is now indented half an inch.

   Special Note: To remove the first line indent:

1. Place the cursor anywhere in the paragraph.
2. Choose the Home tab.
3. In the Paragraphs group, click the launcher. The Paragraph dialog box opens.
4. Choose the Indents and Spacing tab.
5. Click the down arrow next to the Special field and then click None.
6. Click OK.

Indent Paragraphs

Indentation allows you to indent your paragraph from the left and/or right margin. You may find this necessary when you are quoting a large block of text. The following exercise shows you how to indent a paragraph 1 inch from each side.


EXAMPLE: Indentation

On the Insert tab, the galleries include items that are designed to coordinate with the overall look of your document. You can use these galleries to insert tables, headers, footers, lists, cover pages, and other document building blocks. When you create pictures, charts, or diagrams, they also coordinate with your current document look.

> You can easily change the formatting of selected text in the
> document text by choosing a look for the selected text
> from the Quick Styles gallery on the Home tab. You can
> also format text directly by using the other controls on the
> Home tab. Most controls offer a choice of using the look
> from the current theme or using a format that you specify
> directly.

EXERCISE 6

Indent Paragraphs
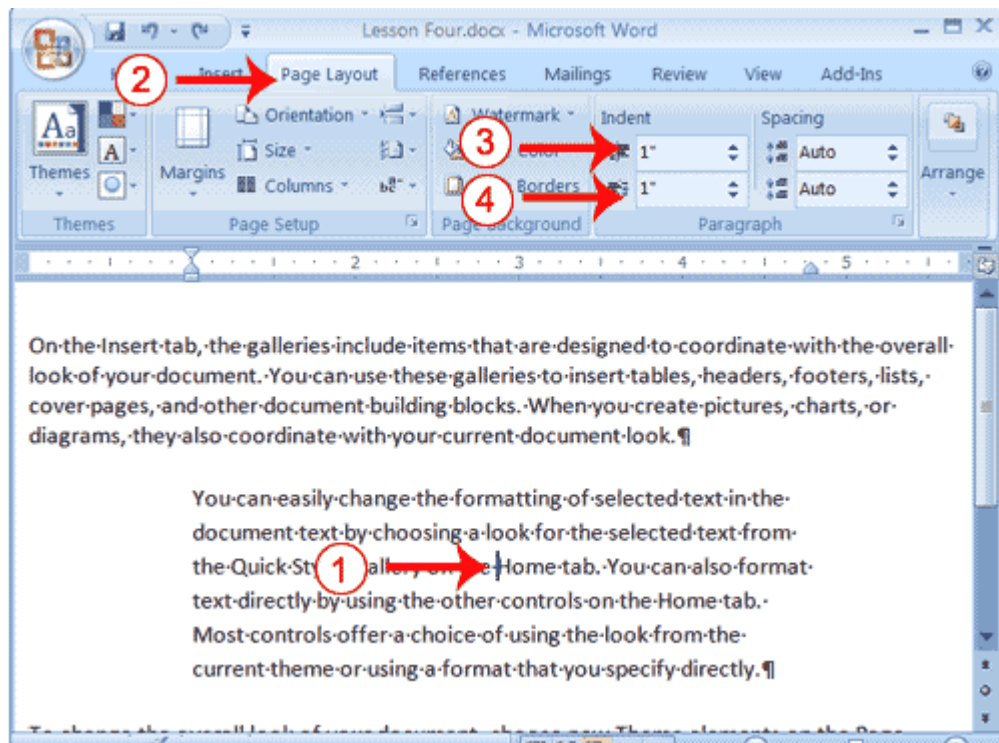
1. Place your cursor anywhere in the second paragraph of sample text you created in Exercise 2.
2. Choose the Page Layout tab.
3. Type **1"** in the Indent Left field or use the up or down arrows to set the field value to 1".
4. Type **1"** in the Indent Right field or use the up or down arrows to set the field value to 1". Your paragraph is now indented one inch from both the left and right margins, as in the example.

Create a Hanging Indent

The hanging indent feature indents each line except the first line by the amount specified in the By field, as shown in the example.
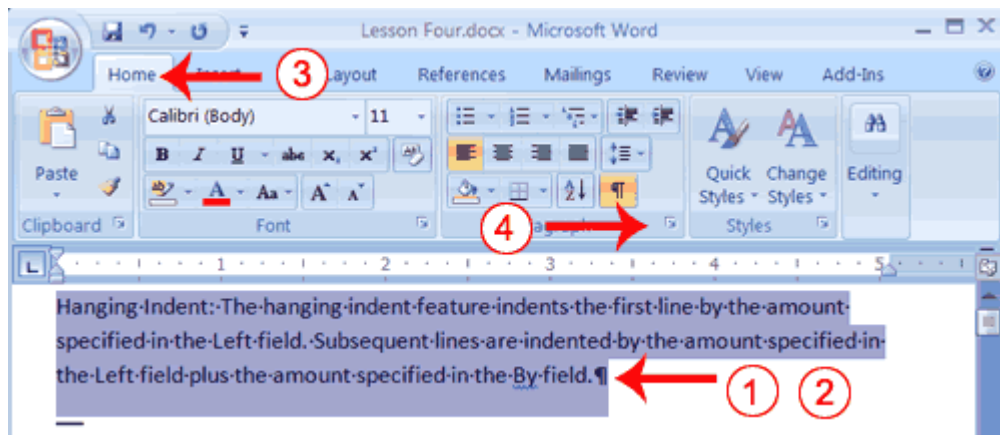
EXAMPLE: Hanging Indent	
Hanging Indent:	The hanging indent feature indents the first line of the paragraph from the margin by the amount specified in the Left field. The amount in the Left field plus the amount specified in the By field indent all subsequent lines.

EXERCISE 8

Create a Hanging Indent

1. Type the following:
   Hanging Indent: The hanging indent feature indents the first line by the amount specified in the Left field. Subsequent lines are indented by the amount specified in the Left field plus the amount specified in the By field.
2. Select the paragraph you just typed.
3. Choose the Home tab.
4. Click the launcher in the Paragraph group. The Paragraph dialog box appears.
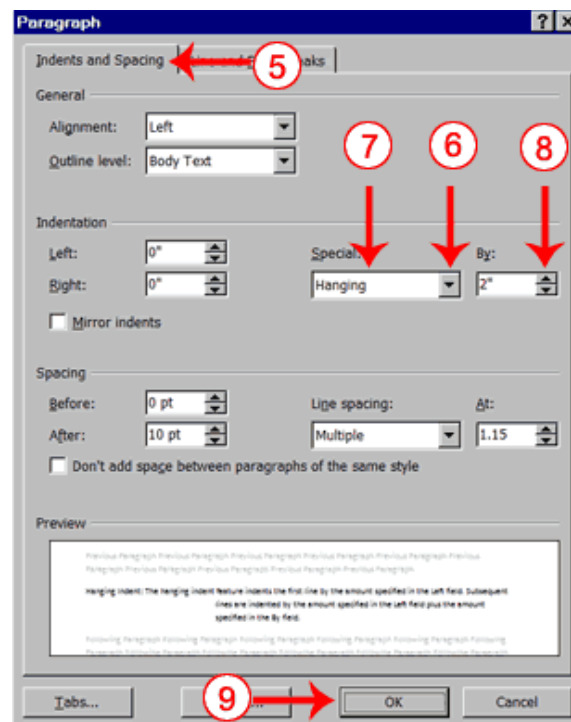
5. Choose the Indents and Spacing tab.
6. In the Special field, click to open the pull-down menu.
7. Click Hanging.
8. In the By box, type **2"**.

9. Click OK.
10. Place the cursor after the colon following "Hanging Indent."
11. Press the Tab key. Notice that the indentation changes.

5. Align Paragraphs

Microsoft Word gives you a choice of several types of alignments. Left-aligned text is flush with the left margin of your document and is the default setting. Right-aligned text is flush with the right margin of your document, centered text is centered between the left and right margins, and justified text is flush with both the left and right margins.

EXAMPLE: Left-Aligned

Sample Paragraph

On the Insert tab, the galleries include items that are designed to coordinate with the overall look of your document. You can use these galleries to insert tables, headers, footers, lists, cover pages, and other document building blocks. When you create pictures, charts, or diagrams, they also coordinate with your current document look.

EXAMPLE: Right-aligned

Sample Paragraph

On the Insert tab, the galleries include items that are designed to coordinate with the overall look of your document. You can use these galleries to insert tables, headers, footers, lists, cover pages, and other document building blocks. When you create pictures, charts, or diagrams, they also coordinate with your current document look.

EXAMPLE: Centered

Sample Paragraph

On the Insert tab, the galleries include items that are designed to coordinate with the overall look of your document. You can use these galleries to insert tables, headers, footers, lists, cover pages, and other document building blocks. When you create pictures, charts, or diagrams, they also coordinate with your current document look.

EXAMPLE: Justified

Sample Paragraph

On the Insert tab, the galleries include items that are designed to coordinate with the overall look of your document. You can use these galleries to insert tables, headers, footers, lists, cover pages, and other document building blocks. When you create pictures, charts, or diagrams, they also coordinate with your current document look.
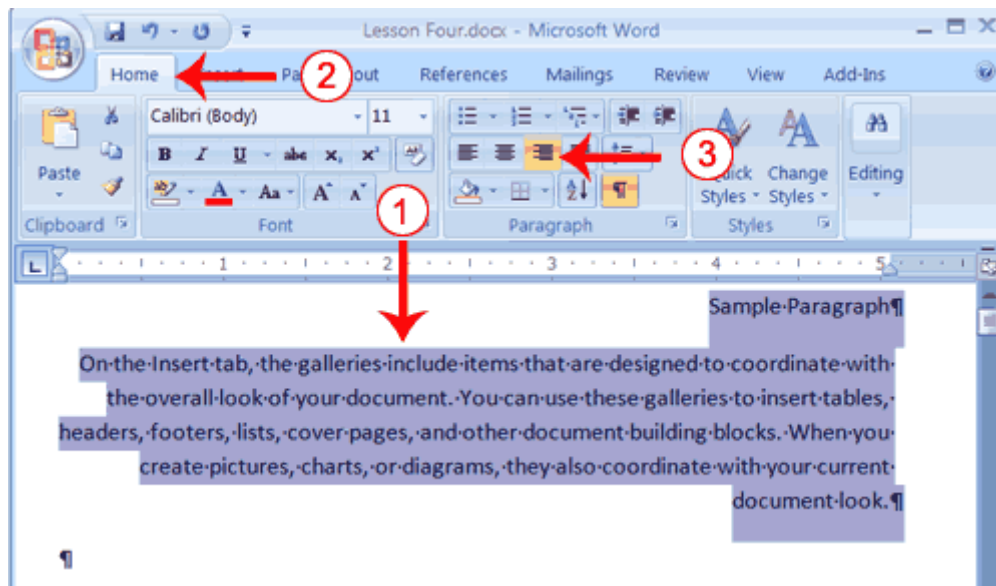

The following exercises demonstrate how to justify text.

EXERCISE 7

Create the Paragraphs

1. Type Sample Paragraph.
2. Press Enter.
3. Type =rand(1) to create a paragraph.
4. Press Enter.

Right-align

1. Select the paragraphs you created.
2. Choose the Home tab.
3. Click the Align-right button ⊒ in the Paragraph group. Word right-aligns your paragraphs.

Left-align

1. Select the paragraphs you created.
2. Choose the Home tab.
3. Click the Align-left button ⊒ in the Paragraph group. Word left-aligns your paragraph.

Center

1. Selected the paragraphs you created.
2. Choose the Home tab.
3. Click the Center button ⊒ in the Paragraph group. Word centers your paragraph.

Justify

1. Select the paragraphs you created.
2. Choose the Home tab.
3. Click the Justify button in the Paragraph group. Word justifies your paragraph.

Alternate Method—Right-Justify with Keys

1. Select the paragraphs you created.
2. Press Ctrl+r. The paragraph is now right-aligned.

Alternate Method—Left-Justify with Keys

1. Select the paragraphs you created.
2. Press Ctrl+l. The paragraph is now left-aligned.

Alternate Method—Center with Keys

1. Select the paragraphs you created.
2. Press Ctrl+e. The paragraph is now centered.

*Alternate Method—Justify with Keys*

1. Select the paragraphs you created.
2. Press Ctrl+j. The paragraph is now justified.

6. Choose a Style Set

When working with Word, you can use styles to quickly format your documents. A style is a set of formats consisting of such things as fonts, font colors, font sizes, and paragraph formats. Word 2007 supplies you with predesigned style sets that contain styles for titles, subtitles, quotes, headings, lists and more. The sections that follow all show you how to work with styles. The exercises are based on a file you must download. Right click here to download the file. Click Save Target As from the menu that appears, and save the linked file to a directory on your computer.

The file will download as a zip file. A zip file is a file that is compressed. Compressed files are smaller and easier to download. To open the file:

1. Open the folder you downloaded the file to.
2. Right-click on the file name.
3. Click Extract All on the menu that appears. The Extract Compressed (Zipped) Folders dialog box appears.
4. Enter the folder you want to put the file in or except to suggested location.
5. Click Extract. Windows Explorer extracts the file.
6. You can use Microsoft Word to open the file.

EXERCISE 9

Choose a Style Set
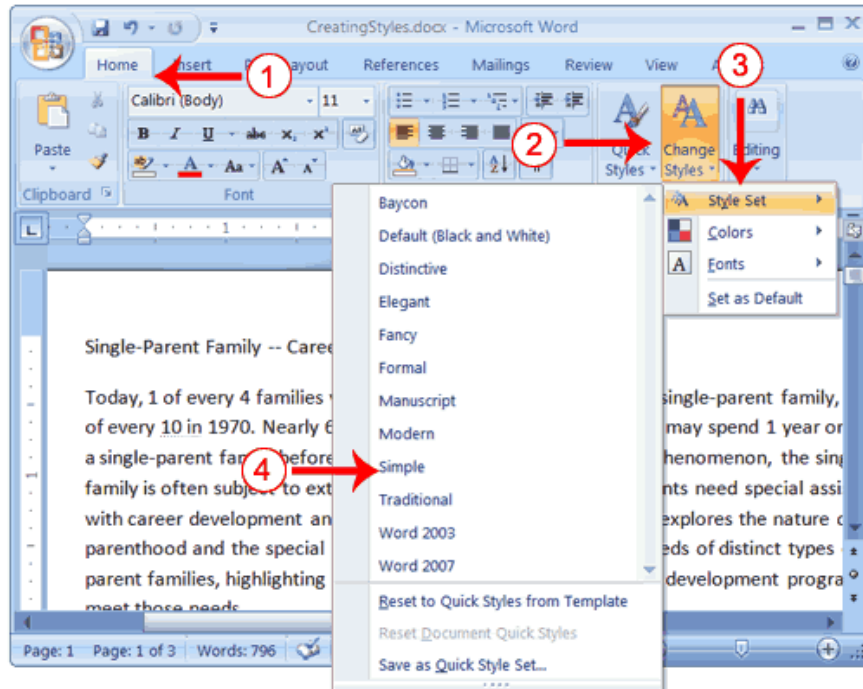
1. Choose the Home tab.
2. Click Change Styles in the Styles group. A menu appears.
3. Click Style Set. A menu appears. You can choose from any of the styles listed on the menu.
4. Click Simple. Word 2007 reformats all of the paragraphs into the Simple style by applying the Normal format to each paragraph.

Apply a Style

You can see of all the styles available to you in the style set by clicking the launcher in the Styles group and opening the Styles pane. You can leave the Styles pane open and available for use by docking it. To dock the Styles pane, click the top of the pane and drag it to the left or right edge of the Word window.

You do not need to select an entire paragraph to apply a style. If the cursor is anywhere in the paragraph, when you click on the style, Word formats the entire paragraph.

EXERCISE 10

Apply the Title Style
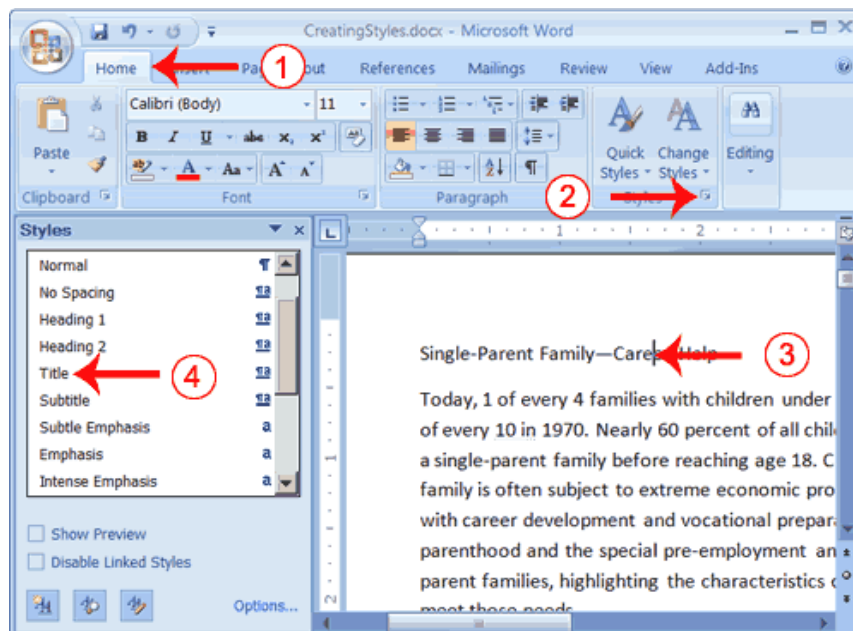
1. Choose the Home tab.
2. Click the launcher in the Styles Group. The Styles pane appears. You can drag it to the side of the Word window to dock it. To close the Styles pane, click the Close button ⊠ in the upper right corner of the pane .
3. Click anywhere in the paragraph "Single-Parent Family—Career Help."
4. Click Title in the Styles pane. Word 2007 applies the Title style to the paragraph.

Headings and subheadings mark major topics within your document. With Word 2007, you can easily format the headings and subheadings in your document.

Apply Headings

1. Click anywhere in the paragraph "The Nature of Single Parenthood."
2. In the Style box, click Heading 1. Word reformats the paragraph.
3. Repeat steps 1 and 2 in the following paragraphs:

- Types of Single Parents
- Career Development Needs of Single Parents
- Career Development Programs

Apply Subheadings

1. Click anywhere in the paragraph "Displaced Homemakers"
2. In the Style box, click Heading 2. Word reformats the paragraph.
3. Repeat steps 1 and 2 for the following paragraphs:

- Displaced Homemakers
- Adolescent Mothers
- Single Fathers
- High School Dropout Prevention
- Established Education Sites

Alternate Method -- Apply Styles with the Ribbon

You can also choose styles by selecting the option you want from the Styles group on the Ribbon. First you must place your cursor in the paragraph to which you want to apply the style. Then you click the More button in the Styles group to see all of the styles in the currently selected set. As you roll your cursor over each of the styles listed, Word 2007 provides you with a live preview of how the style will appear when applied.

1. Select the paragraphs "Emotional Support" through "Parenthood Education" (they are probably on page two).
2. Click the More button in the Styles group.
3. Locate and click the List Paragraph style. Word applies the List Paragraph style to the paragraphs you selected.

Change Style Sets

Once you have applied styles, changing to another style set is easy. You simply open the Style Set gallery. As you move your cursor down the menu, Word 2007 provides you with a live preview of the effect of applying the style set. To choose a style set, you click it.

EXERCISE 11

Change Style Sets

1. Click Change Styles in the Styles group. A menu appears.
2. Click Style Set. A menu appears. As you move your cursor down the menu Word 2007 provides you with a live preview of the effect of applying the Style set to your document.
3. Click Formal. Word 2007 reformats all of the paragraphs into the Formal style applying the appropriate format to each paragraph.

Lesson 5

ADDING BULLETS AND NUMBERS, UNDOING AND REDOING, SETTING PAGE LAYOUTS AND PRINTING DOCUMENTS

5.0. Objective

The objective of this lesson is to make you learn setting page layouts, adding bullets and or numbers when you work with lists. This lesson also explains about how to take print outs of the document.

After studying this lesson you can

- prepare lists in word
- add bullets to the list
- set page layout
- print setup

Structure

1. Introduction

2. Adding Bullets and Numbers

   2.1. Numbering

   2.2. Bulleting

3. Undo and Redo

4. Page Layouts

   4.1 Set the Orientation

   4.2 Set the Page Size

   4.3 Set the Margins

   4.4 Add Page Numbers

   4.5 Insert Page Breaks

5. Preview and Print Documents

1. Introduction

If you have lists of data, you may want to bullet or number them. When using Microsoft Word, bulleting and numbering are easy. The first part of this lesson teaches you to add bullet and number to the lists in the document.

After you have completed your document, you may want to share it with others. One way to share your document is to print and distribute it. However, before you print you may want to add page numbers and tell Word such things as the page orientation, the paper size, and the margin setting you want to use. In this lesson you will learn how to layout and how to print your documents.

2. Adding Bullets and Numbers

In Microsoft Word, you can easily create bulleted or numbered lists of items. Several bulleting and numbering styles are available, as shown in the examples. You can select the one you wish to use.

2.1. Numbering

EXAMPLES: Numbering

1. Apple	1) Apple	i. Apple
2. Orange	2) Orange	ii. Orange
3. Grape	3) Grape	iii. Grape
4. Mango	4) Mango	iv. Mango
5. Cherry	5) Cherry	v. Cherry

A. Apple	a) Apple	a. Apple
B. Orange	b) Orange	b. Orange
C. Grape	c) Grape	c. Grape
D. Mango	d) Mango	d. Mango
E. Cherry	e) Cherry	e. Cherry

Numbers
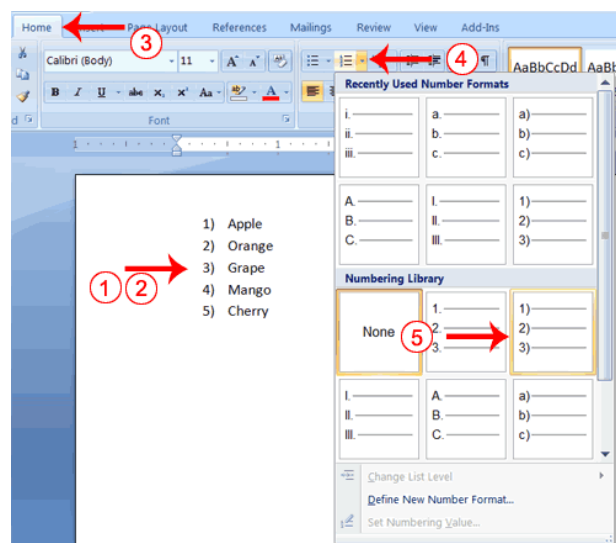
1. Type the following list as shown:
   Apple
   Orange
   Grape
   Mango
   Cherry
2. Select the words you just typed.
3. Choose the Home tab.
4. In the Paragraph group, click the down arrow next to the Numbering button . The Numbering Library appears.
5. Click to select the type of numbering you want to use. Word numbers your list.
   Note: As you move your cursor over the various number styles, Word displays the number style onscreen.

To remove the numbering:

1. Select the list again.
2. Choose the Home tab.
3. In the Paragraph group, click the down arrow next yo the Numbering icon. The Number dialog box appears.
4. Click None. Word removes the numbering from your list.

2.2. Bulleting

EXAMPLES: Bulleting

• Apple	○ Apple	▪ Apple
• Orange	○ Orange	▪ Orange
• Grape	○ Grape	▪ Grape
• Mango	○ Mango	▪ Mango
• Cherry	○ Cherry	▪ Cherry

❖ Apple	➤ Apple	✓ Apple
❖ Orange	➤ Orange	✓ Orange
❖ Grape	➤ Grape	✓ Grape
❖ Mango	➤ Mango	✓ Mango
❖ Cherry	➤ Cherry	✓ Cherry

EXERCISE 1

Bullets

1. Type the following list as shown:
   Apple
   Orange
   Grape
   Mango
   Cherry
2. Select the words you just typed.
3. Choose the Home tab.
4. In the Paragraph group, click the down arrow next to the Bullets button [icon]. The Bullet Library appears.
5. Click to select the type of bullet you want to use. Word adds bullets to your list.
   Note: As you move your cursor over the various bullet styles, Word displays the bullet style onscreen.
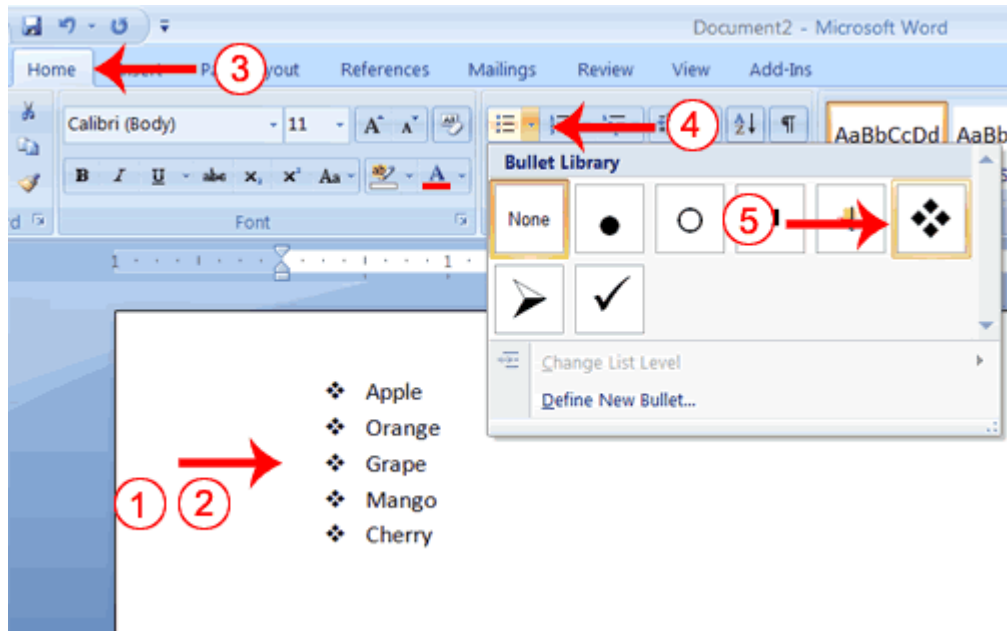
To remove the bulleting:

1. Select the list again.
2. Choose the Home tab.
3. In the Paragraph group, click the down arrow next to the Bullets icon. The Bullet dialog box appears.
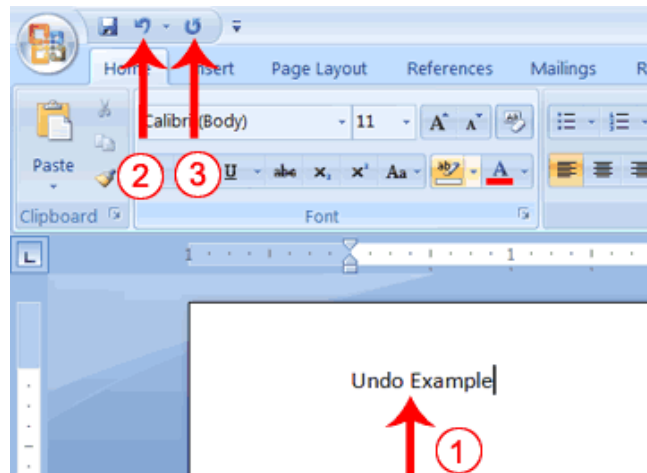4. Click None. Word removes the bullets from your list.

3. Undo and Redo

You can quickly reverse most commands you execute by using Undo. If you then change your mind again, and want to reapply a command, you can use Redo.

EXERCISE 2

Undo and Redo

1. Type **Undo example**.
2. Click the Undo button on the Quick Access menu. The typing disappears.
3. Click the Redo button on the Quick Access menu. The typing reappears.
4. Select "Undo example."
5. Press Ctrl+b to bold. Word bolds the text.
6. Press Ctrl+i. Word italicizes the text.
7. Press Ctrl+u Word underlines the text.
8. Click the down arrow next to the Undo icon. You will see the actions you performed listed. To undo the underline, click Underline; to undo the underline and italic, click Underline Italic; to undo the underline, italic, and bold click Bold etc.
9. To redo, click the Redo icon several times.

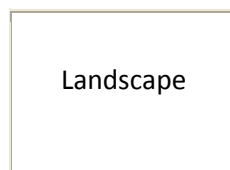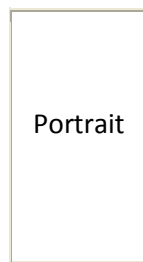***Alternate Method -- Undo & Redo by Using Keys***

1. Type **Undo example**.
2. Press Ctrl+z. The typing disappears.
3. Press Ctrl+y. The typing reappears.
4. Select "Undo example."
5. Press Ctrl+u to underline.
6. Press Ctrl+z. The underline is removed.
7. Press Ctrl+y. The underline reappears.

4. Page Layouts

MS Word provides features to design the page layouts by selecting orientation, paper size, margins etc. It also allows to insert page numbers, page breaks etc.
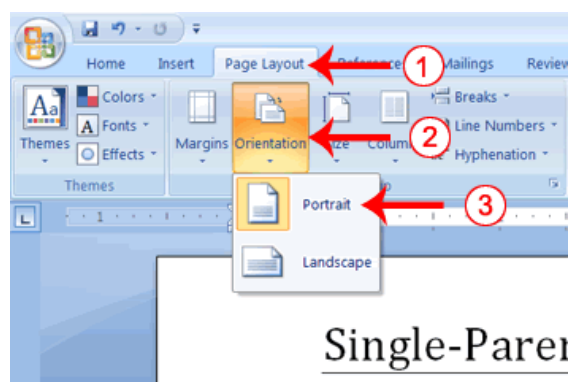
4.1 Set the Orientation

Before you print your document, you may want to change the orientation of your pages. There are two orientations you can use: portrait and landscape. Paper, such as paper sized 8 1/2 by 11, is longer on one edge than it is on the other. If you print in Portrait, the shortest edge of the paper becomes the top of the page. Portrait is the default option. If you print Landscape, the longest edge of the paper becomes the top of the page.

```
+-------------------+
|                   |
|                   |
|     Portrait      |
|                   |
|                   |
+-------------------+
```

```
+-----------------------------+
|                             |
|         Landscape           |
|                             |
+-----------------------------+
```

EXERCISE 3

Set the Orientation

1. Choose the Page Layout tab.
2. Click Orientation in the Page Setup group. A menu appears.
3. Click Portrait. Word sets your page orientation to Portrait.

4.2 Set the Page Size

Paper comes in a variety of sizes. Most business correspondence uses 8 1/2 by 11 paper which is the default page size in Word. If you are not using 8 1/2 by 11paper, you can use the Size option in the Page Setup group of the Page Layout tab to change the Size setting.

EXERCISE 4
Set the Page Size
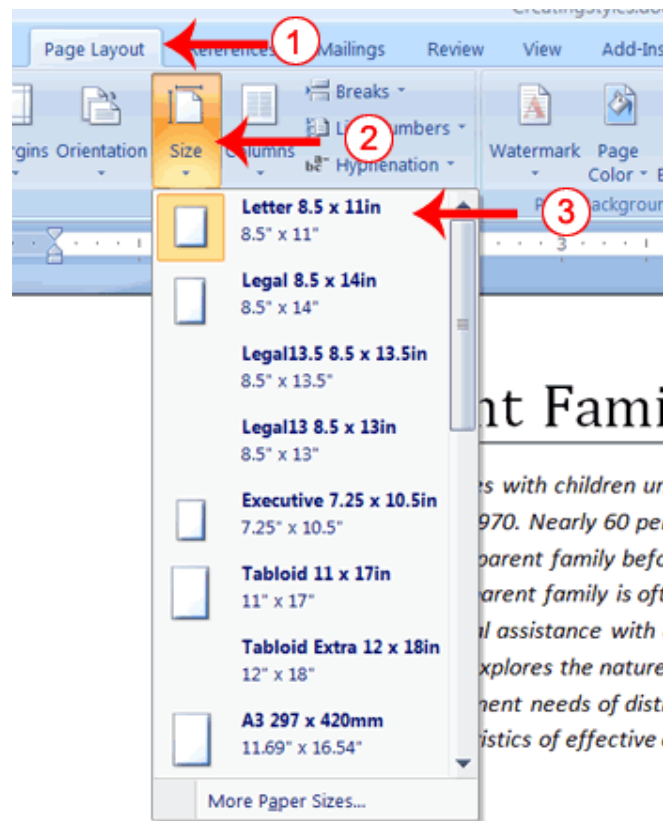
1. Choose the Page Layout tab.
2. Click Size in the Page Setup group. A menu appears.
3. Click Letter 8.5 x 11in. Word sets your page size.

4.3 Set the Margins

Margins define the amount of white space that appears at the top, bottom, left, and right edges of your document. The Margin option in the Page Setup group of the Page Layout tab provides several standard margin sizes from which you can choose.

EXERCISE 5

Set the Margins
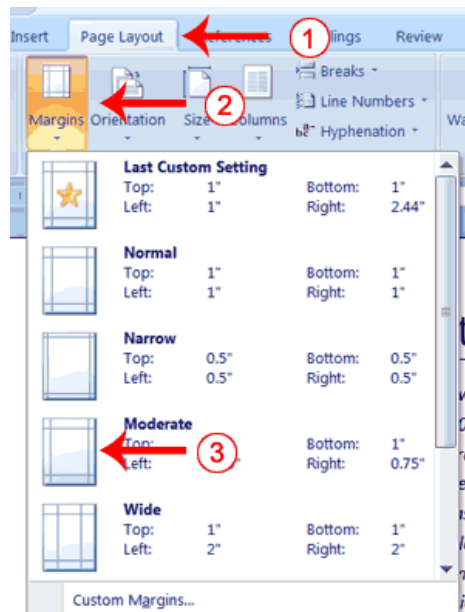
1. Choose the Page Layout tab.
2. Click Margins in the Page Setup group. A menu appears.
3. Click Moderate. Word sets your margins to the Moderate settings.

4.4 Add Page Numbers

Page numbers help you keep your document organized and enable readers to find information quickly. You can add page numbers to the top, bottom, or margins of your pages, and you can choose where the numbers appear. For example, numbers can appear at the top of the page, on the left, right, or center of the page. Word also offers several number styles from which you can choose.

EXERCISE 6

Add Page Numbers
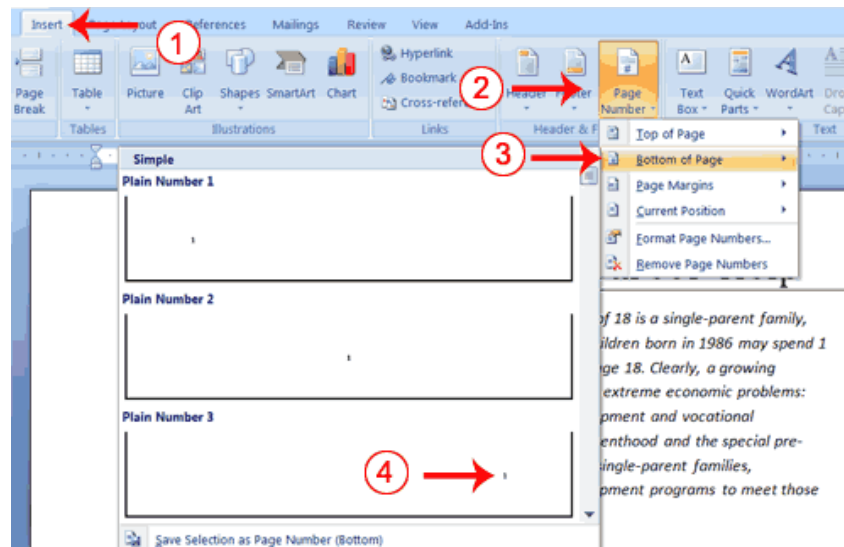
1. Choose the Insert tab.
2. Click the Page Number button in the Header & Footer group. A menu appears.
3. Click Bottom of Page.
4. Click the right-side option.

4.5 Insert Page Breaks

As you learned in Lesson 1, you can display your document in any of five views: Draft, Web Layout, Print Layout, Full Screen Reading, or Online Layout. In Print Layout view you see your document as it will appear when you print it. You can clearly see where each page ends and a new page begins.

As you review your document, you may find that you want to change the point at which a new page begins. You do this by inserting a page break. For example, if a page heading appears on one page and the first paragraph under the heading appears on the next page, you may want to insert a page break before the heading to keep the heading and the first paragraph together.

EXERCISE 7

Change to Print View
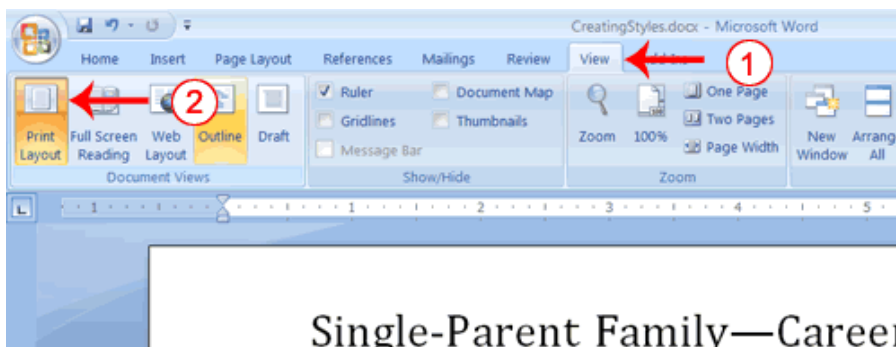
1. Choose the View tab.
2. Click Print Layout in the Document Views group. Your document changes to the Print Layout view.
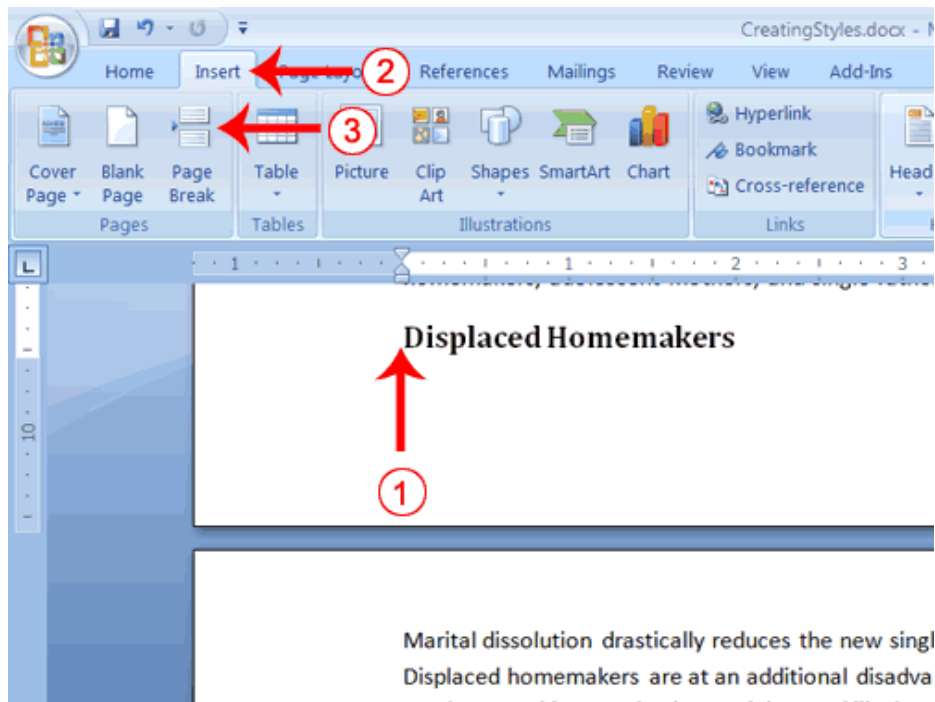
Insert Page Breaks

1. Place your cursor before the D in "Displaced Homemakers"
2. Choose the Insert tab.
3. Click Page Break. Word places a page break in your document.

To delete a page break, you select the page break and then press the Delete key.

5. Preview and Print Documents

When you have your margins, tabs, and so on the way you want them, you are ready to print. In Word, You can preview your document before you print. In the Preview mode, you can review each page, view multiple pages at the same time, zoom in on a page, and access the Size, Orientation, and Margin options.

If you press the Zoom button while you are in Preview mode, the Zoom dialog box appears. In the Zoom dialog box you can set the sizes of the pages that display as well as the number of pages that display.

When you are ready to print, you use the Print dialog box. In the Print Range area, choose All to print every page of your document, choose Current Page to print the page you are currently on, or choose Pages to enter the specific pages you want to print. Type the pages you

want to print in the Pages field. Separate individual pages with commas (1,3, 13); specify a range by using a dash (4-9).

EXERCISE 8
Print Preview
1. Click the Microsoft Office button. A menu appears.
2. Highlight the Print option. The Preview and Print the Document menu appears.
3. Click Print Preview. The Preview window appears, with your document in the window.
4. Click One Page to view one page at a time. Click Two Pages to view two pages at a time.
5. To view your document in normal size, click 100%.
6. Click the Zoom Button. The Zoom dialog box appears.
7. Select an option and then click OK. Perform this task for each option and note the results.

Note: If you want to make changes to your document, click the Close Print Preview button, to return to your document. Once you are satisfied with your document, you are ready to print.

Print
1. Click the Print button. The Print dialog box appears.
2. Click the down arrow next to the Name field and select the printer to which you want to print.
3. Choose All as the page range.
4. Click OK. Word prints your document.

UNIT – 2 : Lesson 6

MICROSOFT EXCEL 2007

6.0. Objective

The objective of this lesson is to explain the spreadsheet program provided by Microsoft Office in the form of Excel. This lesson explains the basics of using Excel program in organizing data and to do mathematical calculations.

After studying this lesson you will be able to learn

- basics of excel window
- enter text and numbers into columns
- edit the data entered

Structure

1. Introduction
2. Entering Text and Numbers
      2.1 The Microsoft Excel Window
      2.2 Moving Around Worksheet
      2.3 Enter Data
3. Editing
4. Saving and Closing the file

1. Introduction

Microsoft Excel is an electronic spreadsheet program. You can use it to organize your data into rows and columns. You can also use it to perform mathematical calculations quickly. This lesson explains Microsoft Excel features and about how to use Excel window. You use the window to interact with Excel.

2. Entering Text and Numbers

The excel window provides worksheets to enter text or numbers into columns and rows. Before explaining the entering of data and performing mathematical functions, the following section explains the MS Excel Window.

2.1 The Microsoft Excel Window

Start Microsoft Excel 2007. The Microsoft Excel window appears and your screen looks similar to the one shown here.
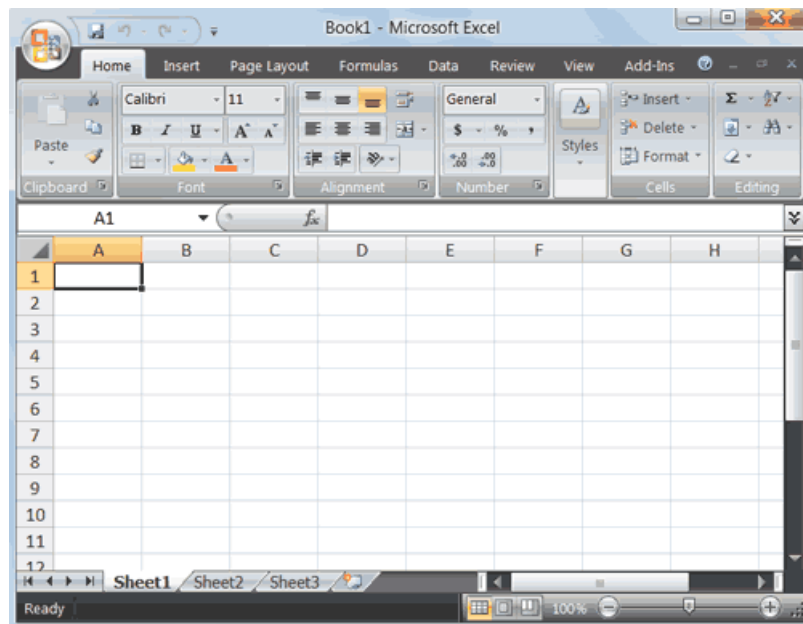
Note: Your screen will probably not look exactly like the screen shown. In Excel 2007, how a window displays depends on the settings

The Microsoft Office Button

In the upper-left corner of the Excel 2007 window is the Microsoft Office button. When you click the button, a menu appears. You can use the menu to create a new file, open an existing file, save a file, and perform many other tasks.
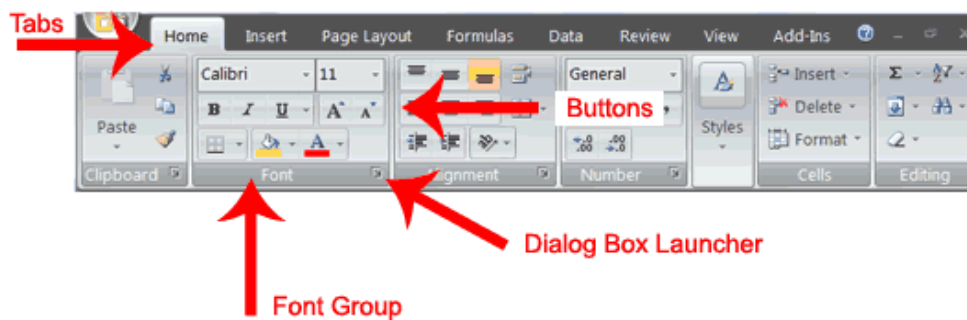
The Quick Access Toolbar

Next to the Microsoft Office button is the Quick Access toolbar. The Quick Access toolbar gives you with access to commands you frequently use. By default, Save, Undo, and Redo appear on the Quick Access toolbar. You can use Save to save your file, Undo to roll back an action you have taken, and Redo to reapply an action you have rolled back.

The Title Bar

Book1 - Microsoft Excel

Next to the Quick Access toolbar is the Title bar. On the Title bar, Microsoft Excel displays the name of the workbook you are currently using. At the top of the Excel window, you should see "Microsoft Excel - Book1" or a similar name.

The Ribbon

In Microsoft Excel 2007, you use the Ribbon to issue commands. The Ribbon is located near the top of the Excel window, below the Quick Access toolbar. At the top of the Ribbon are several tabs; clicking a tab displays several related command groups. Within each group are related command buttons. You click buttons to issue commands or to access menus and dialog boxes. You may also find a dialog box launcher in the bottom-right corner of a group. When you click the dialog box launcher, a dialog box makes additional commands available.

Worksheets
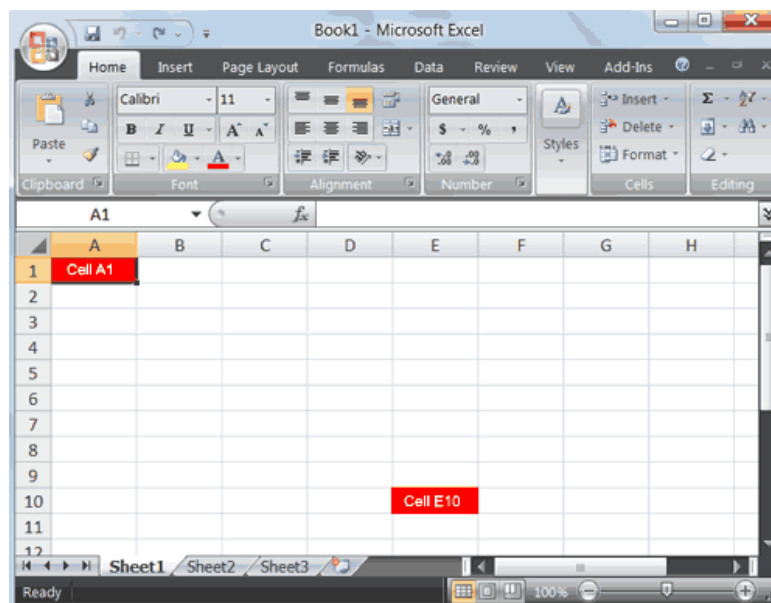
Microsoft Excel consists of worksheets. Each worksheet contains columns and rows. The columns are lettered A to Z and then continuing with AA, AB, AC and so on; the rows are numbered 1 to 1,048,576. The number of columns and rows you can have in a worksheet is limited by your computer memory and your system resources.

The combination of a column coordinate and a row coordinate make up a cell address. For example, the cell located in the upper-left corner of the worksheet is cell A1, meaning column A, row 1. Cell E10 is located under column E on row 10. You enter your data into the cells on the worksheet.

The Formula Bar

Formula Bar

If the Formula bar is turned on, the cell address of the cell you are in displays in the Name box which is located on the left side of the Formula bar. Cell entries display on the right side of the Formula bar. If you do not see the Formula bar in your window, perform the following steps:

1. Choose the View tab.
2. Click Formula Bar in the Show/Hide group. The Formula bar appears.

The Status Bar
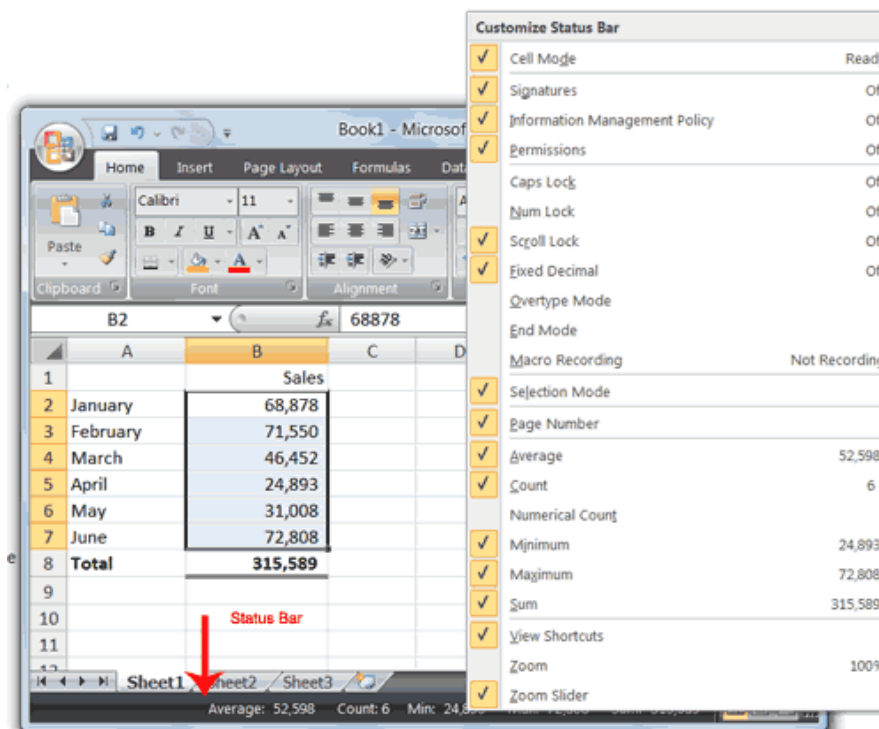
The Status bar appears at the very bottom of the Excel window and provides such information as the sum, average, minimum, and maximum value of selected numbers. You can change what displays on the Status bar by right-clicking on the Status bar and selecting the options you want from the Customize Status Bar menu. You click a menu item to select it. You click it again to deselect it. A check mark next to an item means the item is selected.

2.2 Moving Around Worksheet

By using the arrow keys, you can move around your worksheet. You can use the down arrow key to move downward one cell at a time. You can use the up arrow key to move upward one cell at a time. You can use the Tab key to move across the page to the right, one cell at a time. You can hold down the Shift key and then press the Tab key to move to the left, one cell at a time. You can use the right and left arrow keys to move right or left one cell at a time. The Page Up and Page Down keys move up and down one page at a time. If you hold down the Ctrl key and then press the Home key, you move to the beginning of the worksheet.

EXERCISE 1

Move Around the Worksheet

The Down Arrow Key

- Press the down arrow key several times. Note that the cursor moves downward one cell at a time.

The Up Arrow Key

- Press the up arrow key several times. Note that the cursor moves upward one cell at a time.

The Tab Key

1. Move to cell A1.
2. Press the Tab key several times. Note that the cursor moves to the right one cell at a time.

The Shift+Tab Keys

- Hold down the Shift key and then press Tab. Note that the cursor moves to the left one cell at a time.

The Right and Left Arrow Keys

1. Press the right arrow key several times. Note that the cursor moves to the right.
2. Press the left arrow key several times. Note that the cursor moves to the left.

Page Up and Page Down

1. Press the Page Down key. Note that the cursor moves down one page.
2. Press the Page Up key. Note that the cursor moves up one page.

The Ctrl-Home Key

1. Move the cursor to column J.
2. Stay in column J and move the cursor to row 20.
3. Hold down the Ctrl key while you press the Home key. Excel moves to cell A1.

Go To Cells Quickly

The following are shortcuts for moving quickly from one cell in a worksheet to a cell in a different part of the worksheet.

EXERCISE 2

Go to -- F5

The F5 function key is the "Go To" key. If you press the F5 key, you are prompted for the cell to which you wish to go. Enter the cell address, and the cursor jumps to that cell.

1. Press F5. The Go To dialog box opens.
2. Type **J3** in the Reference field.
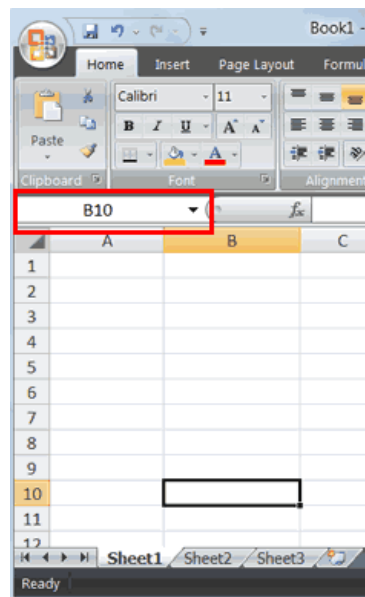3. Press Enter. Excel moves to cell J3.

Go to -- Ctrl+G

You can also use Ctrl+G to go to a specific cell.

1. Hold down the Ctrl key while you press "g" (Ctrl+g). The Go To dialog box opens.
2. Type **C4** in the Reference field.
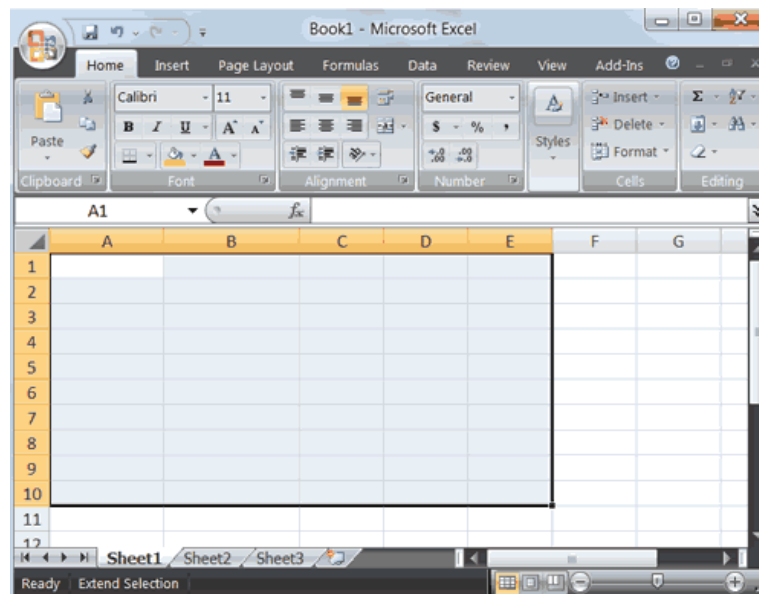3. Press Enter. Excel moves to cell C4.

The Name Box

You can also use the Name box to go to a specific cell. Just type the cell you want to go to in the Name box and then press Enter.

1. Type **B10** in the Name box.
2. Press Enter. Excel moves to cell B10.

Select Cells

If you wish to perform a function on a group of cells, you must first select those cells by highlighting them. The exercises that follow teach you how to select.

EXERCISE 3

Select Cells

To select cells A1 to E1:

1. Go to cell A1.
2. Press the F8 key. This anchors the cursor.
3. Note that "Extend Selection" appears on the Status bar in the lower-left corner of the window. You are in the Extend mode.
4. Click in cell E7. Excel highlights cells A1 to E7.
5. Press Esc and click anywhere on the worksheet to clear the highlighting.

Alternative Method: Select Cells by Dragging

You can also select an area by holding down the left mouse button and dragging the mouse over the area. In addition, you can select noncontiguous areas of the worksheet by doing the following:
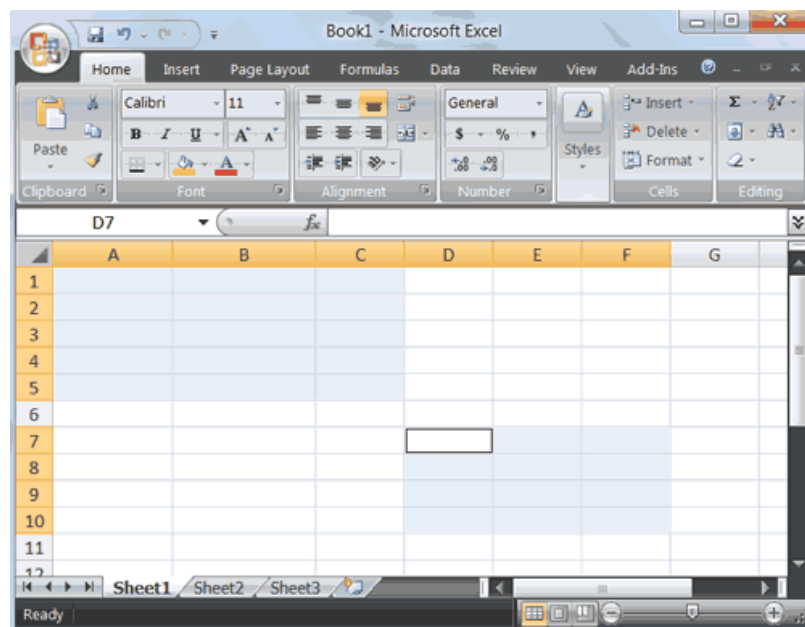

1. Go to cell A1.
2. Hold down the Ctrl key. You won't release it until step 9. Holding down the Ctrl key enables you to select noncontiguous areas of the worksheet.
3. Press the left mouse button.
4. While holding down the left mouse button, use the mouse to move from cell A1 to C5.
5. Continue to hold down the Ctrl key, but release the left mouse button.
6. Using the mouse, place the cursor in cell D7.
7. Press the left mouse button.
8. While holding down the left mouse button, move to cell F10. Release the left mouse button.
9. Release the Ctrl key. Cells A1 to C5 and cells D7 to F10 are selected.
10. Press Esc and click anywhere on the worksheet to remove the highlighting.
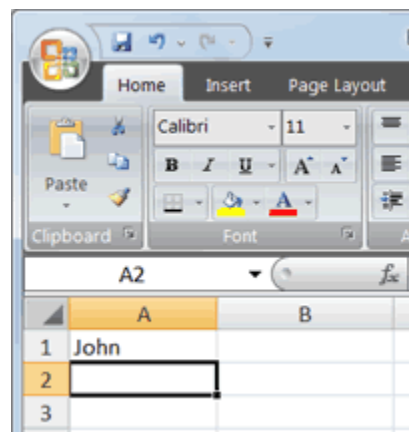
2.3 Enter Data

This section explains you how to enter data into your worksheet. First, place the cursor in the cell in which you want to start entering data. Type some data, and then press Enter. If you need to delete, press the Backspace key to delete one character at a time.

EXERCISE 4
Enter Data
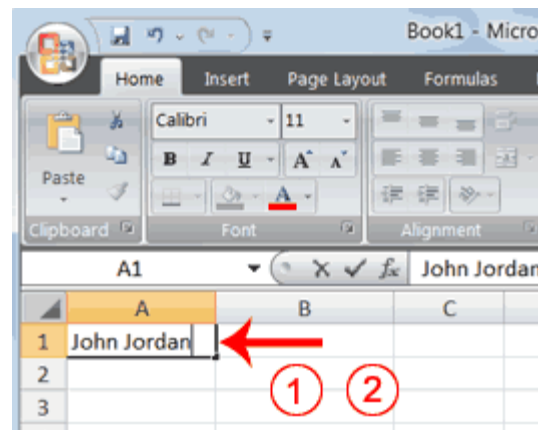
1. Place the cursor in cell A1.
2. Type **John Jordan**. Do not press Enter at this time.
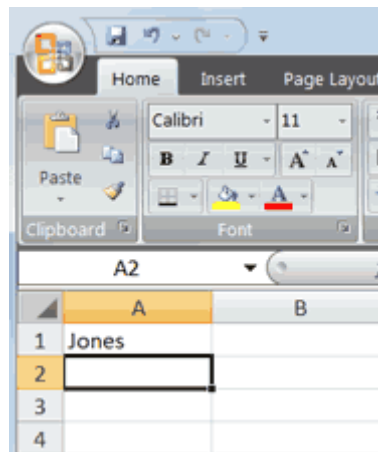

Delete Data
    The Backspace key erases one character at a time.
1. Press the Backspace key until Jordan is erased.
2. Press Enter. The name "John" appears in cell A1.

3. Editing
Edit a Cell
After you enter data into a cell, you can edit the data by pressing F2 while you are in the cell you wish to edit.

EXERCISE 5
Edit a Cell

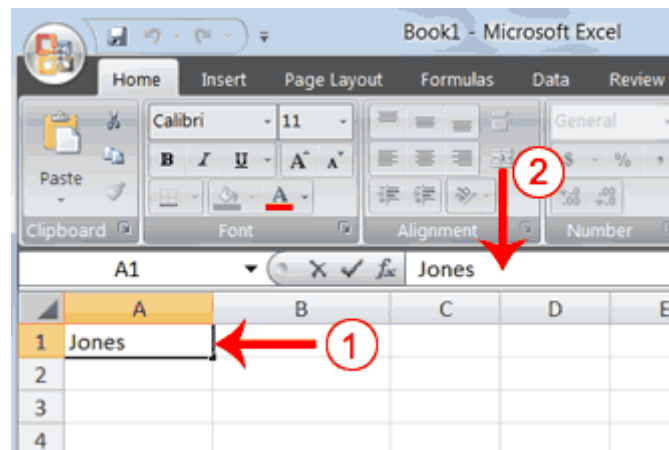Change "John" to "Jones."
1. Move to cell A1.
2. Press F2.
3. Use the Backspace key to delete the "n" and the "h."
4. Type **nes**.
5. Press Enter.

Alternate Method: Editing a Cell by Using the Formula Bar

You can also edit the cell by using the Formula bar. You change "Jones" to "Joker" in the following exercise.

1. Move the cursor to cell A1.
2. Click in the formula area of the Formula bar.
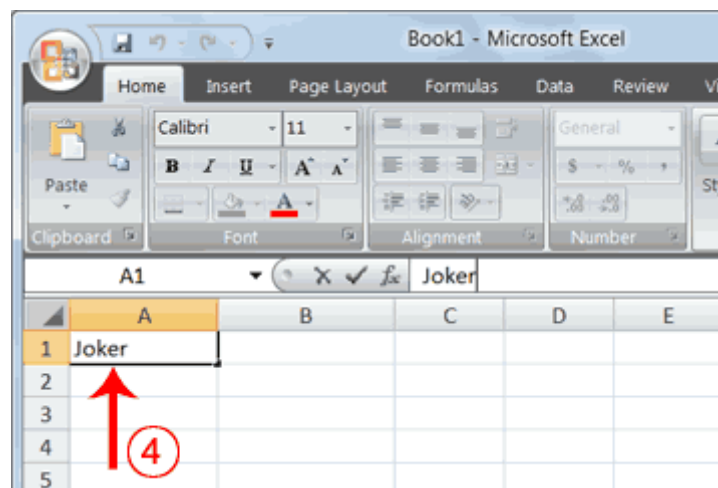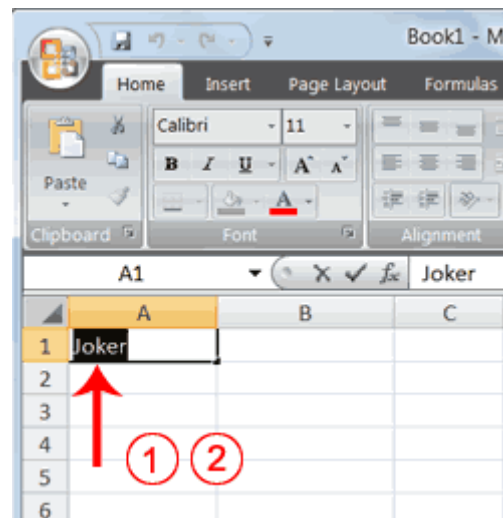
3. Use the backspace key to erase the "s," "e," and "n."
4. Type **ker**.
5. Press Enter.

Alternate Method: Edit a Cell by Double-Clicking in the Cell

You can change "Joker" to "Johnson" as follows:

1. Move to cell A1.
2. Double-click in cell A1.
3. Press the End key. Your cursor is now at the end of your text.
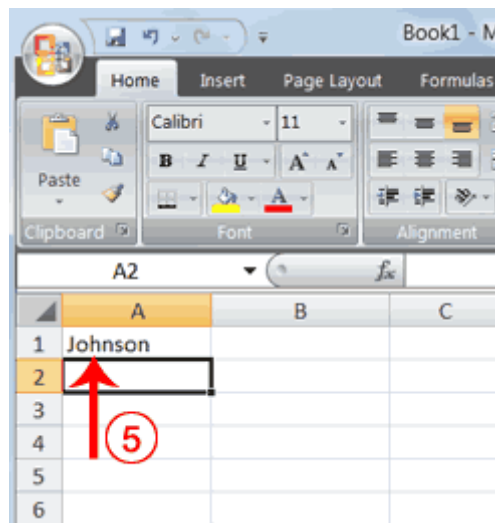
3. Use the Backspace key to erase "r," "e," and "k."
4. Type **hnson**.
5. Press Enter.

Change a Cell Entry

Typing in a cell replaces the old cell entry with the new information you type.

1. Move the cursor to cell A1.
2. Type **Cathy**.
3. Press Enter. The name "Cathy" replaces "Johnson."
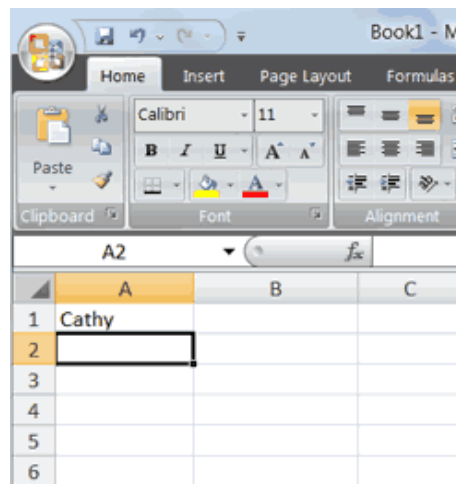
Wrap Text

When you type text that is too long to fit in the cell, the text overlaps the next cell. If you do not want it to overlap the next cell, you can wrap the text.

EXERCISE 6

Wrap Text
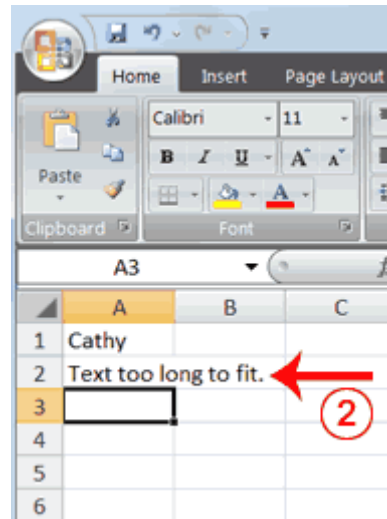
1. Move to cell A2.
2. Type **Text too long to fit**.
3. Press Enter.
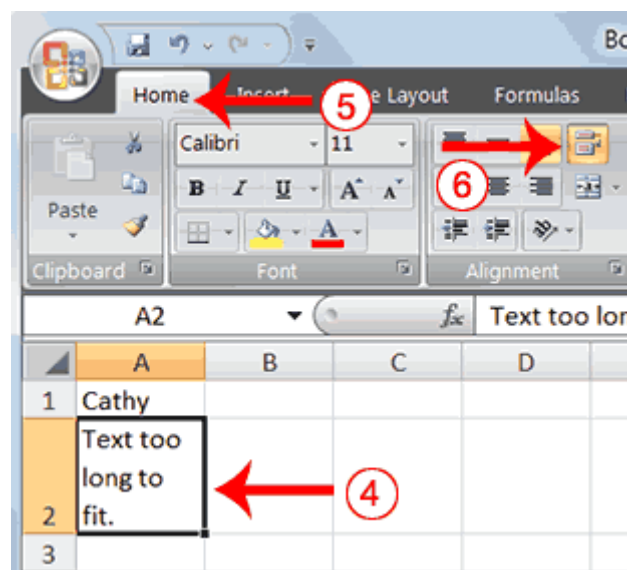
4. Return to cell A2.
5. Choose the Home tab.
6. Click the Wrap Text button ⬚. Excel wraps the text in the cell.

Delete a Cell Entry

To delete an entry in a cell or a group of cells, you place the cursor in the cell or select the group of cells and press Delete.

EXERCISE 7

Delete a Cell Entry

1. Select cells A1 to A2.
2. Press the Delete key.

4. Saving and Closing the file

Save a File

To save your file:

1. Click the Office button. A menu appears.
2. Click Save. The Save As dialog box appears.
3. Go to the directory in which you want to save your file.
4. Type **Lesson1** in the File Name field.
5. Click Save. Excel saves your file.

Close Excel

Close Microsoft Excel.

1. Click the Office button. A menu appears.
2. Click Close. Excel closes.

Lesson 7

EXCEL FORMULAS AND MATHEMATICAL CALCULATIONS

7.0. Objective

The objective of this lesson is to explain how to perform mathematical calculations. This lesson makes you learn how to format text in the cells.

After studying this lesson you will be able to
- do mathematical calculations with data entered into the cells
- format text in the desired way

Structure

1. Introduction

2. Set the Enter Key Direction

3. Perform Mathematical Calculations

    3.1 Addition

    3.2 Subtraction

    3.3 Multiplication

    3.4 Division

    3.5 Auto Sum

4. Perform Automatic Calculations

5. Perform Advanced Mathematical Calculations

6. Align Cell Entries

7. Copy, Cut, Paste, and Cell Addressing

    7.1 Copy with the Ribbon

    7.2 Copy with the Mini Toolbar

    7.3 Absolute Cell Addressing

    7.4 Copy and Paste with Keyboard Shortcuts

    7.5 Mixed Cell Addressing

    7.6 Cut and Paste

1. Introduction

The previous lesson taught you how to move around the Excel window, and how to enter data. Excel window provides formula bar to perform basic mathematical calculations on the data entered into cells. Excel also gave provision to format text and numerical data. To start this lesson, open Excel.

2. Set the Enter Key Direction

In Microsoft Excel, you can specify the direction the cursor moves when you press the Enter key. In the exercises that follow, the cursor must move down one cell when you press Enter. You can use the Direction box in the Excel Options pane to set the cursor to move up, down, left, right, or not at all. Perform the steps that follow to set the cursor to move down when you press the Enter key.
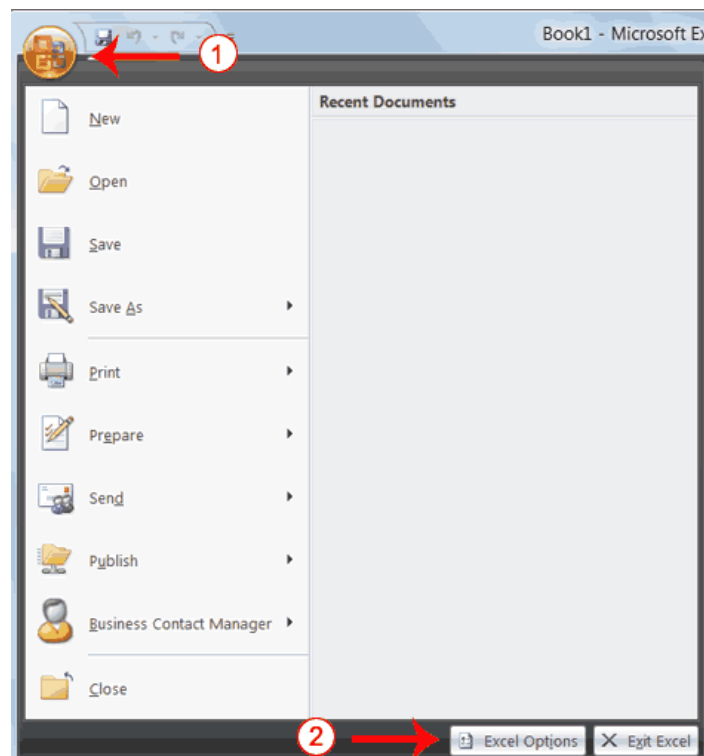
1. Click the Microsoft Office button. A menu appears.
2. Click Excel Options in the lower-right corner. The Excel Options pane appears.
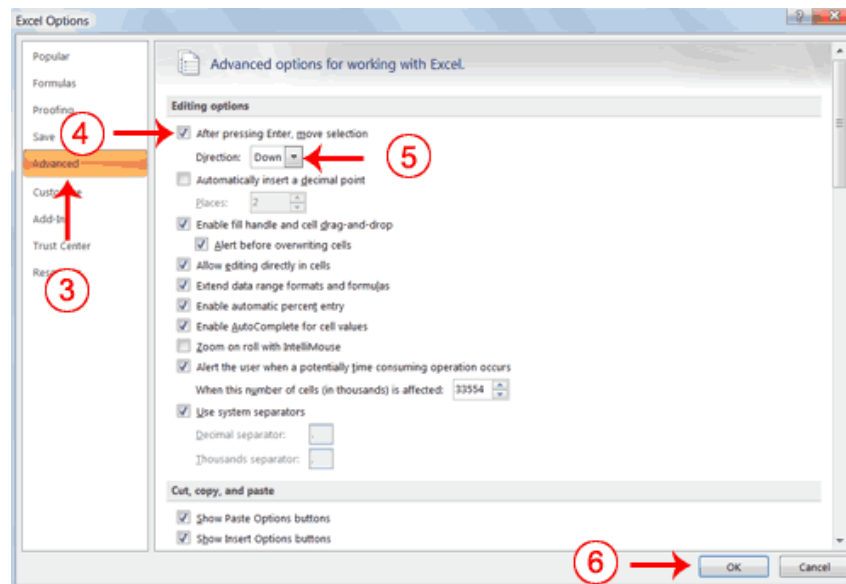
3. Click Advanced.
4. If the check box next to After Pressing Enter Move Selection is not checked, click the box to check it.
5. If Down does not appear in the Direction box, click the down arrow next to the Direction box and then click Down.
6. Click OK. Excel sets the Enter direction to down.

3. Perform Mathematical Calculations

In Microsoft Excel, you can enter numbers and mathematical formulas into cells. Whether you enter a number or a formula, you can reference the cell when you perform mathematical calculations such as addition, subtraction, multiplication, or division. When entering a mathematical formula, precede the formula with an equal sign. Use the following to indicate the type of calculation you wish to perform:

+ Addition
- Subtraction
* Multiplication
/ Division
^ Exponential

In the following exercises, you can learn how to perform mathematical calculations.

EXERCISE 1

3.1 Addition
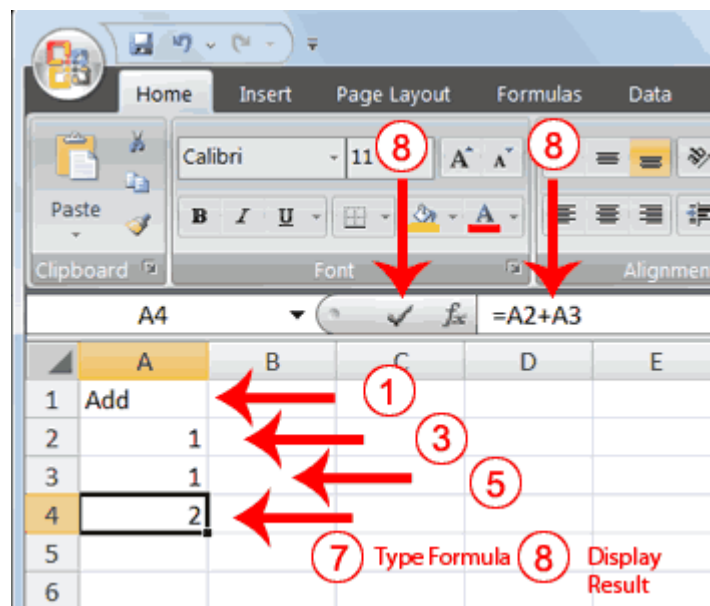
1. Type **Add** in cell A1.
2. Press Enter. Excel moves down one cell.
3. Type **1** in cell A2.
4. Press Enter. Excel moves down one cell.
5. Type **1** in cell A3.
6. Press Enter. Excel moves down one cell.
7. Type **=A2+A3** in cell A4.
8. Click the check mark on the Formula bar. Excel adds cell A1 to cell A2 and displays the result in cell A4. The formula displays on the Formula bar.

Note: Clicking the check mark on the Formula bar is similar to pressing Enter. Excel records your entry but does not move to the next cell.

3.2 Subtraction

1. Press F5. The Go To dialog box appears.
2. Type **B1** in the Reference field.
3. Press Enter. Excel moves to cell B1.

4. Type **Subtract**.
5. Press Enter. Excel moves down one cell.
6. Type **6** in cell B2.
7. Press Enter. Excel moves down one cell.
8. Type **3** in cell B3.
9. Press Enter. Excel moves down one cell.
10. Type =**B2-B3** in cell B4.
11. Click the check mark on the Formula bar. Excel subtracts cell B3 from cell B2 and the result displays in cell B4. The formula displays on the Formula bar.

3.3 Multiplication

1. Hold down the Ctrl key while you press "g" (Ctrl+g). The Go To dialog box appears.
2. Type **C1** in the Reference field.
3. Press Enter. Excel moves to cell C1
4. Type **Multiply**.
5. Press Enter. Excel moves down one cell.
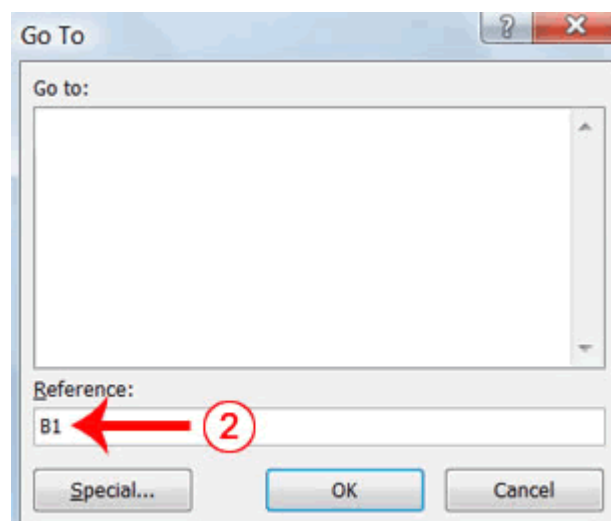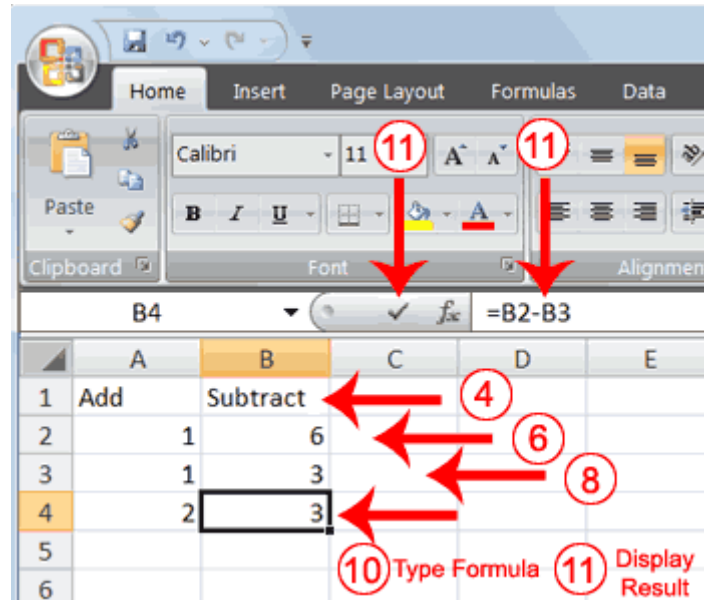6. Type **2** in cell C2.
7. Press Enter. Excel moves down one cell.
8. Type **3** in cell C3.
9. Press Enter. Excel moves down one cell.
10. Type =**C2*C3** in cell C4.
11. Click the check mark on the Formula bar. Excel multiplies C1 by cell C2 and displays the result in cell C3. The formula displays on the Formula bar.

3.4 Division

1. Press F5.
2. Type **D1** in the Reference field.
3. Press Enter. Excel moves to cell D1.
4. Type **Divide**.
5. Press Enter. Excel moves down one cell.
6. Type **6** in cell D2.
7. Press Enter. Excel moves down one cell.
8. Type **3** in cell D3.
9. Press Enter. Excel moves down one cell.
10. Type **=D2/D3** in cell D4.
11. Click the check mark on the Formula bar. Excel divides cell D2 by cell D3 and displays the result in cell D4. The formula displays on the Formula bar.

When creating formulas, you can reference cells and include numbers. All of the following formulas are valid:

> =A2/B2
> =A1+12-B3
> =A2*B2+12
> =24+53

3.5 AutoSum

You can use the AutoSum button Σ on the Home tab to automatically add a column or row of numbers. When you press the AutoSum button Σ, Excel selects the numbers it thinks you want to add. If you then click the check mark on the Formula bar or press the Enter key, Excel adds the numbers. If Excel's guess as to which numbers you want to add is wrong, you can select the cells you want.

EXERCISE 2

AutoSum

The following illustrates AutoSum:
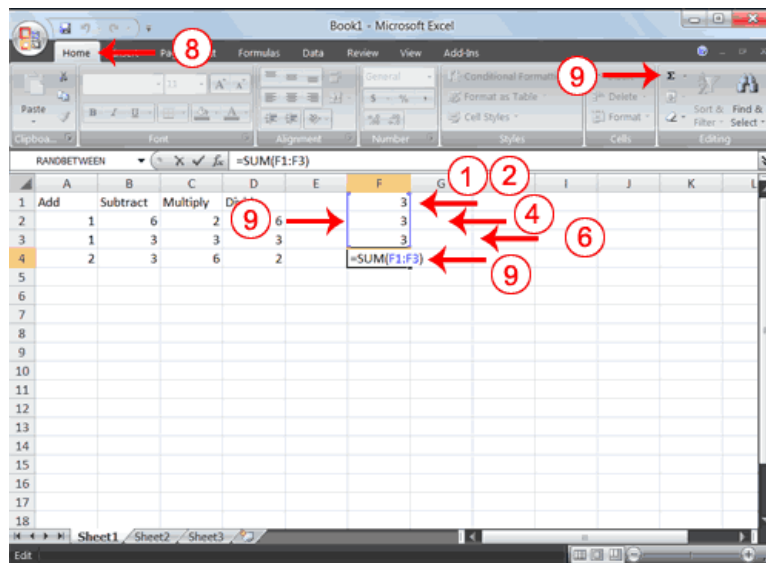
1. Go to cell F1.
2. Type **3.**
3. Press Enter. Excel moves down one cell.
4. Type **3**.
5. Press Enter. Excel moves down one cell.
6. Type **3**.
7. Press Enter. Excel moves down one cell to cell F4.
8. Choose the Home tab.
9. Click the AutoSum button **Σ** in the Editing group. Excel selects cells F1 through F3 and enters a formula in cell F4.

10. Press Enter. Excel adds cells F1 through F3 and displays the result in cell F4.

4. Perform Automatic Calculations

By default, Microsoft Excel recalculates the worksheet as you change cell entries. This makes it easy for you to correct mistakes and analyze a variety of scenarios.

EXERCISE 3

Automatic Calculation

Make the changes described below and note how Microsoft Excel automatically re - calculates.
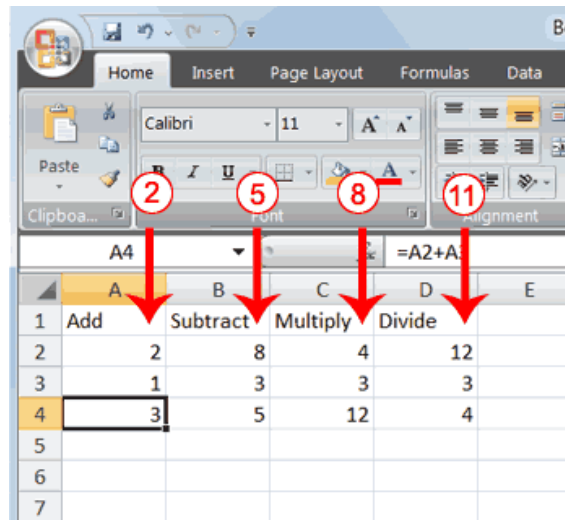
1. Move to cell A2.
2. Type **2**.
3. Press the right arrow key. Excel changes the result in cell A4. Excel adds cell A2 to cell A3 and the new result appears in cell A4.
4. Move to cell B2.
5. Type **8**.
6. Press the right arrow key. Excel subtracts cell B3 from cell B3 and the new result appears in cell B4.
7. Move to cell C2.
8. Type **4**.
9. Press the right arrow key. Excel multiplies cell C2 by cell C3 and the new result appears in cell C4.
10. Move to cell D2.
11. Type **12**.
12. Press the Enter key. Excel divides cell D2 by cell D3 and the new result appears in cell D4.

5. Perform Advanced Mathematical Calculations

When you perform mathematical calculations in Excel, be careful of precedence. Calculations are performed from left to right, with multiplication and division performed before addition and subtraction.

EXERCISE 5

Advanced Calculations

1. Move to cell A7.
2. Type =**3+3+12/2*4**.
3. Press Enter.

   Note: Microsoft Excel divides 12 by 2, multiplies the answer by 4, adds 3, and then adds another 3. The answer, 30, displays in cell A7.

A7			f_x	=3+3+12/2*4	
	A	B	C	D	E
7	30				
8					

To change the order of calculation, use parentheses. Microsoft Excel calculates the information in parentheses first.

1. Double-click in cell A7.
2. Edit the cell to read =**(3+3+12)/2*4**.
3. Press Enter.

   Note: Microsoft Excel adds 3 plus 3 plus 12, divides the answer by 2, and then multiplies the result by 4. The answer, 36, displays in cell A7.

A7			f_x	=(3+3+12)/2*4	
	A	B	C	D	E
7	36				
8					

6. Align Cell Entries

When you type text into a cell, by default your entry aligns with the left side of the cell. When you type numbers into a cell, by default your entry aligns with the right side of the cell. You can change the cell alignment. You can center, left-align, or right-align any cell entry. Look at cells A1 to D1. Note that they are aligned with the left side of the cell.

	A	B	C	D
1	Add	Subtract	Multiply	Divide
2	2	8	4	12

EXERCISE 4

Center

To center cells A1 to D1:
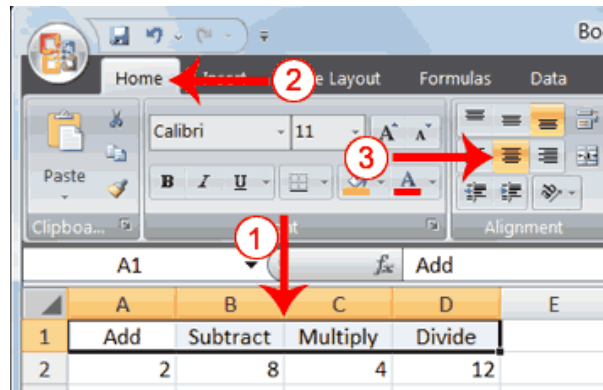
1. Select cells A1 to D1.
2. Choose the Home tab.
3. Click the Center button [icon] in the Alignment group. Excel centers each cell's content.

Left-Align

To left-align cells A1 to D1:
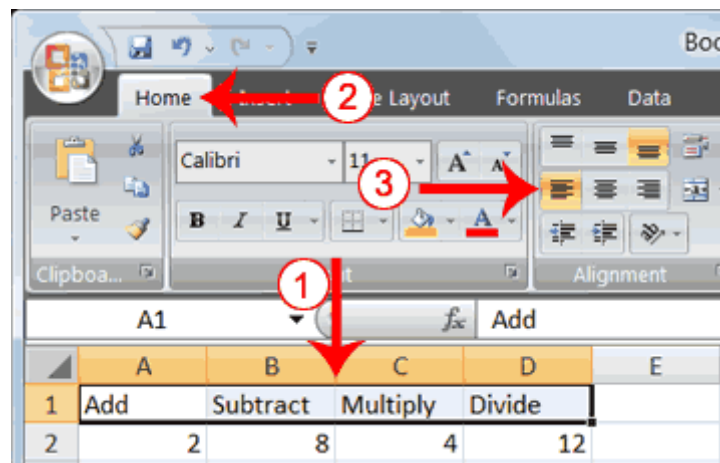
1. Select cells A1 to D1.
2. Choose the Home tab.
3. Click the Align Text Left [icon] button in the Alignment group. Excel left-aligns each cell's content.

Right-Align

To right-align cells A1 to D1:
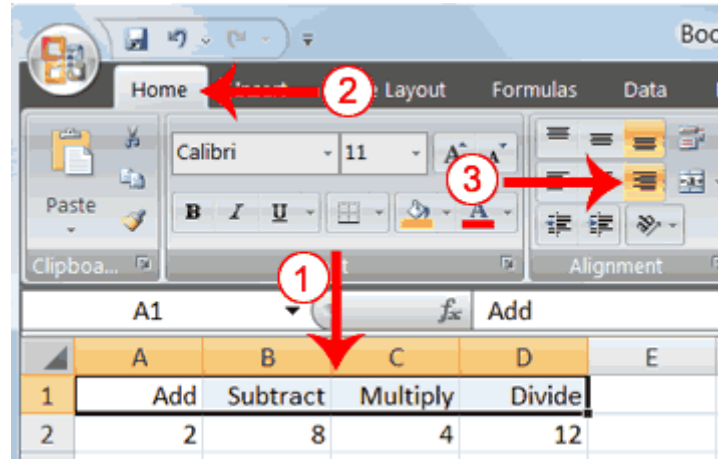
1. Select cells A1 to D1. Click in cell A1.
2. Choose the Home tab.
3. Click the Align Text Right ⊟ button. Excel right-aligns the cell's content.
4. Click anywhere on your worksheet to clear the highlighting.

7. Copy, Cut, Paste, and Cell Addressing

In Excel, you can copy data from one area of a worksheet and place the data you copied anywhere in the same or another worksheet. In other words, after you type information into a worksheet, if you want to place the same information somewhere else, you do not have to retype the information. You simple copy it and then paste it in the new location.

You can use Excel's Cut feature to remove information from a worksheet. Then you can use the Paste feature to place the information you cut anywhere in the same or another worksheet. In other words, you can move information from one place in a worksheet to another place in the same or different worksheet by using the Cut and Paste features.

Microsoft Excel records cell addresses in formulas in three different ways, called *absolute*, *relative,* and *mixed*. The way a formula is recorded is important when you copy it. With relative cell addressing, when you copy a formula from one area of the worksheet to another, Excel records the position of the cell relative to the cell that originally contained the formula. With *absolute* cell addressing, when you copy a formula from one area of the worksheet to another, Excel references the same cells, no matter where you copy the formula. You can use mixed cell addressing to keep the row constant while the column changes, or vice versa. The following exercises demonstrate.

EXERCISE 6

Copy, Cut, Paste, and Cell Addressing

1. Move to cell A9.
2. Type **1**. Press Enter. Excel moves down one cell.
3. Type **1**. Press Enter. Excel moves down one cell.
4. Type **1**. Press Enter. Excel moves down one cell.
5. Move to cell B9.
6. Type **2**. Press Enter. Excel moves down one cell.
7. Type **2**. Press Enter. Excel moves down one cell.
8. Type **2**. Press Enter. Excel moves down one cell.

In addition to typing a formula, you can also enter formulas by using Point mode. When you are in Point mode, you can enter a formula either by clicking on a cell or by using the arrow keys.

1. Move to cell A12.
2. Type =.
3. Use the up arrow key to move to cell A9.
4. Type +.
5. Use the up arrow key to move to cell A10.
6. Type +.
7. Use the up arrow key to move to cell A11.
8. Click the check mark on the Formula bar. Look at the Formula bar. Note that the formula you entered is displayed there.

7.1 Copy with the Ribbon

To copy the formula you just entered, follow these steps:
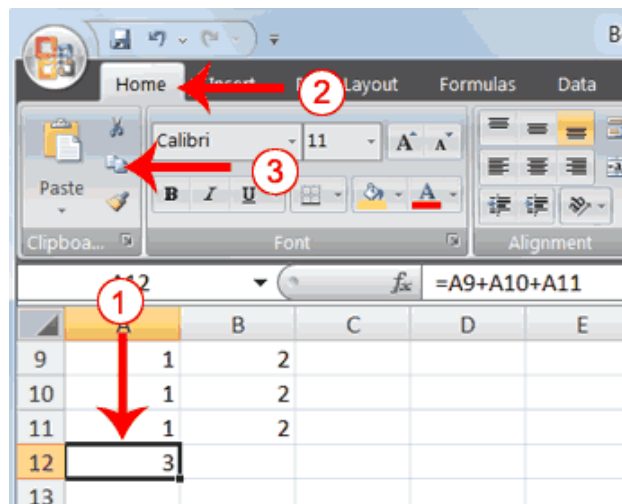
1. You should be in cell A12.
2. Choose the Home tab.
3. Click the Copy ⎘ button in the Clipboard group. Excel copies the formula in cell A12.
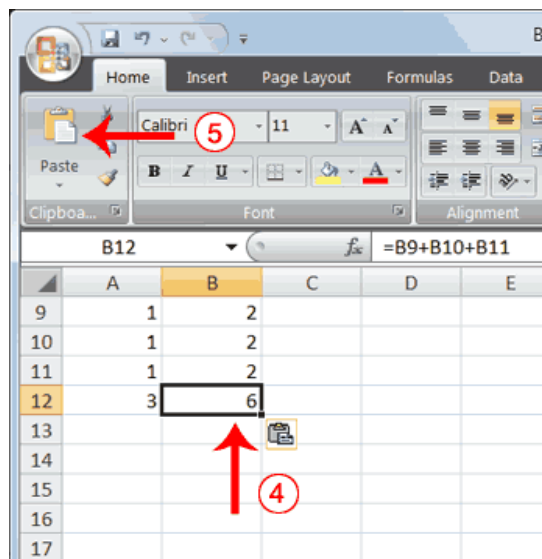
4. Press the right arrow key once to move to cell B12.

5. Click the Paste 📋 button in the Clipboard group. Excel pastes the formula in cell A12 into cell B12.

6. Press the Esc key to exit the Copy mode.

Compare the formula in cell A12 with the formula in cell B12 (while in the respective cell, look at the Formula bar). The formulas are the same except that the formula in cell A12 sums the entries in column A and the formula in cell B12 sums the entries in column B. The formula was copied in a *relative* fashion. Before proceeding with the next part of the exercise, you must copy the information in cells A7 to B9 to cells C7 to D9. This time you will copy by using the Mini toolbar.

7.2 Copy with the Mini Toolbar
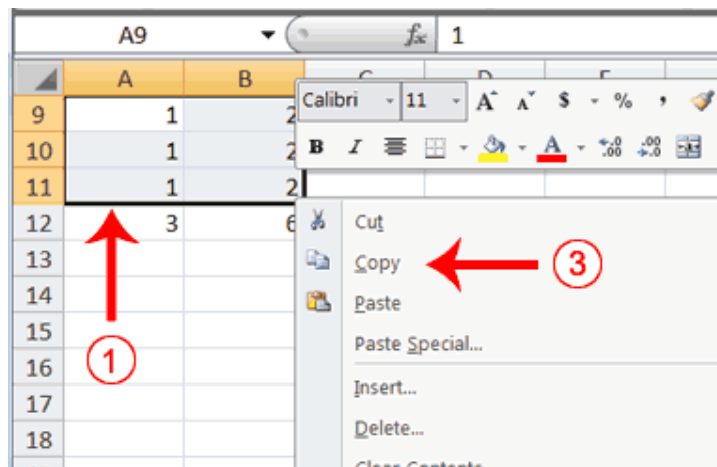
1. Select cells A9 to B11. Move to cell A9. Press the Shift key. While holding down the Shift key, press the down arrow key twice. Press the right arrow key once. Excel highlights A9 to B11.
2. Right-click. A context menu and a Mini toolbar appear.
3. Click Copy, which is located on the context menu. Excel copies the information in cells A9 to B11.
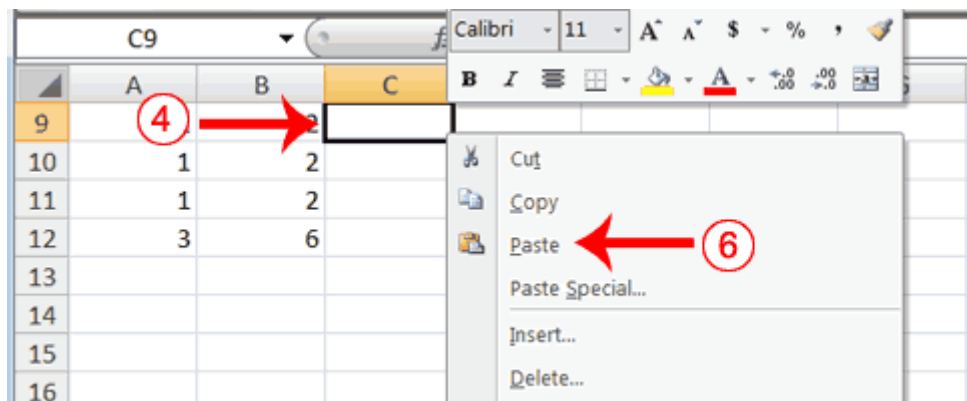
4. Move to cell C9.
5. Right-click. A context menu appears.
6. Click Paste. Excel copies the contents of cells A9 to B11 to cells C9 to C11.

7. Press Esc to exit Copy mode.

7.3 Absolute Cell Addressing

You make a cell address an absolute cell address by placing a dollar sign in front of the row and column identifiers. You can do this automatically by using the F4 key. To illustrate:

1. Move to cell C12.
2. Type =.
3. Click cell C9.
4. Press F4. Dollar signs appear before the C and the 9.
5. Type +.
6. Click cell C10.
7. Press F4. Dollar signs appear before the C and the 10.
8. Type +.
9. Click cell C11.
10. Press F4. Dollar signs appear before the C and the 11.
11. Click the check mark on the formula bar. Excel records the formula in cell C12.

C12		f_x	=$C$9+$C$10+$C$11		
	A	B	C	D	E	F
9	1	2	1	2		
10	1	2	1	2		
11	1	2	1	2		
12	3	6	3			
13						
14						

7.4 Copy and Paste with Keyboard Shortcuts

Keyboard shortcuts are key combinations that enable you to perform tasks by using the keyboard. Generally, you press and hold down a key while pressing a letter. For example, Ctrl+c means you should press and hold down the Ctrl key while pressing "c." This tutorial notates key combinations as follows:

Press Ctrl+c.

Now copy the formula from C12 to D12. This time, you can copy by using keyboard short cuts.

1. Move to cell C12.
2. Hold down the Ctrl key while you press "c" (Ctrl+c). Excel copies the contents of cell C12.
3. Press the right arrow once. Excel moves to D12.

4. Hold down the Ctrl key while you press "v" (Ctrl+v). Excel pastes the contents of cell C12 into cell D12.
5. Press Esc to exit the Copy mode.

D12				f_x	=$C$9+$C$10+$C$11	
	A	B	C	D	E	F
9	1	2	1	2		
10	1	2	1	2		
11	1	2	1	2		
12	3	6	3	3		
13						
14						

Compare the formula in cell C12 with the formula in cell D12 (while in the respective cell, look at the Formula bar). The formulas are exactly the same. Excel copied the formula from cell C12 to cell D12. Excel copied the formula in an *absolute* fashion. Both formulas sum column C.

7.5 Mixed Cell Addressing

You use mixed cell addressing to reference a cell when you want to copy part of it absolute and part relative. For example, the row can be absolute and the column relative. You can use the F4 key to create a mixed cell reference.

1. Move to cell E1.
2. Type =.
3. Press the up arrow key once.
4. Press F4.
5. Press F4 again. Note that the column is relative and the row is absolute.
6. Press F4 again. Note that the column is absolute and the row is relative.
7. Press Esc.

7.6 Cut and Paste

You can move data from one area of a worksheet to another.
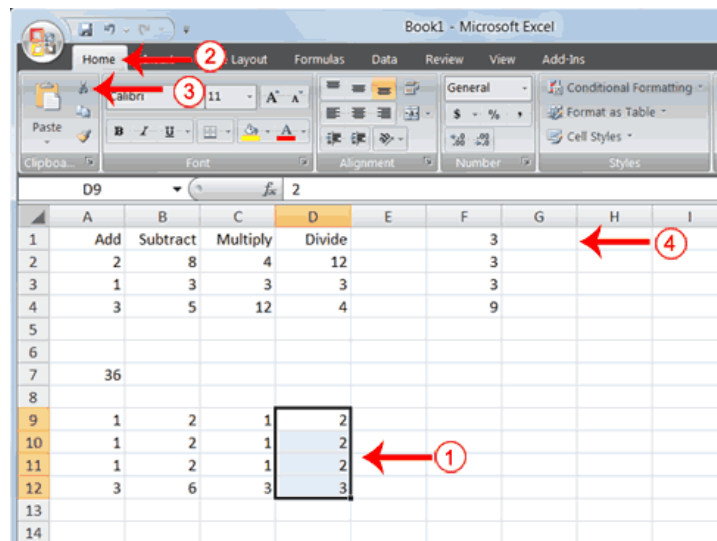
1. Select cells D9 to D12
2. Choose the Home tab.
3. Click the Cut [scissors icon] button.
4. Move to cell G1.
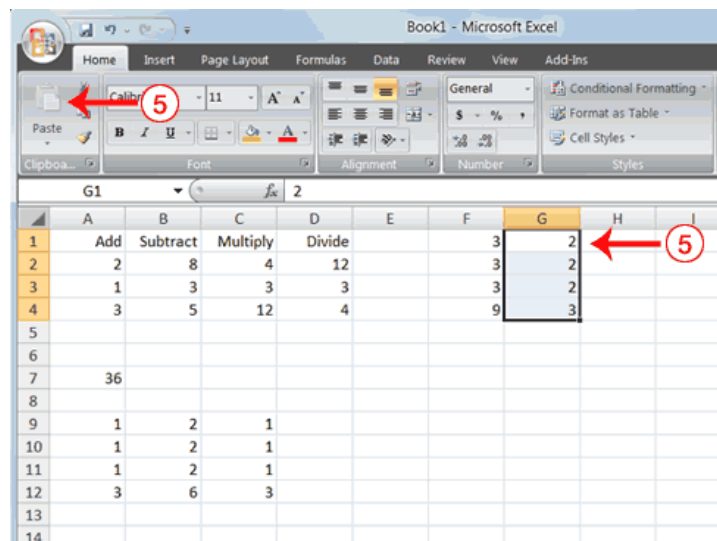
5. Click the Paste button [clipboard icon]. Excel moves the contents of cells D9 to D12 to cells G1 to G4.

The keyboard shortcut for Cut is Ctrl+x. The steps for cutting and pasting with a keyboard shortcut are:

1. Select the cells you want to cut and paste.
2. Press Ctrl+x.
3. Move to the upper-left corner of the block of cells into which you want to paste.
4. Press Ctrl+v. Excel cuts and pastes the cells you selected.

Lesson 8

FORMATTING DATA AND EDITING COLUMNS AND ROWS

8.0. Objective

The objective of this lesson is to explain some formatting features such as how to insert and delete rows and columns, changing the column width and selecting font size and font colour etc. This lesson also makes you learn how to format numbers and change decimals to a percent.

After studying this lesson you will be able to

- insert and delete rows and columns
- bold, italicize and underline text in the cells
- change the fonts in size and colour
- change the decimal to percent

Structure

1. Introduction

2. Insert and Delete Columns and Rows

3. Create Borders

4. Merge and Centre

5. Add Background colour

6. Change the Font, Font Size, and Font Color

      6.1 Change the font size

      6.2 Change the Font colour

7. Move to a New Worksheet

8. Bold, Italicize, and Underline

      8.1 Bold with the Ribbon

      8.2 Italicize with the Ribbon

      8.3 Underline with the Ribbon

      8.4 Double Underline

      8.5 Bold, Underline, and Italicize

      8.6 Bold, Underline, and Italicize with short keys

9. Work with Long Text

10. Change Column's width

11. Change a Column Width by Dragging

12. Format numbers

13. Change a decimal to a percent

1. Introduction

The previous lesson taught you how to perform basic mathematical calculations on the data entered into cells. You have also learned to edit text with copy and paste commands. Excel also gave provision to format text and numerical data. To start this lesson, open Excel.

2. Insert and Delete Columns and Rows

You can insert and delete columns and rows. When you delete a column, you delete everything in the column from the top of the worksheet to the bottom of the worksheet. When you delete a row, you delete the entire row from left to right. Inserting a column or row inserts a completely new column or row.

EXERCISE 7

Insert and Delete Columns and Rows

To delete columns F and G:
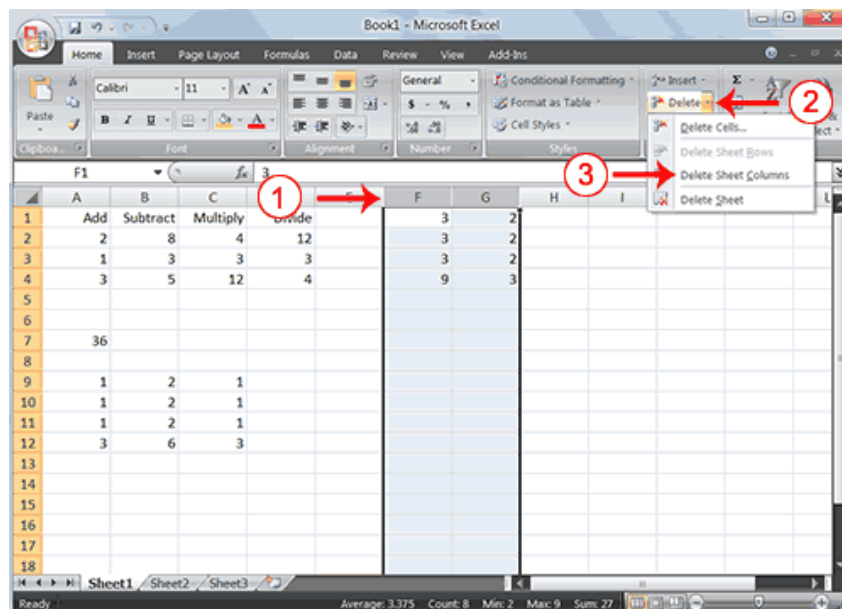
1. Click the column F indicator and drag to column G.
2. Click the down arrow next to Delete in the Cells group. A menu appears.

3. Click Delete Sheet Columns. Excel deletes the columns you selected.
4. Click anywhere on the worksheet to remove your selection.

To delete rows 7 through 12:
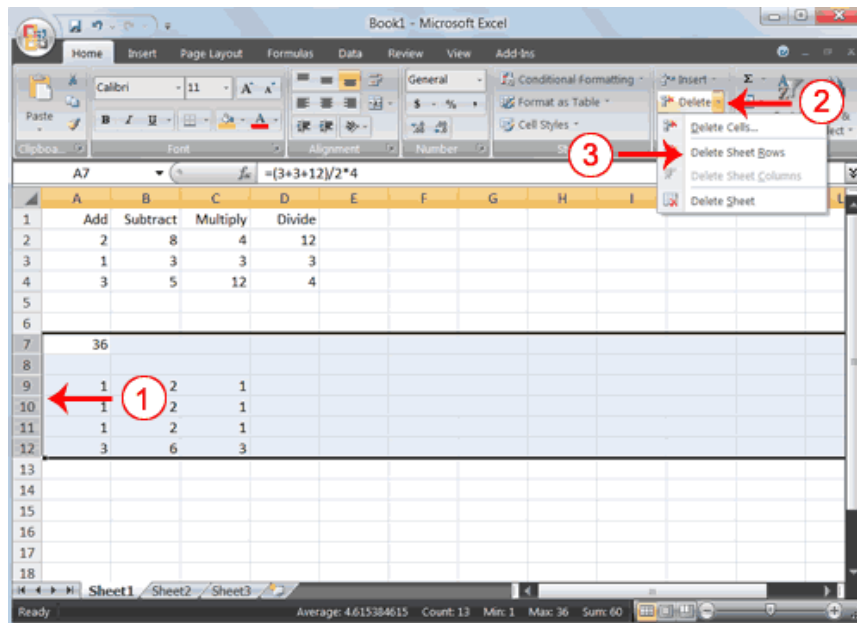
1. Click the row 7 indicator and drag to row 12.
2. Click the down arrow next to Delete in the Cells group. A menu appears.
3. Click Delete Sheet Rows. Excel deletes the rows you selected.
4. Click anywhere on the worksheet to remove your selection.

To insert a column:

1. Click on A to select column A.
2. Click the down arrow next to Insert in the Cells group. A menu appears.
3. Click Insert Sheet Columns. Excel inserts a new column.
4. Click anywhere on the worksheet to remove your selection.

To insert rows:

1. Click on 1 and then drag down to 2 to select rows 1 and 2.
2. Click the down arrow next to Insert in the Cells group. A menu appears.
3. Click Insert Sheet Rows. Excel inserts two new rows.
4. Click anywhere on the worksheet to remove your selection.

Your worksheet should look like the one shown here.

3. Create Borders

You can use borders to make entries in your Excel worksheet stand out. You can choose from several types of borders. When you press the down arrow next to the Border button ⊞ ▾, a menu appears. By making the proper selection from the menu, you can place a border on the top, bottom, left, or right side of the selected cells; on all sides; or around the outside border. You can have a thick outside border or a border with a single-line top and a double-line bottom. Accountants usually place a single underline above a final number and a double underline below. The following illustrates:

EXERCISE 8

Create Borders

1. Select cells B6 to E6.
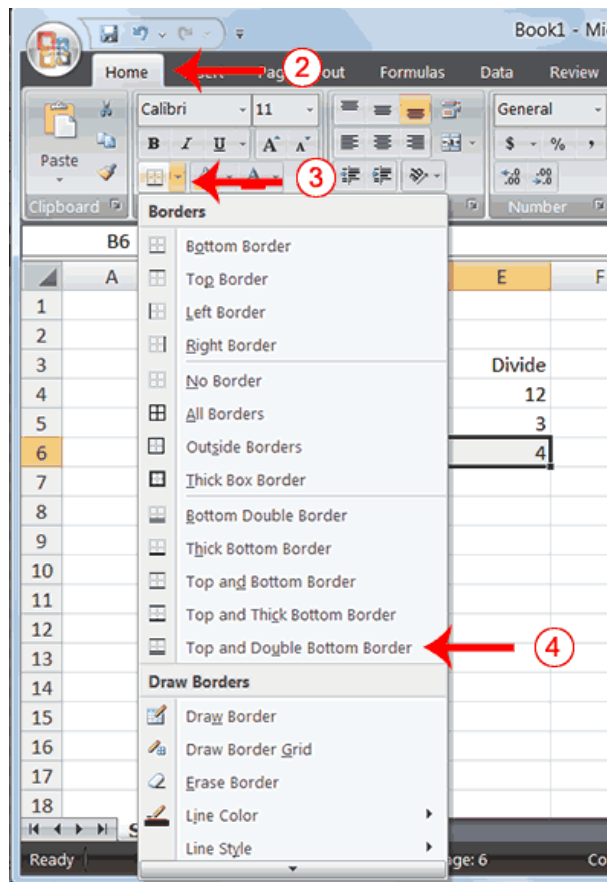
2. Choose the Home tab.
3. Click the down arrow next to the Borders button ⊞▾. A menu appears.
4. Click Top and Double Bottom Border. Excel adds the border you chose to the selected cells.

4.Merge and Center

Sometimes, particularly when you give a title to a section of your worksheet, you will want to center a piece of text over several columns or rows. The following example shows you how.

EXERCISE 9

Merge and Center
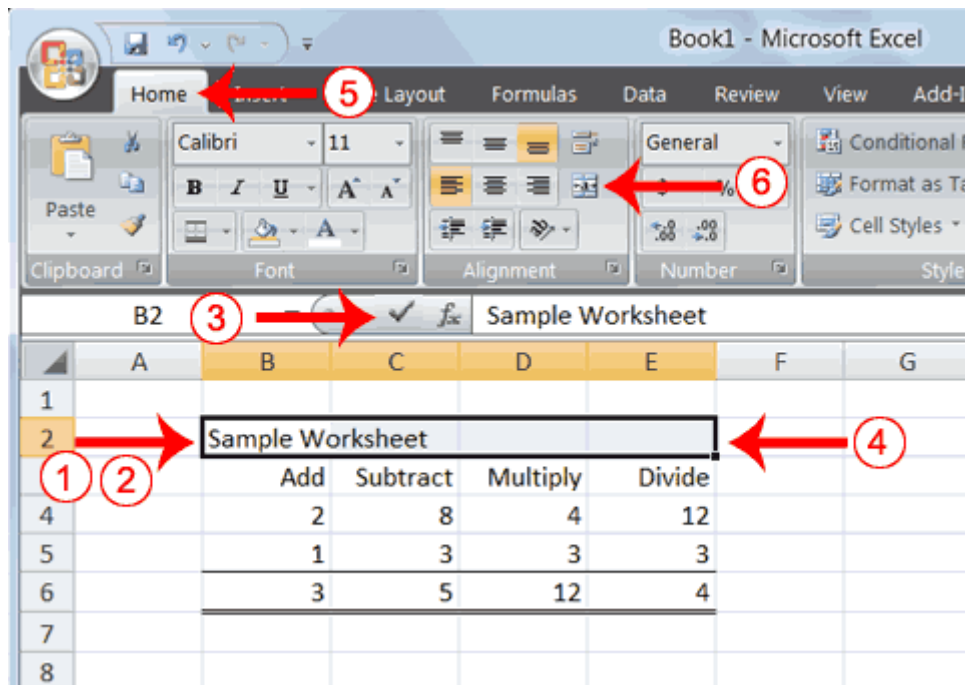
1. Go to cell B2.
2. Type **Sample Worksheet**.
3. Click the check mark on the Formula bar.
4. Select cells B2 to E2.
5. Choose the Home tab.
6. Click the Merge and Center button ⊞ ▾ in the Alignment group. Excel merges cells B2, C2, D2, and E2 and then centers the content.

Note: To unmerge cells:

1. Select the cell you want to unmerge.
2. Choose the Home tab.

3. Click the down arrow next to the Merge and Center button. A menu appears.
4. Click Unmerge Cells. Excel unmerges the cells.

5. Add Background Color

To make a section of your worksheet stand out, you can add background color to a cell or group of cells.

EXERCISE 10

Add Background Color

1. Select cells B2 to E3.

2. Choose the Home tab.
3. Click the down arrow next to the Fill Color button .
4. Click the color dark blue. Excel places a dark blue background in the cells you selected.

6. Change the Font, Font Size, and Font Color

A font is a set of characters represented in a single typeface. Each character within a font is created by using the same basic style. Excel provides many different fonts from which you can choose. The size of a font is measured in points. There are 72 points to an inch. The number of points assigned to a font is based on the distance from the top to the bottom of its longest character. You can change the Font, Font Size, and Font Color of the data you enter into Excel.

EXERCISE 11

Change the Font

1. Select cells B2 to E3.
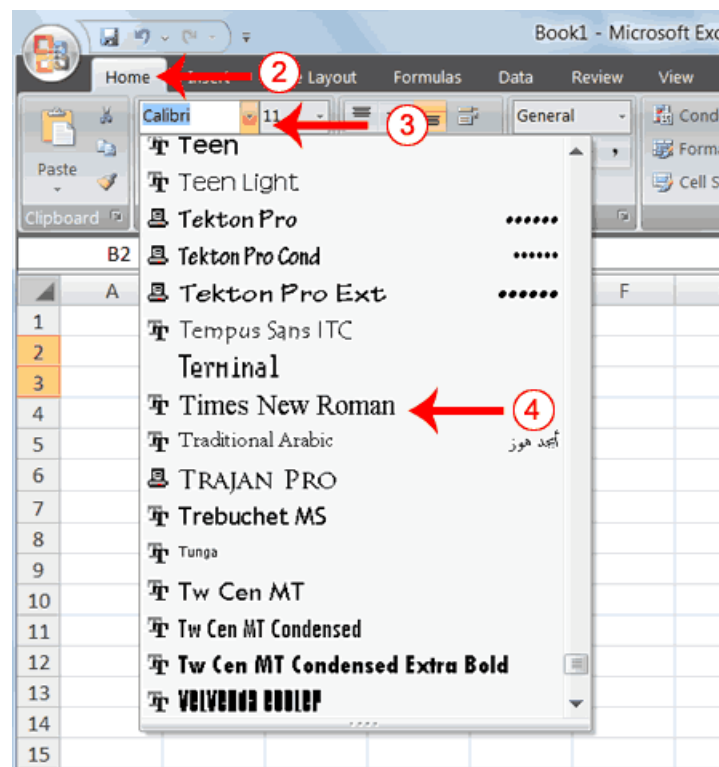
2. Choose the Home tab.
3. Click the down arrow next to the Font box. A list of fonts appears. As you scroll down the list of fonts, Excel provides a preview of the font in the cell you selected.
4. Find and click Times New Roman in the Font box. **Note:** If Times New Roman is your default font, click another font. Excel changes the font in the selected cells.

6.1 Change the Font Size
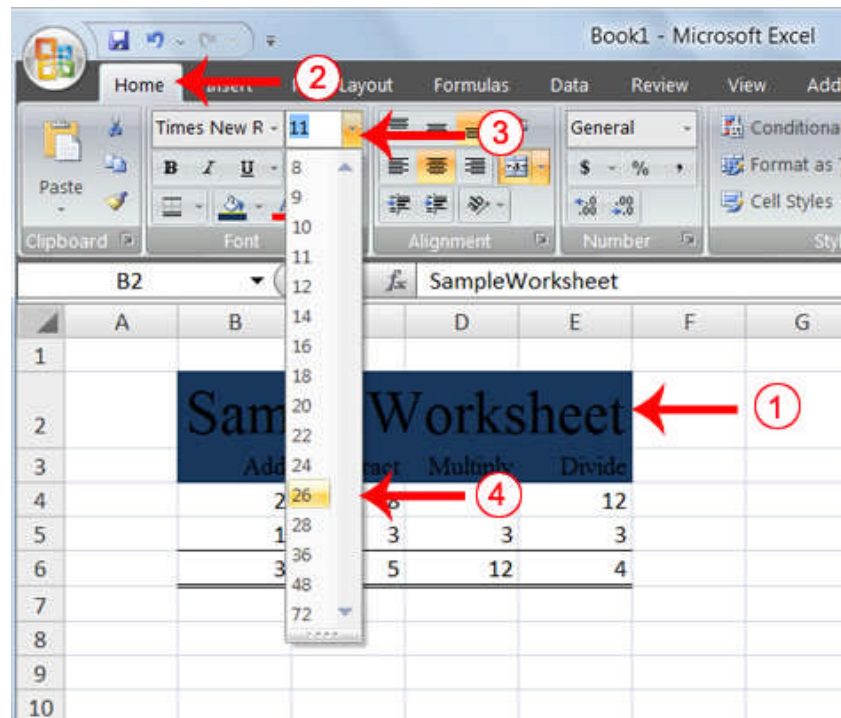
1. Select cell B2.
2. Choose the Home tab.
3. Click the down arrow next to the Font Size box. A list of font sizes appears. As you scroll up or down the list of font sizes, Excel provides a preview of the font size in the cell you selected.
4. Click 26. Excel changes the font size in cell B2 to 26.

6.2 Change the Font Color
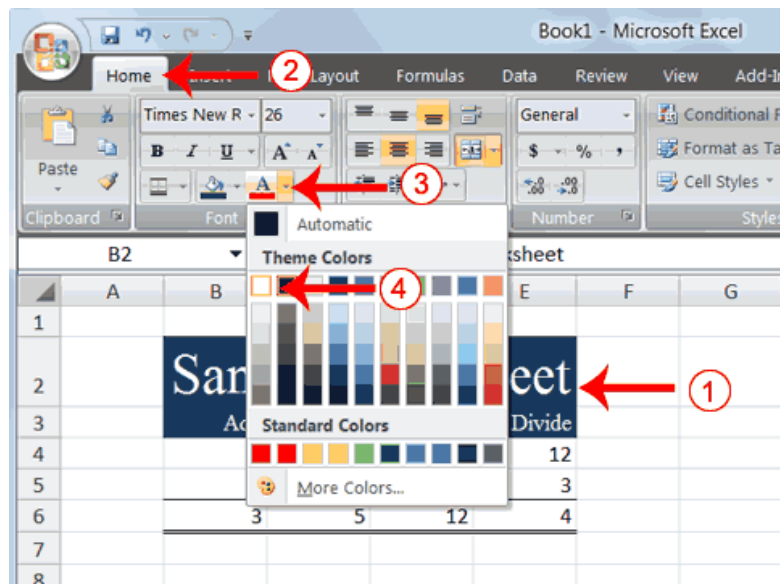
1. Select cells B2 to E3.
2. Choose the Home tab.
3. Click the down arrow next to the Font Color button A.
4. Click on the color white. Your font color changes to white.

Your worksheet should look like the one shown here.

7.Move to a New Worksheet

In Microsoft Excel, each workbook is made up of several worksheets. Each worksheet has a tab. By default, a workbook has three sheets and they are named sequentially, starting with Sheet1. The name of the worksheet appears on the tab. Before moving to the next topic, move to a new worksheet. The exercise that follows shows you how to move to new worksheet.

EXERCISE 12

Move to a New Worksheet

- Click Sheet2 in the lower-left corner of the screen. Excel moves to Sheet2.
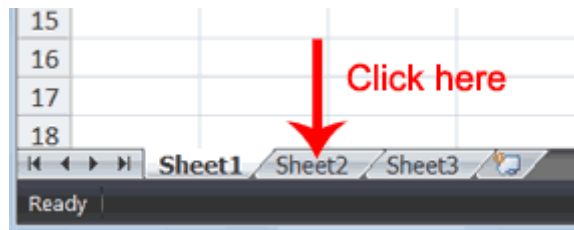
8. Bold, Italicize, and Underline

When creating an Excel worksheet, you may want to emphasize the contents of cells by bolding, italicizing, and/or underlining. You can easily bold, italicize, or underline text with Microsoft Excel. You can also combine these features—in other words, you can bold, italicize, and underline a single piece of text.

In the exercises that follow, you will be explained different methods you can use to bold, italicize, and underline.

EXERCISE 13

8.1 Bold with the Ribbon
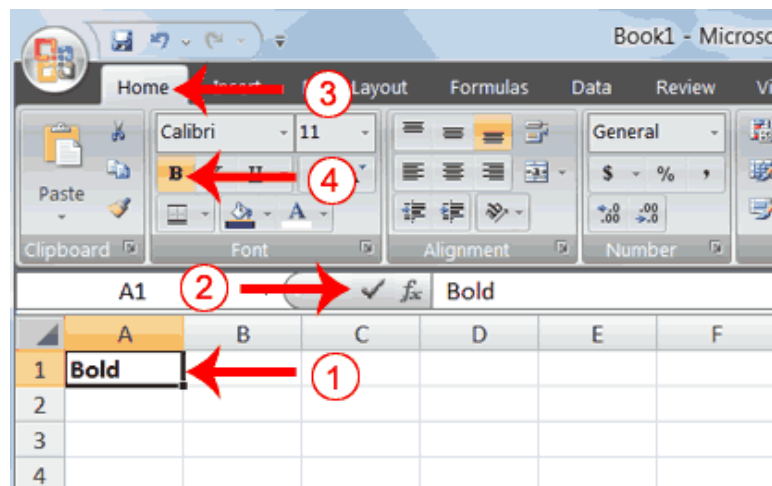
1. Type **Bold** in cell A1.
2. Click the check mark located on the Formula bar.
3. Choose the Home tab.
4. Click the Bold button **B** . Excel bolds the contents of the cell.

5. Click the Bold button **B** again if you wish to remove the bold.

8.2 Italicize with the Ribbon
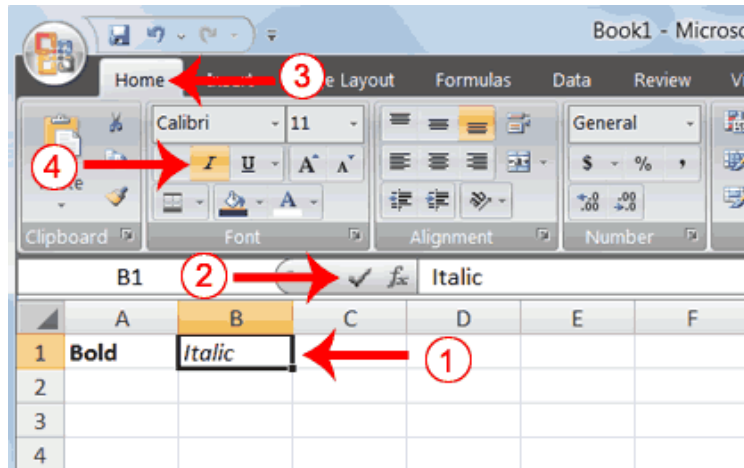
1. Type **Italic** in cell B1.
2. Click the check mark located on the Formula bar.
3. Choose the Home tab.
4. Click the Italic button *I*. Excel italicizes the contents of the cell.
5. Click the Italic button *I* again if you wish to remove the italic.

8.3 Underline with the Ribbon

Microsoft Excel provides two types of underlines. The exercises that follow illustrate them.

Single Underline:
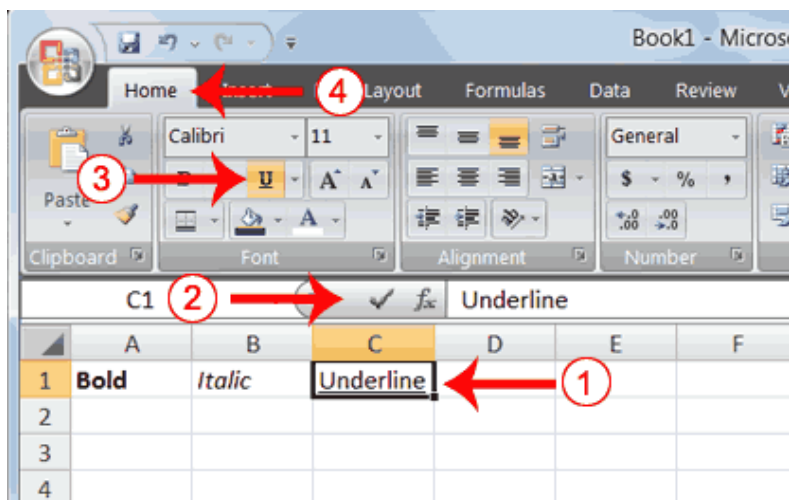
1. Type **Underline** in cell C1.

2. Click the check mark located on the Formula bar.
3. Choose the Home tab.
4. Click the Underline button ⎡U ⎤. Excel underlines the contents of the cell.
5. Click the Underline button ⎡U ⎤ again if you wish to remove the underline.

8.4 Double Underline
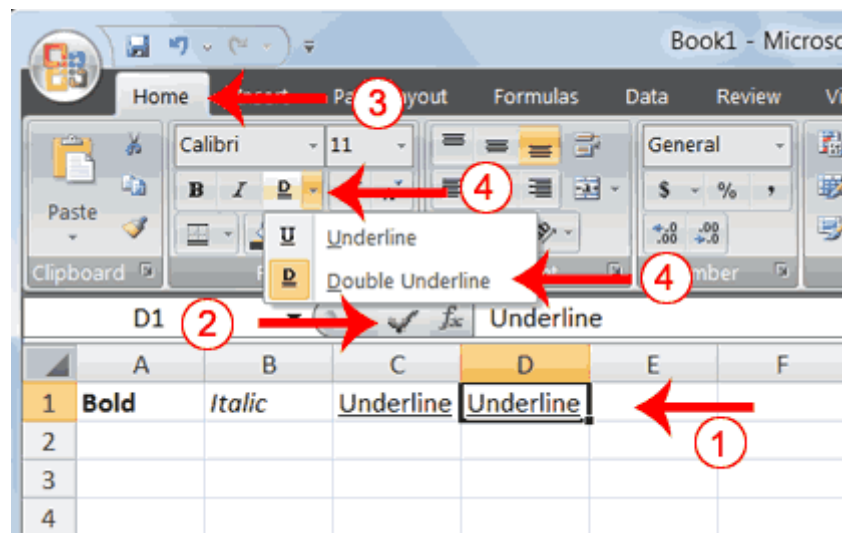
1. Type **Underline** in cell D1.
2. Click the check mark located on the Formula bar.
3. Choose the Home tab.
4. Click the down arrow next to the Underline button ⎡U ⎤ and then click Double Underline. Excel double-underlines the contents of the cell. Note that the Underline button changes to the button shown here ⎡D ⎤, a D with a double underline under it. Then next time you click the Underline button, you will get a double underline. If you want a single underline, click the down arrow next to the Double Underline button ⎡D ⎤ and then choose Underline.
5. Click the double underline button again if you wish to remove the double underline.

8.5 Bold, Underline, and Italicize

1. Type **All three** in cell E1.
2. Click the check mark located on the Formula bar.
3. Choose the Home tab.
4. Click the Bold button ⎡B⎤. Excel bolds the cell contents.
5. Click the Italic button ⎡I⎤. Excel italicizes the cell contents.
6. Click the Underline button ⎡U ⎤. Excel underlines the cell contents.

Alternate Method: Bold with Shortcut Keys

1. Type **Bold** in cell A2.
2. Click the check mark located on the Formula bar.
3. Hold down the Ctrl key while pressing "b" (Ctrl+b). Excel bolds the contents of the cell.
4. Press Ctrl+b again if you wish to remove the bolding.

Alternate Method: Italicize with Shortcut Keys

1. Type **Italic** in cell B2. **Note:** Because you previously entered the word Italic in column B, Excel may enter the word in the cell automatically after you type the letter I. Excel does this to speed up your data entry.
2. Click the check mark located on the Formula bar.
3. Hold down the Ctrl key while pressing "i" (Ctrl+i). Excel italicizes the contents of the cell.
4. Press Ctrl+i again if you wish to remove the italic formatting.

Alternate Method: Underline with Shortcut Keys

1. Type **Underline** in cell C2.
2. Click the check mark located on the Formula bar.
3. Hold down the Ctrl key while pressing "u" (Ctrl+u). Excel applies a single underline to the cell contents.
4. Press Ctrl+u again if you wish to remove the underline.

8.6 Bold, Italicize, and Underline with Shortcut Keys

1. Type **All three** in cell D2.
2. Click the check mark located on the Formula bar.
3. Hold down the Ctrl key while pressing "b" (Ctrl+b). Excel bolds the cell contents.
4. Hold down the Ctrl key while pressing "i" (Ctrl+i). Excel italicizes the cell contents.
5. Hold down the Ctrl key while pressing "u" (Ctrl+u). Excel applies a single underline to the cell contents.

9. Work with Long Text

Whenever you type text that is too long to fit into a cell, Microsoft Excel attempts to display all the text. It left-aligns the text regardless of the alignment you have assigned to it, and it borrows space from the blank cells to the right. However, a long text entry will never write over cells that already contain entries—instead, the cells that contain entries cut off the long text. The following exercise illustrates this.

EXERCISE 14

Work with Long Text
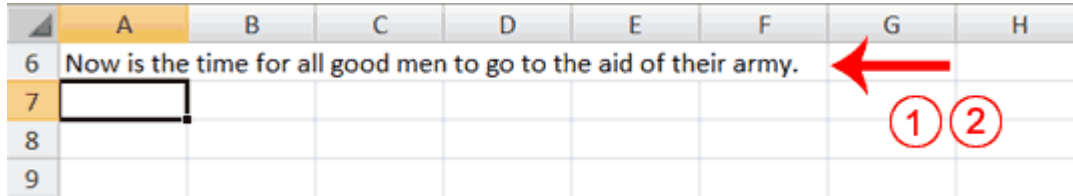
1. Move to cell A6.
2. Type **Now is the time for all good men to go to the aid of their army**.
3. Press Enter. Everything that does not fit into cell A6 spills over into the adjacent cell.
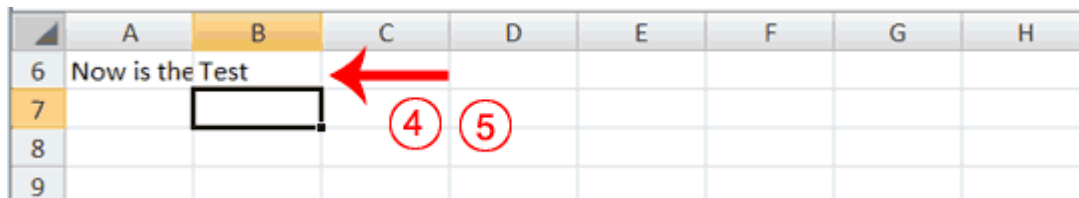
4. Move to cell B6.
5. Type **Test**.
6. Press Enter. Excel cuts off the entry in cell A6.
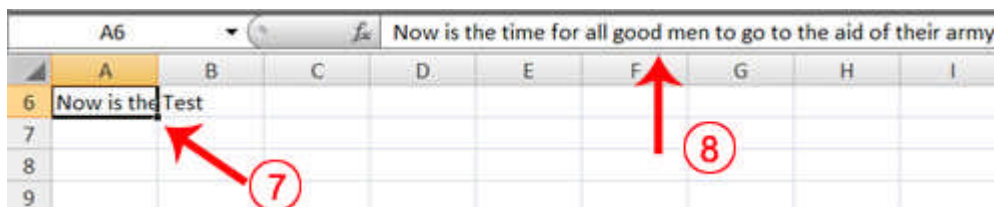
7. Move to cell A6.
8. Look at the Formula bar. The text is still in the cell.

10. Change Column's Width

You can increase column widths. Increasing the column width enables you to see the long text.

EXERCISE 15

Change Column Width
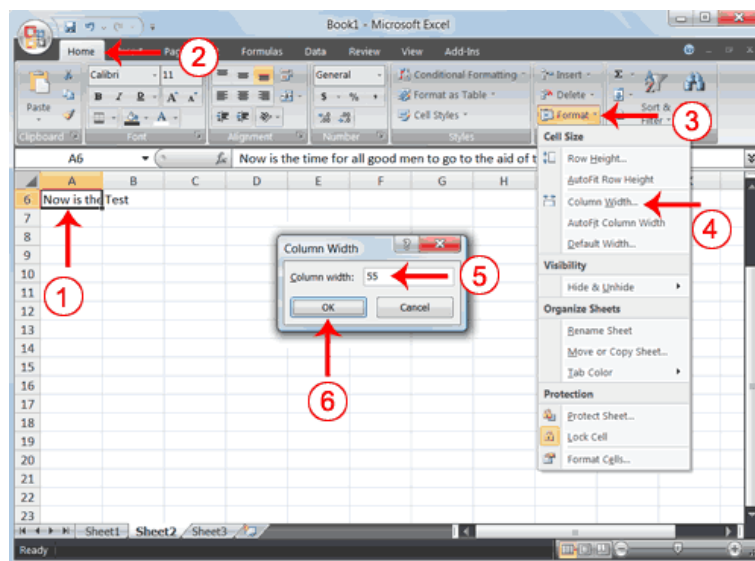
1. Make sure you are in any cell under column A.
2. Choose the Home tab.
3. Click the down arrow next to Format in the Cells group.
4. Click Column Width. The Column Width dialog box appears.
5. Type **55** in the Column Width field.
6. Click OK. Column A is set to a width of 55. You should now be able to see all of the text.
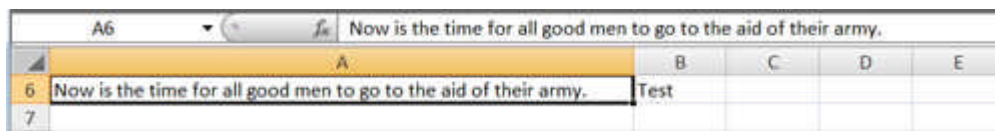
11. Change a Column Width by Dragging

You can also change the column width with the cursor.

1. Place the mouse pointer on the line between the B and C column headings. The mouse pointer should look like the one displayed here ✛, with two arrows.
2. Move your mouse to the right while holding down the left mouse button. The width indicator [Width: 20.00 (247 pixels)] appears on the screen.
3. Release the left mouse button when the width indicator shows approximately 20. Excel increases the column width to 20.

12. Format Numbers

You can format the numbers you enter into Microsoft Excel. For example, you can add commas to separate thousands, specify the number of decimal places, place a dollar sign in front of a number, or display a number as a percent.

EXERCISE 16
Format Numbers
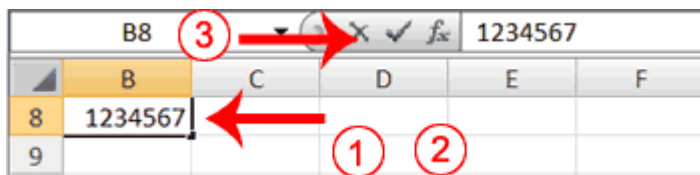
1. Move to cell B8.
2. Type **1234567**.
3. Click the check mark on the Formula bar.
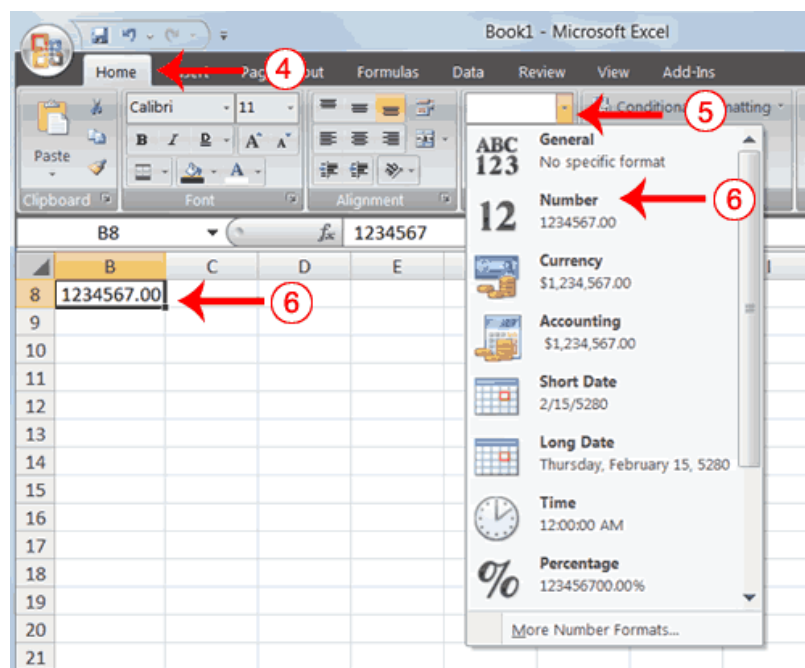
4. Choose the Home tab.
5. Click the down arrow next to the Number Format box. A menu appears.
6. Click Number. Excel adds two decimal places to the number you typed.
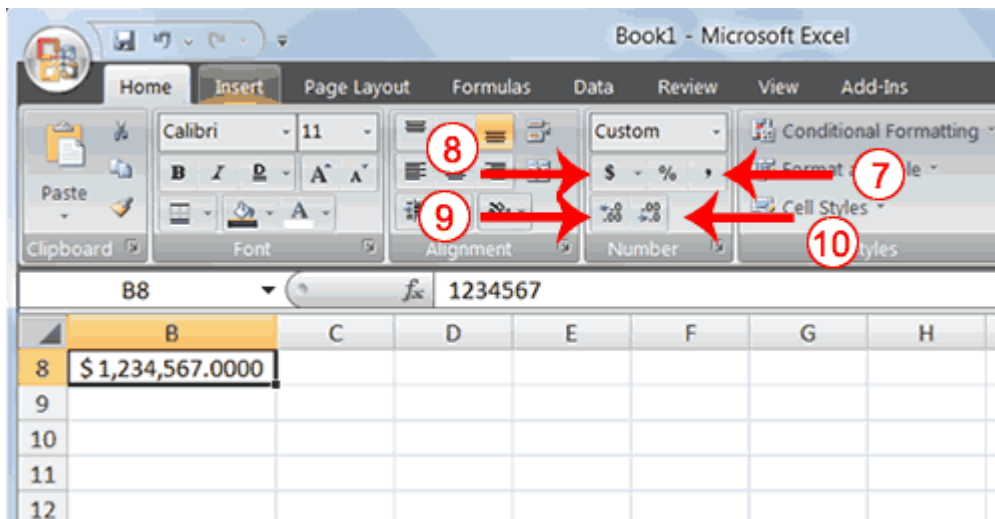
7. Click the Comma Style button ⟨ ' ⟩. Excel separates thousands with a comma.
8. Click the Accounting Number Format button ⟨ $ ⟩. Excel adds a dollar sign to your number.
9. Click twice on the Increase Decimal button ⟨ .00 ⟩ to change the number format to four decimal places.
10. Click the Decrease Decimal button ⟨ .00 ⟩ if you wish to decrease the number of decimal places.

13. Change a decimal to a percent.
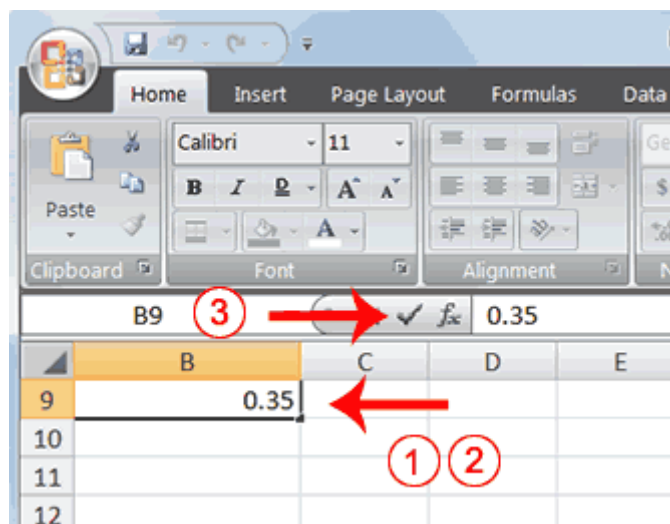
1. Move to cell B9.
2. Type **.35** (note the decimal point).
3. Click the check mark on the formula bar.
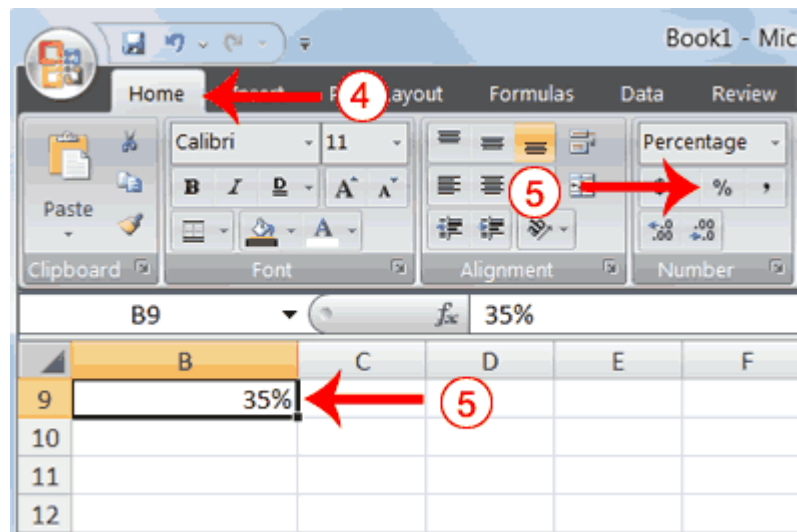
4. Choose the Home tab.

5. Click the Percent Style button %. Excel turns the decimal to a percent.

You can save and close your file.

Lesson 9

CREATING EXCEL FUNCTIONS, FILLING CELLS, AND PRINTING

9.0 Objective

The objective of this lesson is to explain different functions by employing reference operators provided by Excel package.

After studying this lesson you will be able to

- learn using reference operators
- learn performing some mathematical functions
- learn to fill cells automatically

- learn to create header and footer

Structure

1. Introduction
2. Using Reference Operators
3. Understanding Functions

   3.1 SUM Function

   3.2 Average Calculation

   3.3 MIN Function

   3.4 MAX Function

   3.5 Count the Numbers in a Series of Numbers

   3.6

4. Fill Cells Automatically

   4.1 Fill Times

   4.2 Fill Numbers

5. Creating Headers and Footers

1. Introduction

Microsoft Excel provides some prewritten formulas to perform certain mathematical calculations. Sometimes you may want to enter a series of data such as days of a week or months of a year etc. Excel provides automating filling feature to make use to enter a series of data. Adjusting column and row widths and height is also possible to make the document look elegant. Setting page and print layouts is also easy in Excel.

2. Using Reference Operators

To use functions, you need to understand reference operators. Reference operators refer to a cell or a group of cells. There are two types of reference operators: *range* and *union*.

A range reference refers to all the cells between and including the reference. A range reference consists of two cell addresses separated by a colon. The reference A1:A3 includes cells A1, A2, and A3. The reference A1:C3 includes cells A1, A2, A3, B1, B2, B3, C1, C2, and C3.

A union reference includes two or more references. A union reference consists of two or more numbers, range references, or cell addresses separated by a comma. The reference A7,B8:B10,C9,10 refers to cells A7, B8 to B10, C9 and the number 10.

3. Understanding Functions

Functions are prewritten formulas. Functions differ from regular formulas in that you supply the value but not the operators, such as +, -, *, or /. For example, you can use the SUM function to add. When using a function, remember the following:

Use an equal sign to begin a formula.
Specify the function name.

Enclose arguments within parentheses. Arguments are values on which you want to perform the calculation. For example, arguments specify the numbers or cells you want to add.

Use a comma to separate arguments.

3.1 SUM Function
Here is an example of a function:
=SUM(2,13,A1,B2:C7)

In this function:
The equal sign begins the function.
SUM is the name of the function.
2, 13, A1, and B2:C7 are the arguments.
Parentheses enclose the arguments.

Commas separate the arguments.

After you type the first letter of a function name, the AutoComplete list appears. You can double-click on an item in the AutoComplete list to complete your entry quickly. Excel will complete the function name and enter the first parenthesis.

EXERCISE 1

Functions

The SUM function adds argument values.

1. Open Microsoft Excel.
2. Type **12** in cell B1.
3. Press Enter.
4. Type **27** in cell B2.
5. Press Enter.
6. Type **24** in cell B3.
7. Press Enter.
8. Type **=SUM(B1:B3)** in cell A4.
9. Press Enter. The sum of cells B1 to B3, which is 63, appears.

Alternate Method: Enter a Function with the Ribbon
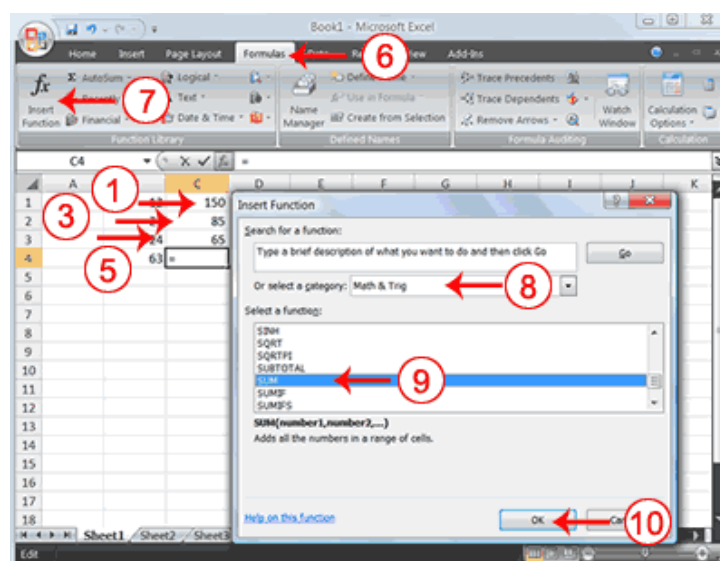
1. Type **150** in cell C1.
2. Press Enter.
3. Type **85** in cell C2.
4. Press Enter.
5. Type **65** in cell C3.
6. Choose the Formulas tab.
7. Click the Insert Function button. The Insert Function dialog box appears.
8. Choose Math & Trig in the Or Select A Category box.
9. Click Sum in the Select A Function box.
10. Click OK. The Function Arguments dialog box appears.
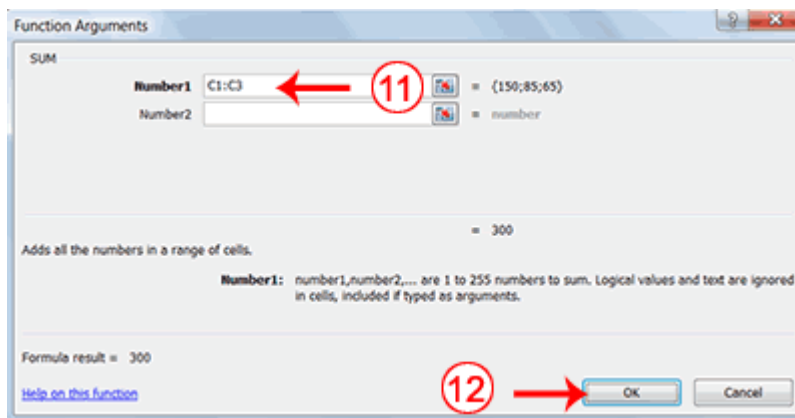
12. Type **C1:C3** in the Number1 field, if it does not automatically appear.
13. Click OK. The sum of cells C1 to C3, which is 300, appears.

Format worksheet

	A	B	C	D
1		12	150	
2		27	85	
3		24	65	
4	Sum	63	300	
5				
6				

1. Move to cell A4.
2. Type the word **Sum**.
3. Select cells B4 to C4.
4. Choose the Home tab.
5. Click the down arrow next to the Borders button.
6. Click Top and Double Bottom Border.

You can also calculate a sum by using the AutoSum button Σ.

3.2 Average Calculation

You can use the AVERAGE function to calculate the average of a series of numbers.

1. Move to cell A6.
2. Type **Average**. Press the right arrow key to move to cell B6.
3. Type **=AVERAGE(B1:B3)**.
4. Press Enter. The average of cells B1 to B3, which is 21, appears.

Calculate an Average with the AutoSum Button

In Microsoft Excel, you can use the AutoSum button Σ to calculate an average.
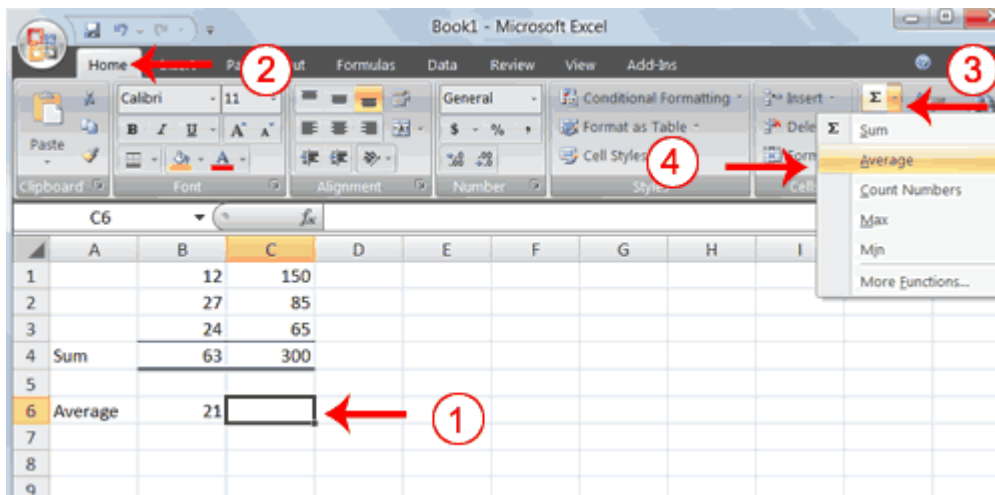
1. Move to cell C6.
2. Choose the Home tab.
3. Click the down arrow next to the AutoSum button Σ .
4. Click Average.

5. Select cells C1 to C3.
6. Press Enter. The average of cells C1 to C3, which is 100, appears.

3.3 MIN Function

Find the Lowest Number

You can use the MIN function to find the lowest number in a series of numbers.

1. Move to cell A7.
2. Type **Min**.
3. Press the right arrow key to move to cell B7.
4. Type = **MIN(B1:B3)**.
5. Press Enter. The lowest number in the series, which is 12, appears.

Note: You can also use the drop-down button next to the AutoSum button Σ ▾ to calculate minimums, maximums, and counts.

3.4 MAX Function

Find the Highest Number

You can use the MAX function to find the highest number in a series of numbers.

1. Move to cell A8.
2. Type **Max**.
3. Press the right arrow key to move to cell B8.
4. Type = **MAX(B1:B3)**.
5. Press Enter. The highest number in the series, which is 27, appears.

3.5 Count the Numbers in a Series of Numbers

You can use the count function to count the number of numbers in a series.
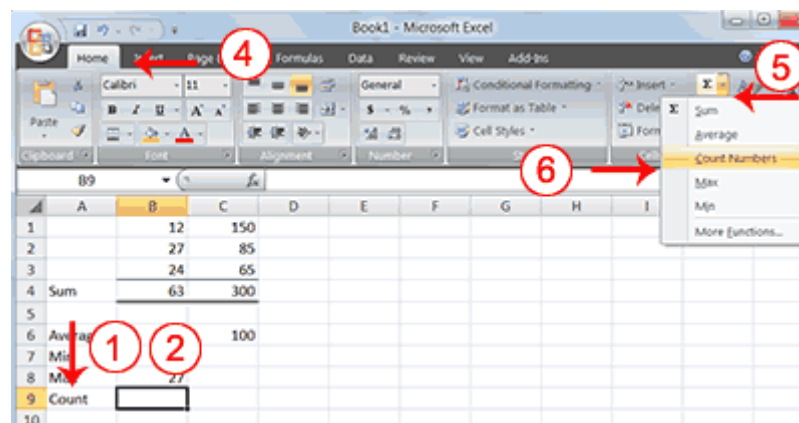
1. Move to cell A9.
2. Type **Count**.
3. Press the right arrow key to move to cell B9.
4. Choose the Home tab.
5. Click the down arrow next to the AutoSum button Σ ▾.
6. Click Count Numbers. Excel places the count function in cell C9 and takes a guess at which cells you want to count. The guess is incorrect, so you must select the proper cells.

7. Select B1 to B3.
8. Press Enter. The number of items in the series, which is 3, appears.

4. Fill Cells Automatically

You can use Microsoft Excel to fill cells automatically with a series. For example, you can have Excel automatically fill your worksheet with days of the week, months of the year, years, or other types of series.

EXERCISE 2:

Fill Cells Automatically

The following demonstrates filling the days of the week:
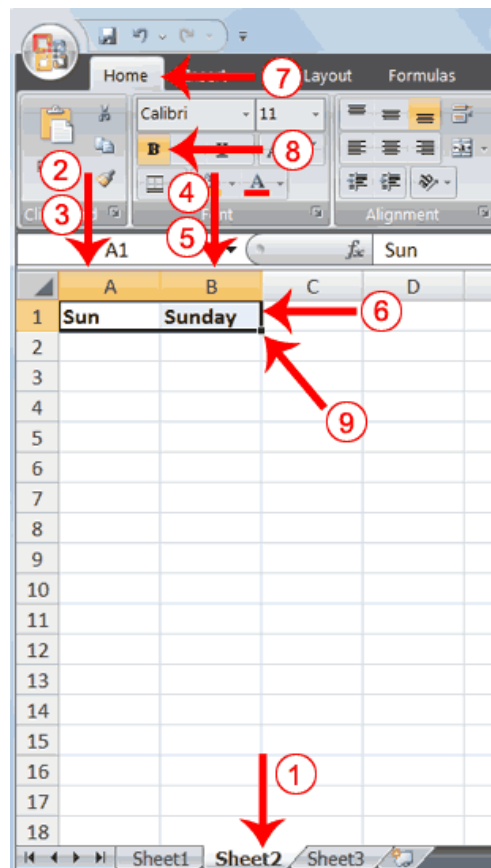
1. Click the Sheet2 tab. Excel moves to Sheet2.
2. Move to cell A1.
3. Type **Sun**.
4. Move to cell B1.
5. Type **Sunday**.
6. Select cells A1 to B1.
7. Choose the Home tab.
8. Click the Bold button **B** . Excel bolds cells A1 to B1.
9. Find the small black square in the lower-right corner of the selected area. The small black square is called the fill handle.
10. Grab the fill handle and drag with your mouse to fill cells A1 to B14. Note how the days of the week fill the cells in a series. Also, note that the Auto Fill Options button appears.

Copy Cells

1. Click the Auto Fill Options button. The Auto Fill Options menu appears.
2. Choose the Copy Cells radio button. The entry in cells A1 and B1 are copied to all the highlighted cells.
3. Click the Auto Fill Options button again.
4. Choose the Fill Series radio button. The cells fill as a series from Sunday to Saturday again.

5. Click the Auto Fill Options button again.
6. Choose the Fill Without Formatting radio button. The cells fill as a series from Sunday to Saturday, but the entries are not bolded.
7. Click the Auto Fill Options button again.
8. Choose the Fill Weekdays radio button. The cells fill as a series from Monday to Friday.

Adjust Column Width

Some of the entries in column B are too long to fit in the column. You can quickly adjust the column width to fit the longest entry.

1. Move your mouse pointer over the line that separates column B and C. The Width Indicator appears.
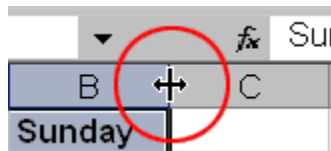
2. Double-click. The Column adjusts to fit the longest entry.

After you complete the remainder of the exercise, your worksheet will look like the one shown here.
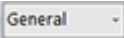
	A	B	C	D	E	F
1	Sun	Sunday	1:00:00 AM	1	Lesson 1	
2	Mon	Monday	2:00:00 AM	2	Lesson 2	
3	Tue	Tuesday	3:00:00 AM	3	Lesson 3	
4	Wed	Wednesday	4:00:00 AM	4	Lesson 4	
5	Thu	Thursday	5:00:00 AM	5	Lesson 5	
6	Fri	Friday	6:00:00 AM	6	Lesson 6	
7	Mon	Monday	7:00:00 AM	7	Lesson 7	
8	Tue	Tuesday	8:00:00 AM	8	Lesson 8	
9	Wed	Wednesday	9:00:00 AM	9	Lesson 9	
10	Thu	Thursday	10:00:00 AM	10	Lesson 10	
11	Fri	Friday	11:00:00 AM	11	Lesson 11	
12	Mon	Monday	12:00:00 PM	12	Lesson 12	
13	Tue	Tuesday	1:00:00 PM	13	Lesson 13	
14	Wed	Wednesday	2:00:00 PM	14	Lesson 14	
15						

4.1 Fill Times

The following demonstrates filling time:

1. Type **1:00** into cell C1.
2. Grab the fill handle and drag with your mouse to highlight cells C1 to C14. Note that each cell fills, using military time.
3. Press Esc and then click anywhere on the worksheet to remove the highlighting.

To change the format of the time:

1. Select cells C1 to C14.
2. Choose the Home tab.
3. Click the down arrow next to the number format box General. A menu appears.
4. Click Time. Excel changes the format of the time.

4.2 Fill Numbers

You can also fill numbers.
Type a **1** in cell D1.
1. Grab the fill handle and drag with your mouse to highlight cells D1 to D14. The number 1 fills each cell.
2. Click the Auto Fill Options button.
3. Choose the Fill Series radio button. The cells fill as a series, starting with 1, 2, 3.

Here is another interesting fill feature.

1. Go to cell E1.
2. Type **Lesson 1**.
3. Grab the fill handle and drag with your mouse to highlight cells E1 to E14. The cells fill in as a series: Lesson 1, Lesson 2, Lesson 3, and so on.

5. Create Headers and Footers

You can use the Header & Footer button on the Insert tab to create headers and footers. A header is text that appears at the top of every page of your printed worksheet. A footer is text that appears at the bottom of every page of your printed worksheet. When you click the Header & Footer button, the Design context tab appears and Excel changes to Page Layout view. A context tab is a tab that only appears when you need it. Page Layout view structures your worksheet so that you can easily change the format of your document. You usually work in Normal view.

You can type in your header or footer or you can use predefined headers and footers. To find predefined headers and footers, click the Header or Footer button or use the Header & Footer Elements group's buttons. When you choose a header or footer by clicking the Header or Footer button, Excel centers your choice. The table shown here describes each of the Header & Footer Elements group button options.

Header & Footer Elements	
Button	**Purpose**
Page Number	Inserts the page number.
Number of Pages	Inserts the number of pages in the document.
Current Time	Inserts the current time.
File Path	Inserts the path to the document.
File Name	Inserts the file name.
Sheet Name	Inserts the name of the worksheet.
Picture	Enables you to insert a picture.

Both the header and footer areas are divided into three sections: left, right, and center. When you choose a Header or Footer from the Header & Footer Elements group, where you place your information determines whether it appears on the left, right, or center of the printed page. You use the Go To Header and Go To Footer buttons on the Design tab to move between the header and footer areas of your worksheet.

EXERCISE 3

Insert Headers and Footers
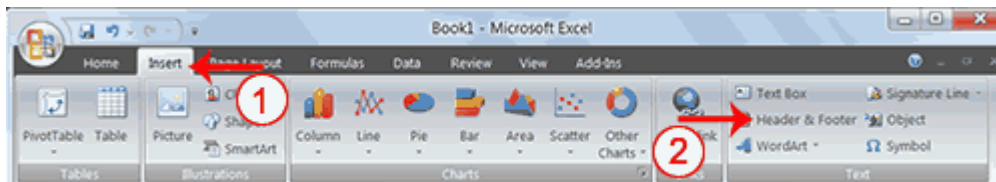
1. Choose the Insert tab.
2. Click the Header & Footer button in the Text group. Your worksheet changes to Page Layout view and the Design context tab appears. Note that your cursor is located in the center section of the header area.
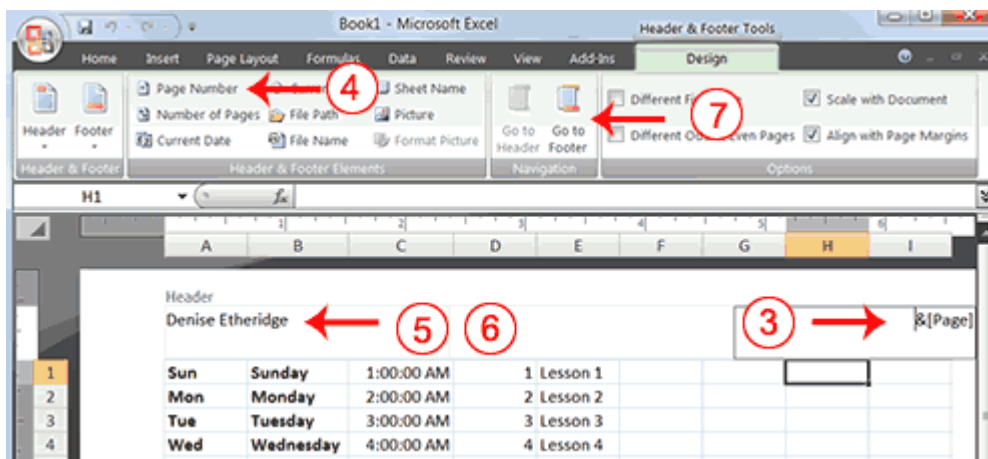
3. Click the right side of the header area.
4. Click Page Number in the Header & Footer Elements group. When you print your document, Excel will place the page number in the upper-right corner.
5. Click the left side of the Header area.
6. Type your name. When you print your document, Excel will place your name in the upper-left corner.
7. Click the Go To Footer button. Excel moves to the footer area.
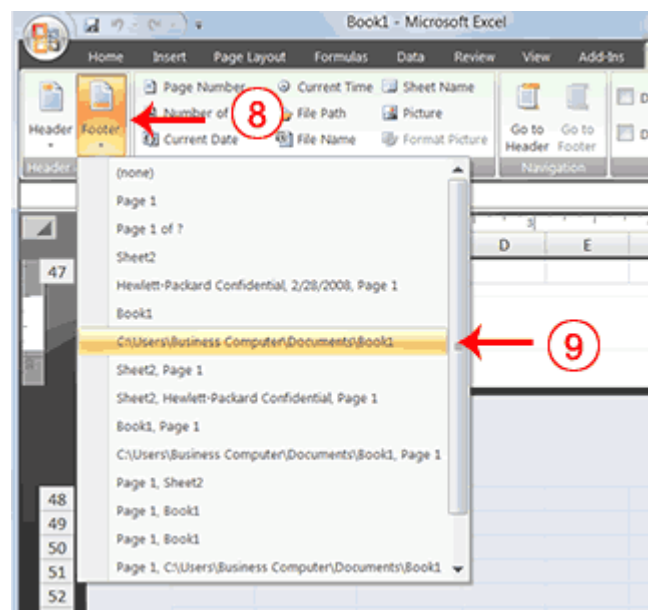
8. Click the Footer button. A menu appears.
9. Click the path to your document. Excel will place the path to your document at the bottom of every printed page.

To return to Normal view:

1. Choose the View tab.
2. Click the Normal button in the Workbook Views group.

Lesson 10

Printing and Creating Charts in Excel

10.0. Objective

The objective of this lesson is to explain how to design page layout, page set up and printing features given in Excel package. This lesson also describes creating charts in different styles and labeling etc.

After studying this lesson you will be able to
- set the page layout
- set the page orientation
- print the document
- creating and inserting charts
- adding labels to charts

Structure

1. Introduction

2. Set Print Functions

   2.1 Set the page layout

   2.2 Set the page orientation

   2.3 Set the paper size

3. Print

4. Creating Charts

   4.1 Create Column Chart

   4.2 Apply a Chart Layout

   4.3 Add labels

   4.4 Switch Data

   4.5 Choose the Style of the Chart

   4.6 Change the Size and Position of the Chart

   4.7 Move a Chart to a Chart Sheet

   4.8 Change the Chart Type

1. Introduction

After creating document in Excel you may want to take a hard copy. The package enables you to layout the page, set up the page format etc. The Excel also enables the user in creating charts in different colours and styles and labeling the charts etc.

2. Set Print Options

There are many print options. You set print options on the Page Layout tab. Among other things, you can set your margins, set your page orientation, and select your paper size. Margins define the amount of white space that appears on the top, bottom, left, and right edges of your document. The Margin option on the Page Layout tab provides several standard margin sizes from which you can choose. There are two page orientations: portrait and landscape. Paper, such as paper sized 8 1/2 by 11, is longer on one edge than it is on the other. If you print in Portrait, the shortest edge of the paper becomes the top of the page. Portrait is the default option. If you print in Landscape, the longest edge of the paper becomes the top of the page.

Portrait

Landscape

Paper comes in a variety of sizes. Most business correspondence uses 8 1/2 by 11 paper, which is the default page size in Excel. If you are not using 8 1/2 by 11 paper, you can use the Size option on the Page Layout tab to change the Size setting.

2.1 Set the Page Layout

Exercise 4
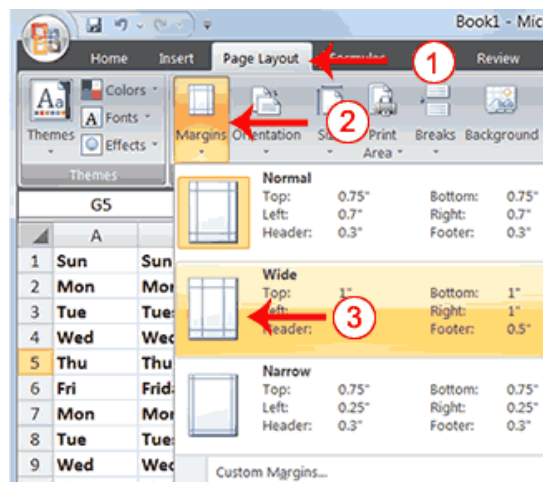
1. Choose the Page Layout tab.
2. Click Margins in the Page Setup group. A menu appears.
3. Click Wide. Word sets your margins to the Wide settings.

2.2 Set the Page Orientation
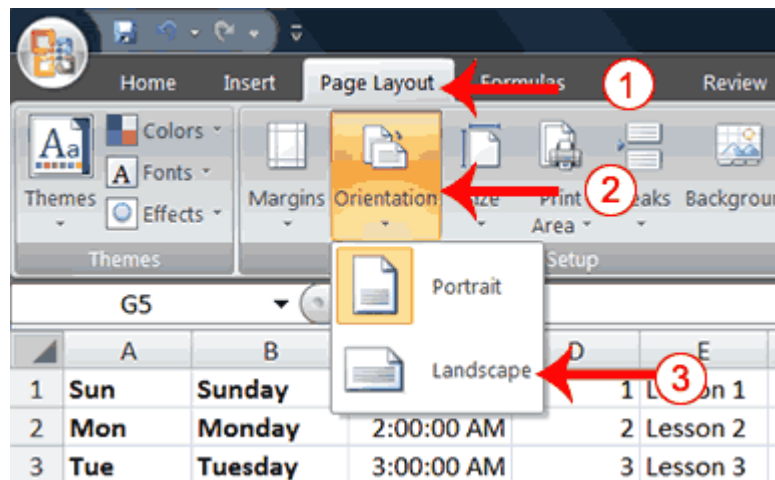
1. Choose the Page Layout tab.
2. Click Orientation in the Page Setup group. A menu appears.
3. Click Landscape. Excel sets your page orientation to landscape.

2.4 Set the Paper Size
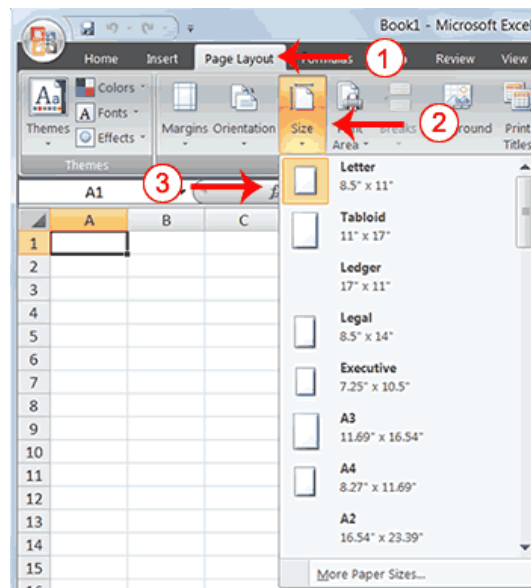
1. Choose the Page Layout tab.
2. Click Size in the Page Setup group. A menu appears.
3. Click the paper size you are using. Excel sets your page size.

3. Print

The simplest way to print is to click the Office button, highlight Print on the menu that appears, and then click Quick Print in the Preview and Print the Document pane. Dotted lines

appear on your screen, and your document prints. The dotted lines indicate the right, left, top, and bottom edges of your printed pages.

You can also use the Print Preview option to print. When using Print Preview, you can see onscreen how your printed document will look when you print it. If you click the Page Setup button while in Print Preview mode, you can set page settings such as centering your data on the page.

If your document is several pages long, you can use the Next Page and Previous Page buttons to move forward and backward through your document. If you check the Show Margins check box, you will see margin lines on your document. You can click and drag the margin markers to increase or decrease the size of your margins. To return to Excel, click the Close Print Preview button.

You click the Print button when you are ready to print. The Print dialog box appears. You can choose to print the entire worksheet or specific pages. If you want to print specific pages, enter the page numbers in the From and To fields. You can enter the number of copies you want to print in the Number of Copies field.

EXERCISE 5

Open Print Preview
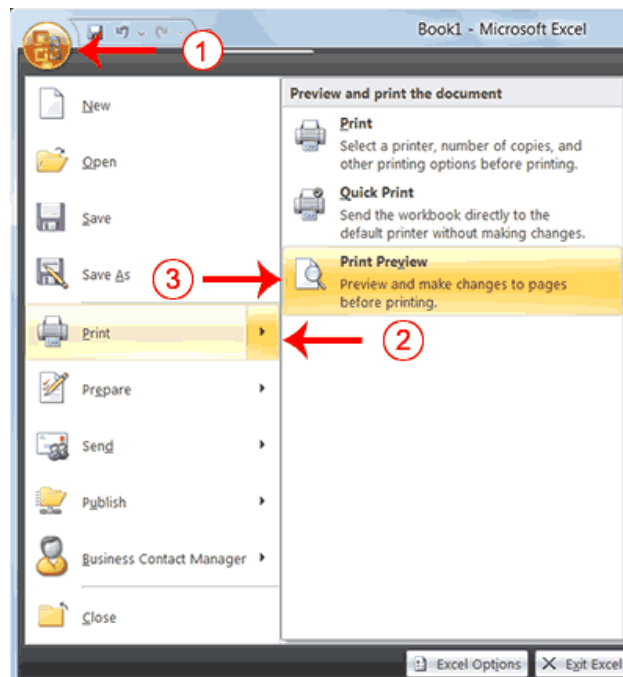
1. Click the Office button. A menu appears.
2. Highlight Print. The Preview and Print The Document pane appears.
3. Click Print Preview. The Print Preview window appears, with your document in the center.

Center Your Document
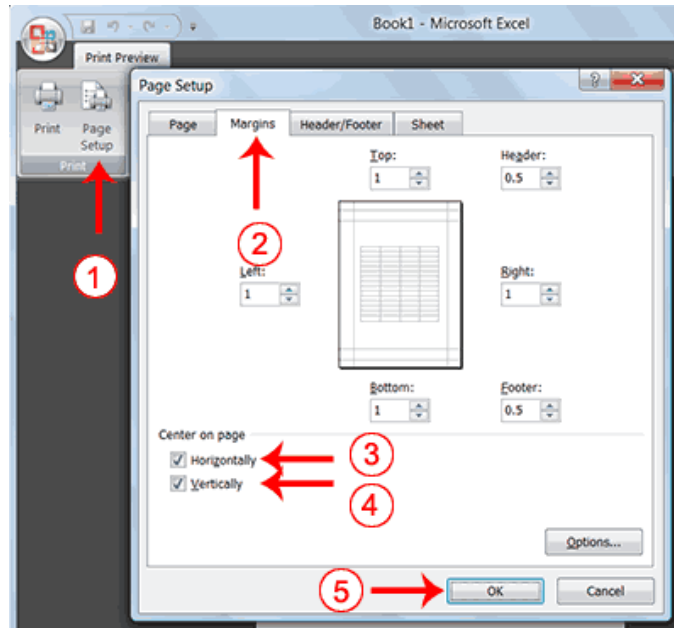
1. Click the Page Setup button in the Print group. The Page Setup dialog box appears.
2. Choose the Margins tab.
3. Click the Horizontally check box. Excel centers your data horizontally.
4. Click the Vertically check box. Excel centers your data vertically.
5. Click OK. The Page Setup dialog box closes.

Print
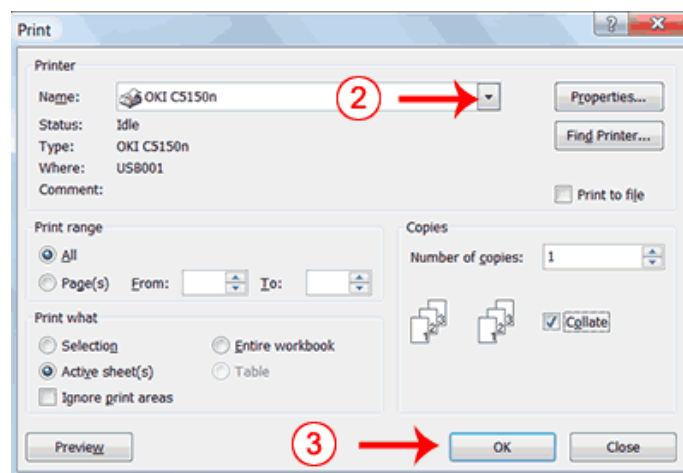
1. Click the Print button. The Print dialog box appears.
2. Click the down arrow next to the name field and select the printer to which you want to print.
3. Click OK. Excel sends your worksheet to the printer.

You can save and close your file.

4. Creating Charts

In Microsoft Excel, you can represent numbers in a chart. On the Insert tab, you can choose from a variety of chart types, including column, line, pie, bar, area, and scatter. The basic procedure for creating a chart is the same no matter what type of chart you choose. As you change your data, your chart will automatically update.

You select a chart type by choosing an option from the Insert tab's Chart group. After you choose a chart type, such as column, line, or bar, you choose a chart sub-type. For example, after you choose Column Chart, you can choose to have your chart represented as a two-dimensional chart, a three-dimensional chart, a cylinder chart, a cone chart, or a pyramid chart. There are further sub-types within each of these categories. As you roll your mouse pointer over each option, Excel supplies a brief description of each chart sub-type.

Create a Chart
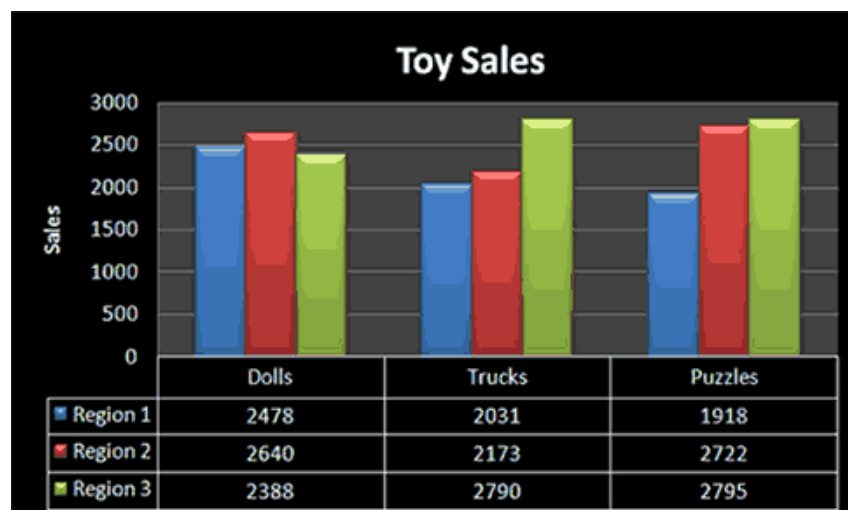
To create the column chart shown above, start by creating the worksheet below exactly as shown.

	A	B	C	D	E
1			Toy Sales		
2					
3	Products	Region 1	Region 2	Region 3	
4	Dolls	2478	2640	2388	
5	Trucks	2031	2173	2790	
6	Puzzles	1918	2722	2795	
7	Total	6427	7535	7973	
8					

After you have created the worksheet, you are ready to create your chart.

4.1 Create Column Chart

EXERCISE 1
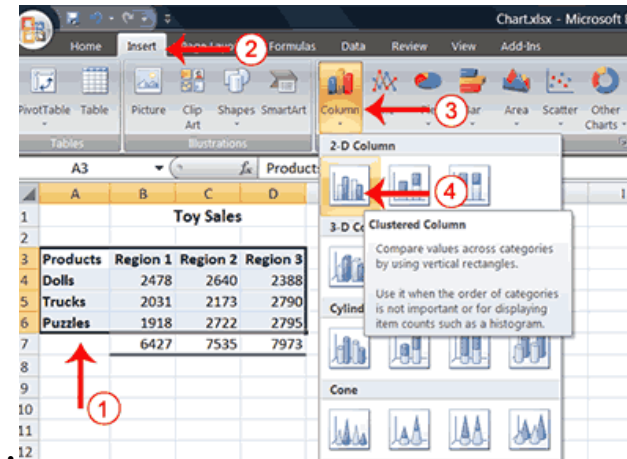
1. Select cells A3 to D6. You must select all the cells containing the data you want in your chart. You should also include the data labels.
2. Choose the Insert tab.
3. Click the Column button in the Charts group. A list of column chart sub-types types appears.
4. Click the Clustered Column chart sub-type. Excel creates a Clustered Column chart and the Chart Tools context tabs appear.

4.2 Apply a Chart Layout

Context tabs are tabs that only appear when you need them. Called Chart Tools, there are three chart context tabs: Design, Layout, and Format. The tabs become available when you create a new chart or when you click on a chart. You can use these tabs to customize your chart.

You can determine what your chart displays by choosing a layout. For example, the layout you choose determines whether your chart displays a title, where the title displays, whether your chart has a legend, where the legend displays, whether the chart has axis labels and so on. Excel provides several layouts from which you can choose.

EXERCISE 2

Apply a Chart Layout
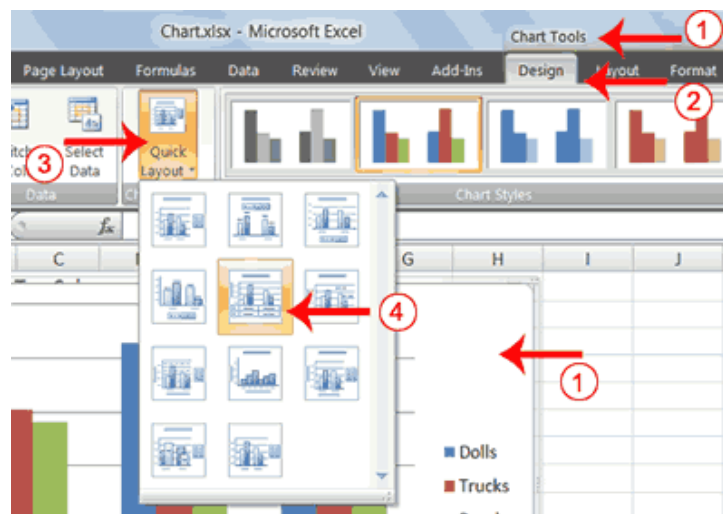
1. Click your chart. The Chart Tools become available.
2. Choose the Design tab.
3. Click the Quick Layout button in the Chart Layout group. A list of chart layouts appears.
4. Click Layout 5. Excel applies the layout to your chart.

4.3 Add Labels

When you apply a layout, Excel may create areas where you can insert labels. You use labels to give your chart a title or to label your axes. When you applied layout 5, Excel created label areas for a title and for the vertical axis.

EXERCISE 3

Add labels
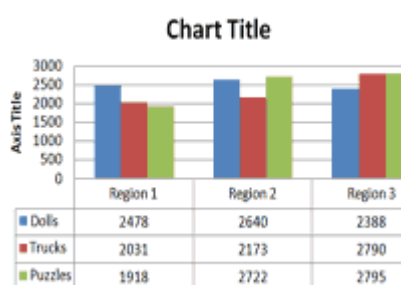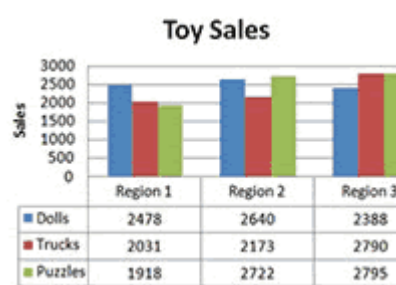
Before   After

1. Select Chart Title. Click on Chart Title and then place your cursor before the C in Chart and hold down the Shift key while you use the right arrow key to highlight the words Chart Title.
2. Type **Toy Sales**. Excel adds your title.
3. Select Axis Title. Click on Axis Title. Place your cursor before the A in Axis. Hold down the Shift key while you use the right arrow key to highlight the words Axis Title.

4. Type **Sales.** Excel labels the axis.
5. Click anywhere on the chart to end your entry.

4.4 Switch Data

If you want to change what displays in your chart, you can switch from row data to column data and vice versa.

EXERCISE 4

Switch Data
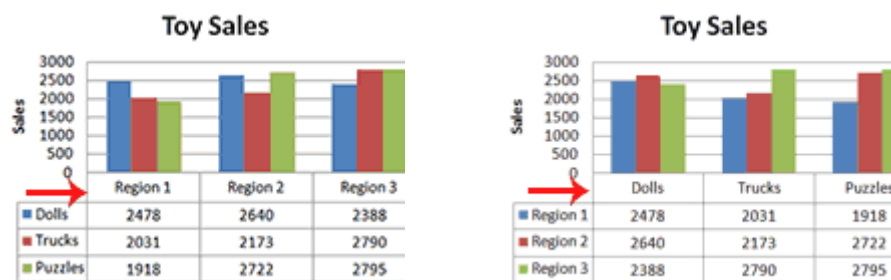
Before   After

1. Click your chart. The Chart Tools become available.
2. Choose the Design tab.
3. Click the Switch Row/Column button in the Data group. Excel changes the data in your chart.

4.5 Change the Style of a Chart

A style is a set of formatting options. You can use a style to change the color and format of your chart. Excel 2007 has several predefined styles that you can use. They are numbered from left to right, starting with 1, which is located in the upper-left corner.

EXERCISE 5

Change the Style of a Chart
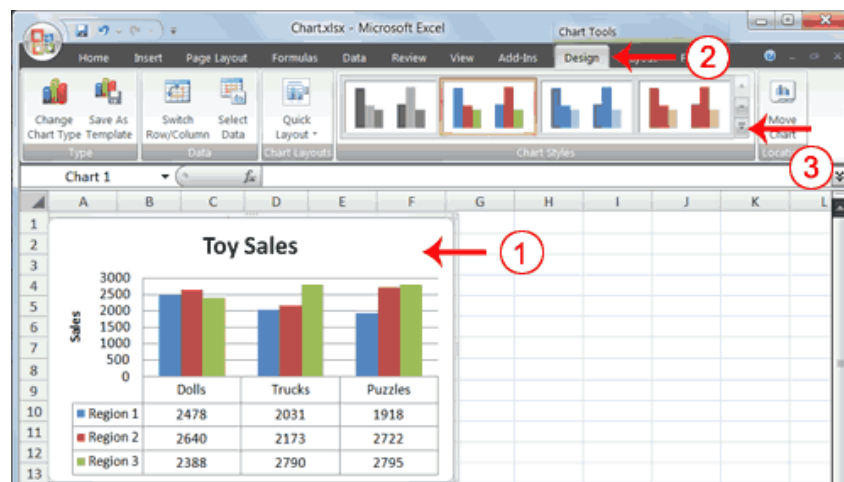
1. Click your chart. The Chart Tools become available.
2. Choose the Design tab.
3. Click the More button in the Chart Styles group. The chart styles appear.

4. Click Style 42. Excel applies the style to your chart.

4.6 Change the Size and Position of a Chart

When you click a chart, handles appear on the right and left sides, the top and bottom, and the corners of the chart. You can drag the handles on the top and bottom of the chart to increase or decrease the height of the chart. You can drag the handles on the left and right sides to increase or decrease the width of the chart. You can drag the handles on the corners to increase or decrease the size of the chart proportionally. You can change the position of a chart by clicking on an unused area of the chart and dragging.

EXERCISE 6

Change the Size and Position of a Chart
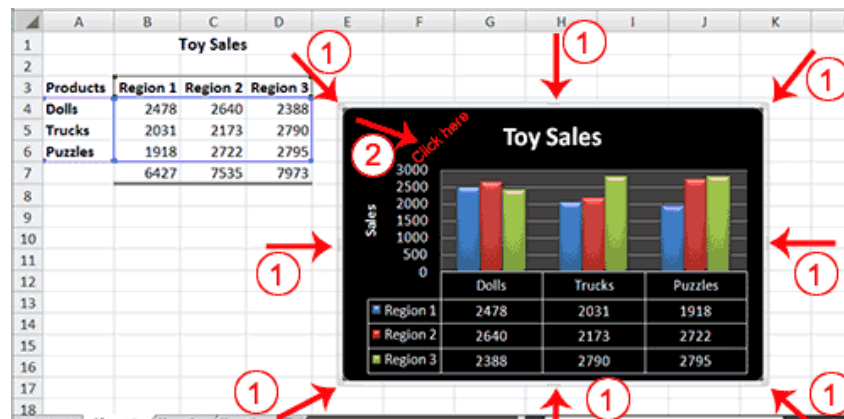
1. Use the handles to adjust the size of your chart.
2. Click an unused portion of the chart and drag to position the chart beside the data.

4.7 Move a Chart to a Chart Sheet

By default, when you create a chart, Excel embeds the chart in the active worksheet. However, you can move a chart to another worksheet or to a chart sheet. A chart sheet is a sheet dedicated to a particular chart. By default Excel names each chart sheet sequentially, starting with Chart1. You can change the name.

EXERCISE 7

Move a Chart to a Chart Sheet
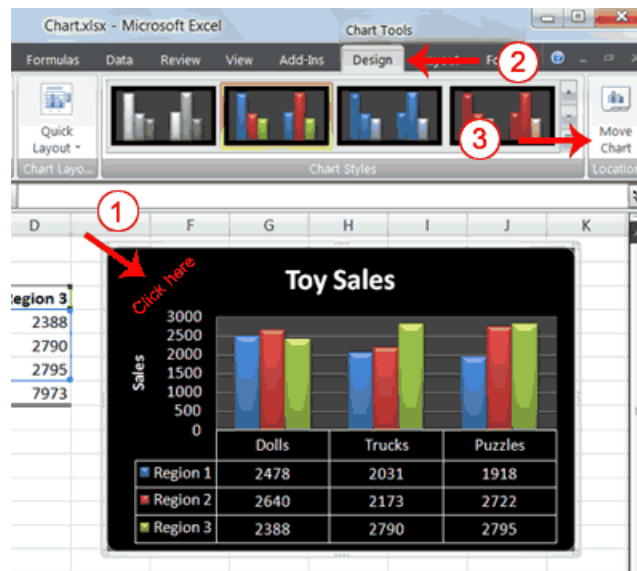
1. Click your chart. The Chart Tools become available.
2. Choose the Design tab.
3. Click the Move Chart button in the Location group. The Move Chart dialog box appears.
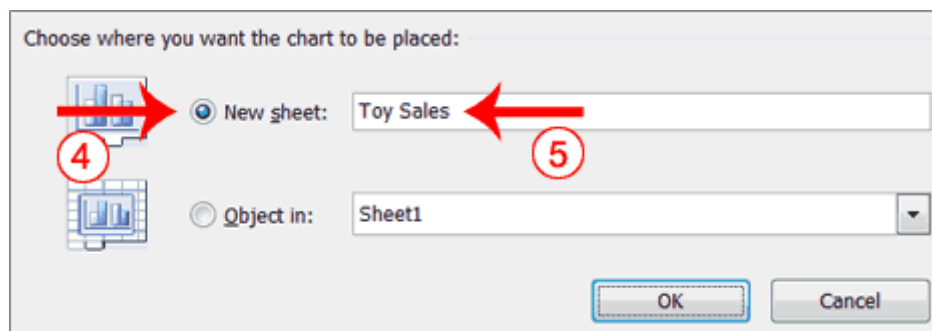
4. Click the New Sheet radio button.
5. Type Toy Sales to name the chart sheet. Excel creates a chart sheet named Toy Sales and places your chart on it.

4.8 Change the Chart Type

Any change you can make to a chart that is embedded in a worksheet, you can also make to a chart sheet. For example, you can change the chart type from a column chart to a bar chart.

EXERCISE 8

Change the Chart Type
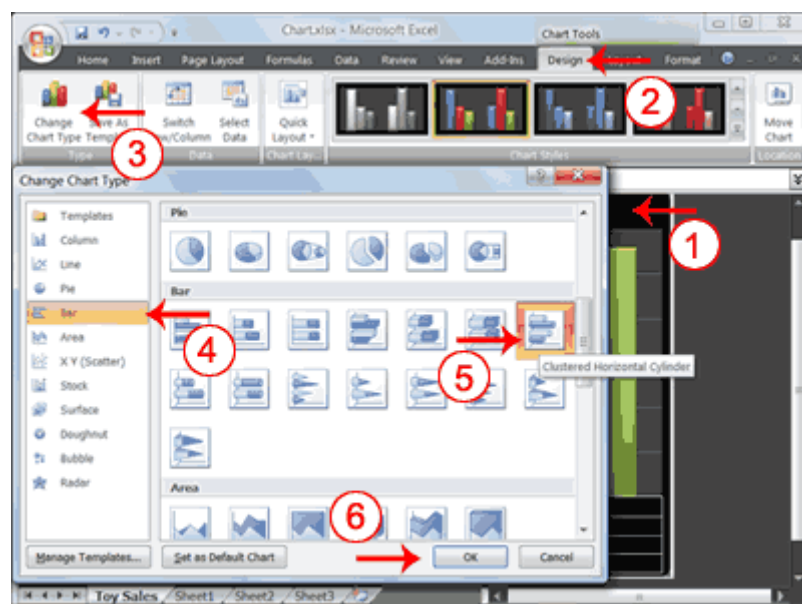
1. Click your chart. The Chart Tools become available.
2. Choose the Design tab.
3. Click Change Chart Type in the Type group. The Chart Type dialog box appears.
4. Click Bar.
5. Click Clustered Horizontal Cylinder.
6. Click OK. Excel changes your chart type.
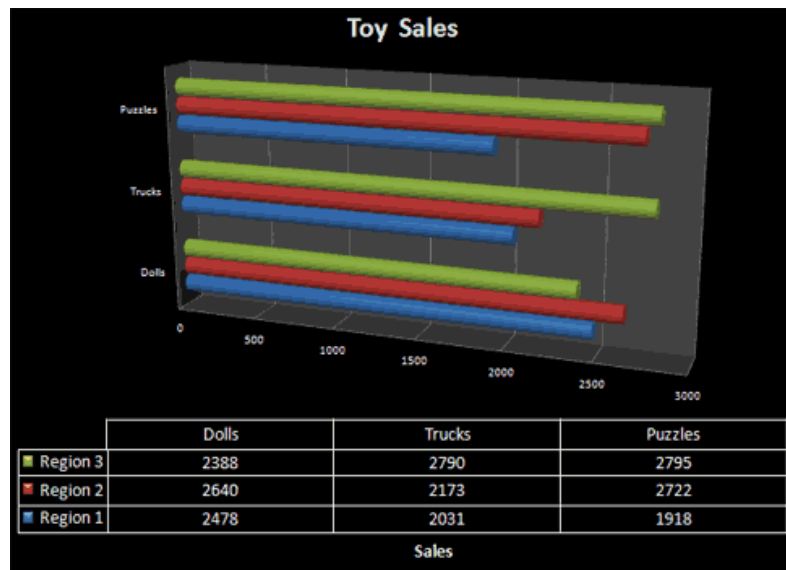
You can save and close your file.

UNIT – 3 : Lesson 11

POWER POINT

11.0 Objective

The objective of this lesson is to explain the basic features of powerPoint package supplied with MS Office suite. It explains the preparation of slides for presentation with various animation effects and to create slide shows.

After studying this lesson you will be able to
- create PowerPoint presentation
- create slides
- editing slides
- apply a theme to slides
- run slide show

Structure
1. The PowerPoint Window
2. Creating PowerPoint Presentation
  2.1 Create a Title Slide
  2.2 Create New Slides
  2.3 Create an Outline
  2.4 Create Two-Column Text
3. Editing Slides
4. Apply a Theme
5. Run PowerPoint Slide Show

1. The PowerPoint Window

PowerPoint is a presentation software package supplied with MS Office suite to create slide shows. This lesson introduces you to the PowerPoint window. You use the window to interact with the software. To begin, click start button on the desktop, click programs, click MS Office and open PowerPoint 2007 by double clicking on it. The window appears and your screen looks similar to the one shown below.
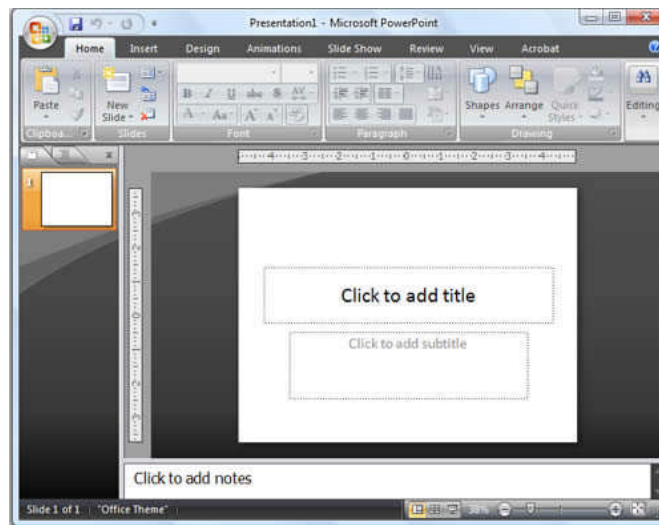
The Microsoft Office Button

In the upper-left corner is the Microsoft Office button. When you click the button, a menu appears. You can use the menu to create a new file, open an existing file, save a file, and perform many other tasks.

The Quick Access Toolbar

Next to the Microsoft Office button is the Quick Access toolbar. The Quick Access toolbar provides you with access to commands you frequently use. By default, Save, Undo, and Redo appear on the Quick Access toolbar. You use Save to save your file, Undo to rollback an action you have taken, and Redo to reapply an action you have rolled back.

The Title Bar

The Title bar is located at the top in the center of the PowerPoint window. The Title bar displays the name of the presentation on which you are currently working. By default,

PowerPoint names presentations sequentially, starting with Presentation1. When you save your file, you can change the name of your presentation.

The Ribbon

1	Tabs
2	Command Group
3	Command Buttons
4	Launcher

You use commands to tell PowerPoint what to do. In PowerPoint 2007, you use the Ribbon to issue commands. The Ribbon is located near the top of the PowerPoint window, below the Quick Access toolbar. At the top of the Ribbon are several tabs; clicking a tab displays several related command groups. Within each group are related command buttons. You click buttons to issue commands or to access menus and dialog boxes. You may also find a dialog box launcher in the bottom-right corner of a group. When you click the dialog box launcher, a dialog box makes additional commands available.

Rulers

Rulers are vertical and horizontal guides. You use them to determine where you want to place an object. If the rulers do not display in your PowerPoint window:

1. Click the View tab.
2. Click Ruler in the Show/Hide group. The rulers appear.

Slides, Placeholders, and Notes
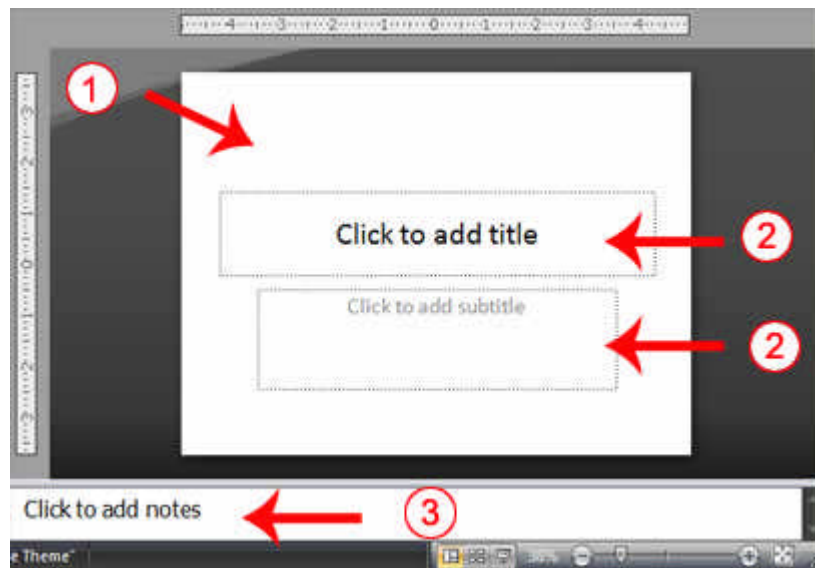
1	Slide
2	Placeholders
3	Notes

Slides appear in the center of the window. You create your presentation on slides. Placeholders hold the objects in your slide. You can use placeholders to hold text, clip art, charts, and more. You can use the notes area to create notes to yourself. You can refer to these notes while you give your presentation.

Status Bar, Tabs, View Buttons, and More

The Status bar generally appears at the bottom of the window. The Status bar displays the number of the slide that is currently displayed, the total number of slides, and the name of the design template in use or the name of the background.

The Outline tab displays the text contained in your presentation. The Slides tab displays a thumbnail of all your slides. You click the thumbnail to view the slide in the Slide pane.

The View buttons appear near the bottom of the screen. You use the View buttons to change between Normal view, Slider Sorter view, and the Slide Show view.
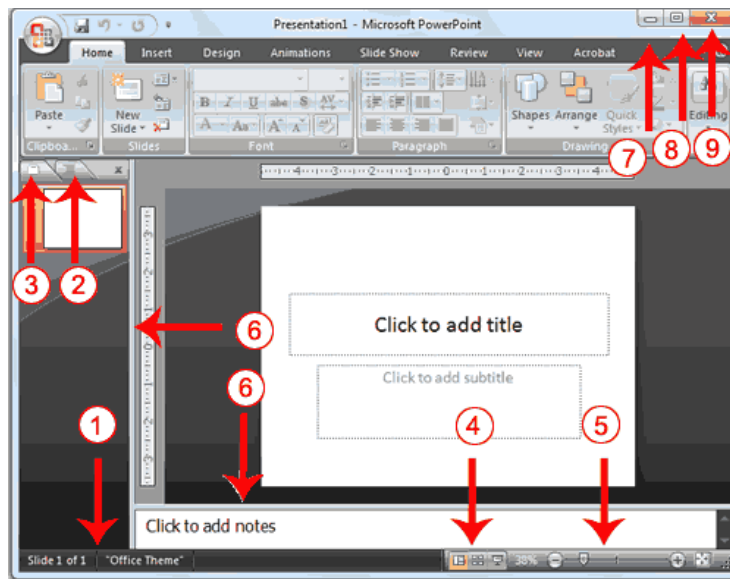
1	Status Bar	6	Vertical & Horizontal Splitter Bars
2	Outline Tab	7	Minimize Button
3	Slides Tab	8	**Maximize/Restore Button**
4	View Buttons	9	**Close Button**
5	Zoom		

Normal View: Normal view splits your screen into three major sections: the Outline and Slides tabs, the Slide pane, and the Notes area. The Outline and Slides tabs are on the left side of your window. They enable you to shift between two different ways of viewing your slides. The Slides tab shows thumbnails of your slides. The Outline tab shows the text on your slides. The Slide pane is located in the center of your window. The Slide pane shows a large view of the slide on which you are currently working. The Notes area appears below the Slide pane. You can type notes to yourself on the Notes area.

Slide Sorter View: Slide Sorter view shows thumbnails of all your slides. In Slide Sorter view, you can easily add, delete, or change their order of your slides.

Slide Show: Use the Slide Show view when you want to view your slides, as they will look in your final presentation. When in Slide Show view:

Esc	Returns you to the view you were using previously.
Left-clicking	Moves you to the next slide or animation effect. When you reach the last slide, you automatically return to your previous view.

| Right-clicking | Opens a pop-up menu. You can use this menu to navigate the slides, add speaker notes, select a pointer, and mark your presentation. |

Zoom allows you to zoom in and zoom out on the window. You can click and drag the vertical and horizontal splitter bars to change the size of your panes.

You use the Minimize button to remove a window from view. While a window is minimized, its title appears on the taskbar. You click the Maximize button to cause a window to fill the screen. After you maximize a window, clicking the Restore button returns the window to its former smaller size. You click the Close button to exit the window and close the program.

2. Creating PowerPoint Presentation

You create your PowerPoint presentation on slides. You use layouts to organize the content on each slide. PowerPoint has several slide layouts from which to choose. Themes are sets of colors, fonts, and special effects. Backgrounds add a colored background to your slides. You can add themes and backgrounds to your slides. After you complete your slides, you can run your presentation.

2.1 Create a Title Slide

When you start PowerPoint, it displays the title slide in the Slide pane. You can type the title of your presentation and a subtitle on this slide. To enter text:

- Click and type the title of your presentation in the "Click to add title" area.
- Click and type a subtitle in the "Click to add subtitle" area.

If you do not wish to use the title slide, click the Delete Slide button in the Slides group on the Home tab.

EXERCISE 1

Create a Title Slide

1. Open PowerPoint. You are presented with a title slide.
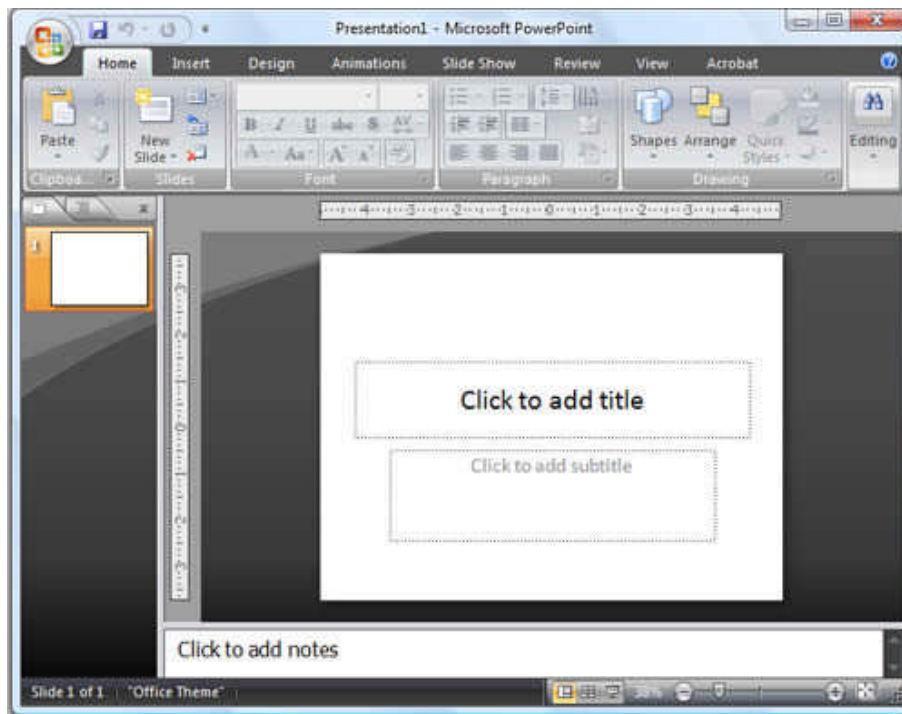
2. Enter the information shown here. Type **College Scholarships and Financial Aid** in the Click to Add Title text box. Type **Paying for College** in the Click to Add Subtitle text box.

2.2 Create New Slides

After completing your title slide, you can create additional slides. To create a new slide:

1. Choose the Home tab.
2. Click the New Slide button in the Slides group. The Office Theme dialog box appears and displays several layout templates.
3. Click the layout you want. The layout appears in the Slide pane of the PowerPoint window.
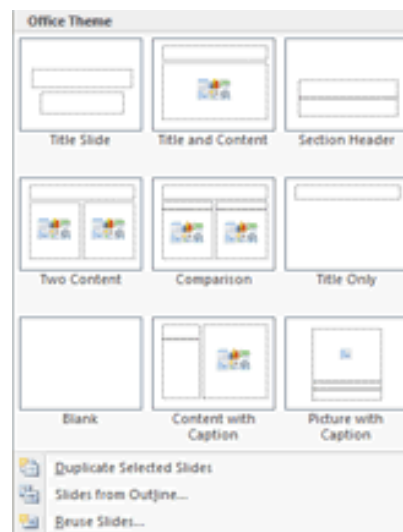
3. To add text, click inside the placeholder and type.
4. To add an additional slide to your presentation, do one of the following:

Right-click the slide layout. A menu appears. Click Layout and then click the layout you want.

EXERCISE 2

Create New Slides

1. Choose the Home tab.
2. Click the New Slide button Slide ▾ in the Slides group. The Office Theme dialog box appears.
3. Click the Title and Content Layout. The slide appears on the Slides tab.
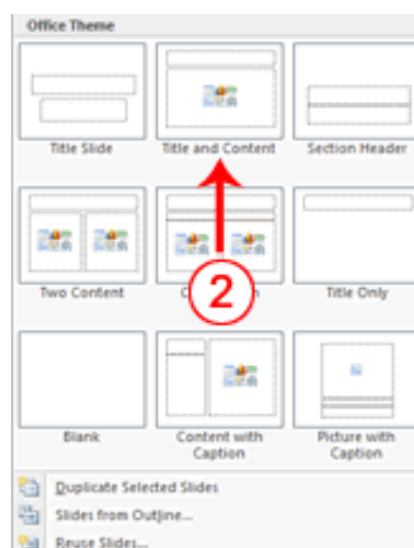
4. Enter the information shown here. Type **Here is what to do:** (including the colon) in the Click to Add Title text box. Type the bulleted text in the Content text box.

Here is what to do:

- Start saving early
- Apply for financial aid

2.3 Create an Outline

If you need to present the information in your slide in outline form, you can easily create an outline by using the Increase List Level button to create a hierarchy.

1. Choose the Home tab.
2. Click the New Slide button in the Slides group. The Office Theme dialog box appears.
3. Click the Title and Content layout.
4. Enter the information shown here. Click the Increase List Level button in the Paragraph group to indent the bullets for Stafford Loans and PLUS Loans. If you ever need to decrease an indent, use the Decrease List Level button in the Paragraph group.

Where to Apply for Aid

- Pell grants
- Work study programs
- Federal loans
  - Stafford loans
  - PLUS loans

2.4 Create Two-Column Text

You can also place text in two separate columns.

1. Choose the Home tab.
2. Click the New Slide button in the Slides group. The Office Theme dialog box appears.

3. Click the Two Content layout.
4. Enter the information shown here.

Other Forms of Aid

- Federal aid administered by college
  - Perkins loans
  - SEOGs

  Column 1

- HOPE scholarships
- Lifetime Learning tax credit
- Tax benefits for higher education

  Column 2
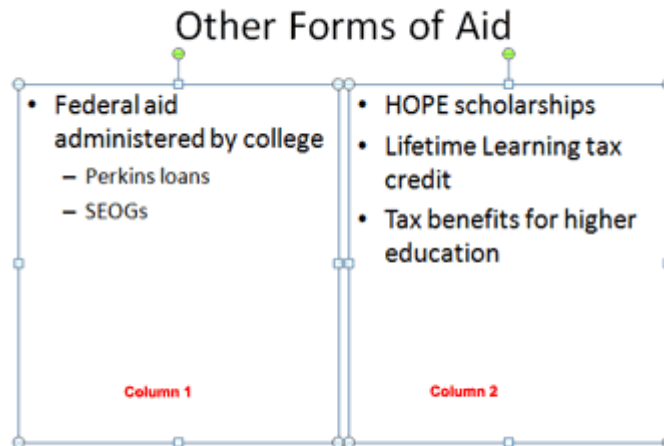
3. Editing Slides

After creating a slide, if you want to add text:
1. Place the mouse pointer at the point at which you would like to add text.
2. Type the information you want to add.

If you would like to change text:
1. Select the text you want to change.
2. Type the new text.
   You can use the Backspace key to delete text. You can also delete text by highlighting the text and pressing the Delete key.

4. Apply a Theme

A theme is a set of colors, fonts, and special effects. Themes provide attractive backgrounds for your PowerPoint slides. To apply a theme to all of the slides in your presentation:

1. Choose the Design tab.
2. Click the More button in the Themes group.
3. Click the design you want.

To apply a theme to selected slides:

1. Click the Slides tab, located on the left side of the window.
2. Hold down the Ctrl key and then click to select the slides to which you want to apply a theme.
3. Choose the Design tab.

4. Click the More button ⏷ in the Themes group.
5. Right-click the theme you want to apply. A menu appears.
6. Click Apply to Selected Slides. Excel applies the theme to the slides you selected.

You can add a dramatic effect to your theme by applying a background.

1. Choose the Design tab.
2. Click the Background Styles button 🎨 Background Styles ▾.
3. Click the background you want.

EXERCISE 3

Apply a Theme

1. Choose the Design tab.
2. Click the More button ⏷ in the Themes group.
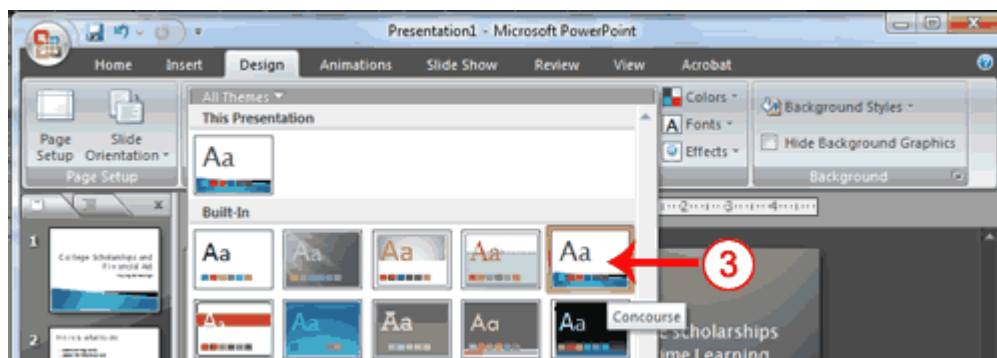
3. Click the theme you want. PowerPoint applies the theme to all of the slides in your presentation.

Add a Background

1. Choose the Design tab.
2. Click the Background Styles button .
3. Click the background you want. PowerPoint applies the background to your slides.

5. Run PowerPoint Slide Show

After you create your slides, you can run your slide show:

1. Do any one of the following:
    o   Press F5.
    o   Choose the Slide Show tab. Click the From Beginning button ![icon] in the Start Slide Show group.
    o   Click the Slide Show icon in the bottom-right corner of your screen.

Your slide show appears on your screen.

Navigating the Slide Show	
Task	**Procedure**
Go to the next slide.	Do one of the following: • Press the Right Arrow key. • Press the Enter key. • Press the Page Down key. • Left-click the slide.
Go to the previous slide.	Do one of the following: • Press the Left Arrow key. • Press the Backspace key. • Press the Page Up key.
End the slide show and return to PowerPoint.	Press the Esc key.

EXERCISE 4

Run Your Slide Show

1. Press F5 to run the slide show.
2. Use the arrow keys on your keyboard to move forward and backward through your slides.
3. Use the Esc key to return to Normal view.

Lesson 12

POWERPOINT - ANIMATIONS, TRANSITIONS, SPELL CHECK, OUTLINE TAB, SLIDES TAB, SORTER VIEW, AND PRINTING

12.0. Objective

The objective of this lesson is to explain about how to introduce animations and transitions into slides to make the presentation effective. This lesson also teaches how to spell-check your document, how to use the Outline and Slides tabs, how to use Sorter view, and how to print.

After studying this lesson you can
- add animation to the slides
- add sound to the slide show
- spell check the slides
- take a print out of outline presentation
- take print out of slides

Structure

1. Introduction

2. Add Animations

3. Modify the Animation

4. Add Transitions

5. Add Sound and Set the Speed

6. Spell Check

7. Use the Outline and Slides Tabs

8. Use Slide Sorter View

9. Print

9.1 Print an Outline

9.2 Print Slides

9.3 Print Slides as Handout

1. Introduction

Animations control how objects move onto the slides and around your slides. It also controls how objects move off from the slides. Transitions control how your presentation moves

from one slide to the next. Different animation techniques are built in along with the package. Applying animations and transitions make the slide show effective.

2. Add Animations

You can animate the objects on your PowerPoint slides. PowerPoint provides four types of animations: Entrance, Emphasis, Exit, and Motion Paths.

An Entrance animation determines the manner in which an object appears on a slide; for example, an object can move onto a slide.

An Emphasis animation does something to draw attention to an object; for example, the object can become larger.

An Exit animation determines the manner in which an object leaves a slide; for example, an object can move off a slide.

A Motion Paths animation determines how an object moves around a slide; for example, an object can move from left to right.

After you add an animation, you can use the Custom Animation pane to modify it by choosing an effect. Choosing an effect enables you to define what starts the animation, its properties, and control the speed of the animation. In addition, you can have an animation start when you click the mouse, start along with the previous animation, or start at a specified time after the previous animation.

If the Auto Preview box is checked on the Custom Animation pane, PowerPoint provides you with preview of your animation after you create it and each time you modify it. You can also use the Play button ▶ Play on the Custom Animation pane to preview an animation.

To choose an effect:

1. Select the object you want to animate.
2. Choose the Animations tab.
3. Click the Custom Animation button 🔲 Custom Animation. The Custom Animation pane appears.
4. Click the Add Effect button ⭐ Add Effect ▼. A menu appears.
5. Choose the type of effect you want. A submenu appears.
6. Click the effect you want. PowerPoint applies the effect.

To modify an effect:

1. Click the down arrow next to the Start field on the Custom Animations pane and then select the start method you want.
2. Click the down arrow next to the Property field on the Custom Animations pane and the select the property you want. The Property field might be labeled Direction, Size, or some other property.
3. Click the down arrow next to the Speed field on the Custom Animations pane and then select the speed you want to apply to your animation.

To preview the animation, click the Play button ▶ Play on the Custom Animations pane.

EXERCISE 1

Add an Animation to a Slide
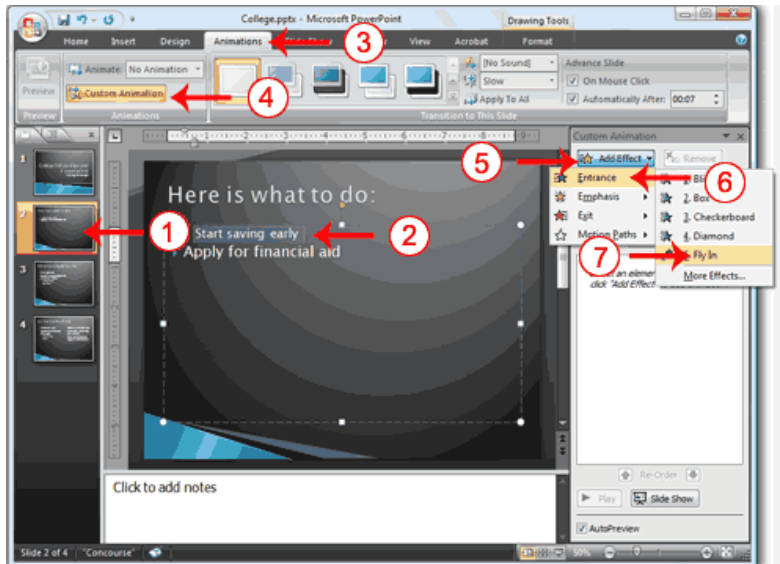
1. Click Slide 2 on the Slides tab.
2. Select "Start saving early."
3. Choose the Animations tab.
4. Click the Custom Animation button . The Custom Animation pane appears.
5. Click the Add Effect button . A menu appears.
6. Choose Entrance. A submenu appears.
7. Click Fly In. PowerPoint applies the effect. If the Auto preview box is checked, PowerPoint automatically provides you with a preview of the animation.

Modify the Effect
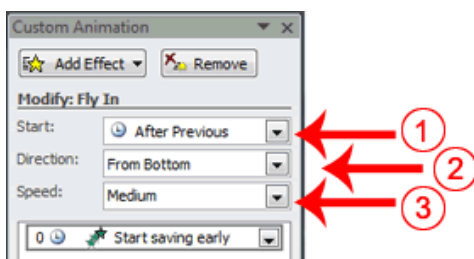
1. Click the down arrow next to the Start field and then select After Previous.
2. Click the down arrow next to the Direction field and then select From Bottom.
3. Click the down arrow next to the Speed field and then select Medium.

Add Another Animation
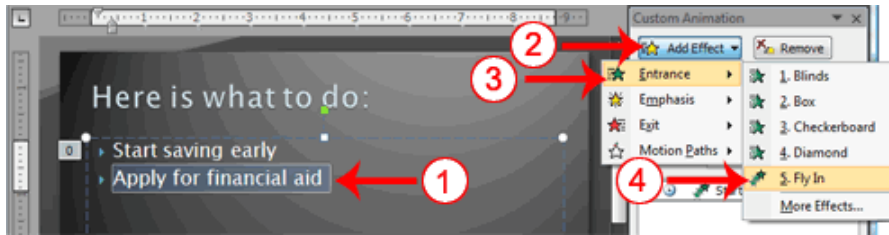
1. Select "Apply for financial aid."
2. Click the Add Effect button ![Add Effect]. A menu appears.
3. Choose Entrance. A submenu appears.
4. Click Fly In. PowerPoint applies the effect. If the Auto preview box is checked, PowerPoint automatically provides you with a preview of the animation.

3. Modify the Animation
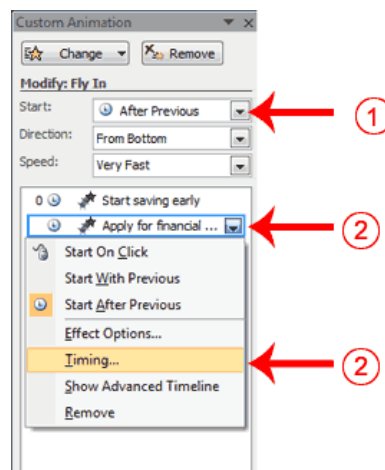
1. Click the down arrow next to the Start field and then select After Previous. The Apply for Financial Aid field appears in the center of the Custom Animation pane.
2. Click the down arrow next to the Apply for Financial Aid field and then click Timing. The Fly In dialog box appears.
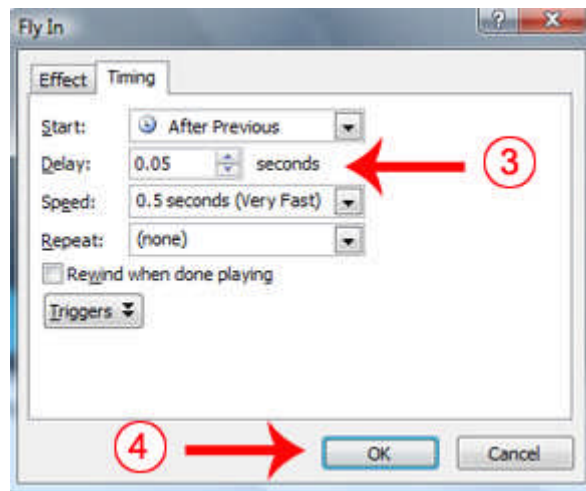
3. Type **0.05** in the Delay text box.
4. Click OK.
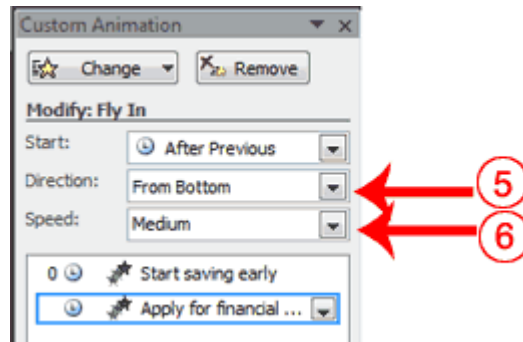
5. Click the down arrow next to the Direction field and then select From Bottom.
6. Click the down arrow next to the Speed field and then select Medium. If the Auto preview box is checked, PowerPoint automatically provides you with a preview of the animation. You can click the Play button ► Play on the Custom Animation pane at anytime to preview an animation.

4. Add Transitions

Transitions determine how your presentations move from one slide to the next. For example, a slide can move up onto the screen and replace the previous slide. PowerPoint provides several transition methods. You can add sound to a transition and you can control its speed. You can apply a transition to selected slides or to all of the slides in your presentation.

A transition can occur when the presenter clicks the mouse or after the amount of time you specify.

To apply a transition to selected slides:

1. On the Slides tab, hold down the Ctrl key and then click the slides to which you want to apply the transition.
2. Choose the Animations tab.
3. Click the More button ⊽ in the Transition to this Slide group. A menu of transitions appears.
4. Click the transition you want to apply. PowerPoint applies the transition. As you roll your pointer over each transition, PowerPoint provides you with a live preview of the transition.

To apply a transition to all slides:

1. Choose the Animations tab.
2. Click the More button ⊽ in the Transition to this Slide group. A menu of transitions appears.
3. Click the transition you want to apply. As you roll your pointer over each transition, PowerPoint provides you with a live preview of the transition.
4. Click the Apply to All button 🔲 Apply To All   in the Transition to This Slide group.

To add a sound to a transition:

1. Choose the Animations tab.
2. Click the down arrow next to the Transition Sound field and then click the sound you want. As you roll your pointer over each sound, PowerPoint plays the sound.

To set the speed of a transition:

1. Choose the Animations tab.
2. Click the down arrow next to the Transition Speed field and then click the speed you want.

If you want the transition to occur after the presenter clicks the mouse, check the 'On Mouse Click' check box. If you want a transition to occur after a specified period of time, check the 'Automatically After' check box and then specify the amount of time you want to elapse before the transition occurs. The 'On Mouse Click' check box and the 'Automatically After' check box are both located on the Animations tab in the Transition to This Slide group.

EXERCISE 2

Add Transitions
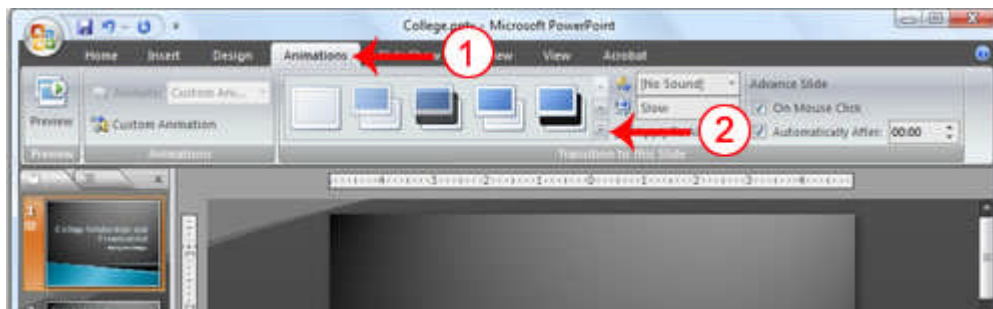
1. Choose the Animations tab.
2. Click the More button ⊽in the Transition to this Slide group. A menu of transitions appears.
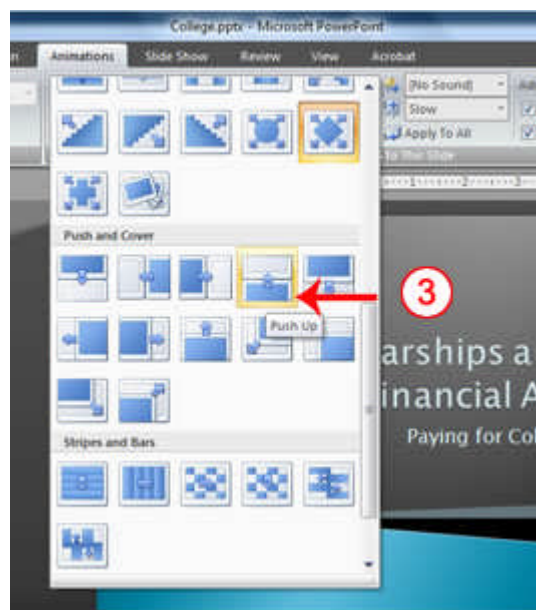
3. Click the Push Up transition. As you roll your pointer over each transition, PowerPoint provides you with a live preview of the transition.

5. Add Sound and Set the Speed

You can add sound to your slide show by clicking some icons or using the menu provided. The speed of the show also can be controlled. This will be done with following window.
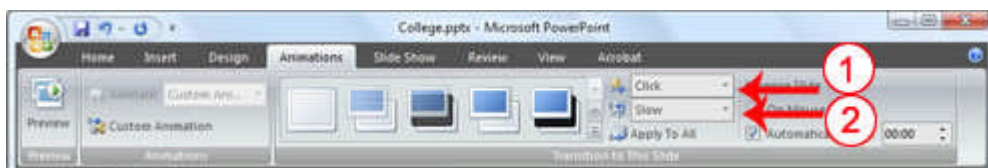
1. Click the down arrow next to the Transition Sound field and then click Click.

2. Click the down arrow next to the Transition Speed field and then click Slow.

Advance Slide
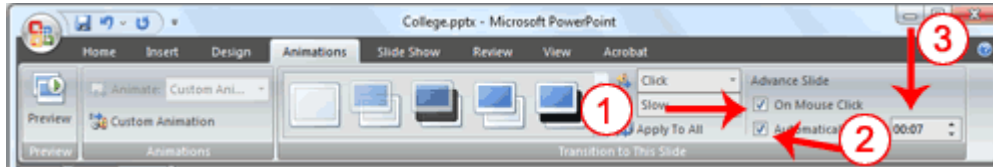
1. Check the On Mouse Click check box.
2. Click the Automatically After check box.
3. Type **00:07** in the Automatically After text box.
4. Click the Apply to All button ![Apply To All]. PowerPoint applies all of your changes to all of the slides.
5. Click Slide 1 on the Slides tab.
6. Type **00:03** in the Automatically After text box. PowerPoint changes the timing for Slide 1.

6. Spell Check

PowerPoint checks the spelling as you type and displays errors with a red wavy line under the misspelled word. You can right-click and then select the correct spelling from the list of offerings on the menu that appears or select Spelling to open the Spelling dialog box. If you need to, you can initiate a spell check anytime you like. To start a spell check, do one of the following:

- Press F7.
- Choose the Review tab and then click the Spelling button ![ABC].

If the spell check finds a possible spelling error, the Spelling dialog box opens with the spelling error highlighted. You can respond in several ways.
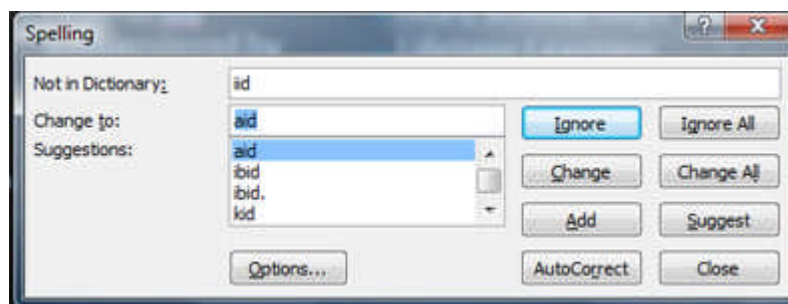
Response	Procedure
Do not change spelling.	Click Ignore.
Correct spelling.	1. Click the correct spelling in the Suggestions box. 2. Click Change.
Add to dictionary.	Click Add.
Word is correct. Do not change presentation.	Click Ignore All.
Word is incorrect. Change entire presentation.	Click Change All.

EXERCISE 3

Spell Check

1. Press F7
2. Correct any spelling errors PowerPoint finds. If PowerPoint does not find any errors, the Spelling Check is Complete message box appears. Click OK.

7. Use the Outline and Slides Tabs

By default, the Outline and Slides tabs are located on the left side of your PowerPoint window. The Outline tab displays the text contained in your presentation. The Slides tab displays a thumbnail of all your slides. You click the thumbnail to view the slide in the Slide pane.

EXERCISE 4

Use the Outline and Slides Tabs
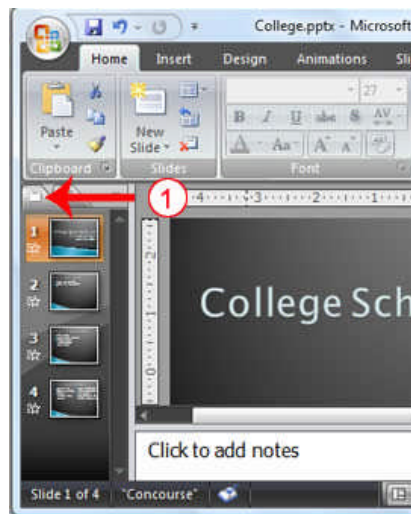
1. Choose the Slides tab to view thumbnails of your slides.
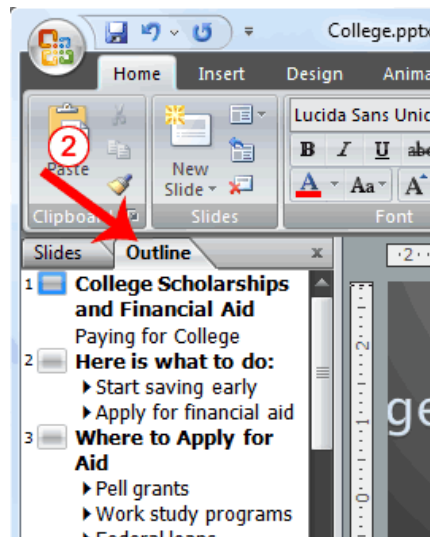
2. Choose the Outline tab to view the text of your presentation as an outline.

8. Use Slide Sorter View

After you have created your PowerPoint slides, you can move, cut, copy, paste, duplicate, navigate, and view them in Sorter view. To view the slides in Sorter view, do one of the following:

- Choose the View tab and then click the Slide Sorter button in the Presentation Views group.
- Click the Slide Sorter button in the bottom-right corner of the PowerPoint window.

Slide Sorter View	
Task	**Procedure**
Move to first slide.	Use Ctrl+Home.
Move to last slide.	Use Ctrl+End.
Move to next slide.	Use the right arrow.
Move to previous slide.	Use the left arrow.
Select a slide.	Single-click the slide.
Open a slide in Normal view.	Double-click the slide.
Select slides.	Select a single slide: 1. Click the slide you want to select.
	Select multiple slides: 1. Hold down the Ctrl key. 2. Click the slides you want to select.
Delete a slide.	1. Select the slide or slides you want to delete. 2. Press the Delete key.
	1. Select the slide or slides you want to delete. 2. Choose the Home tab and then click the Delete button .
Copy a slide.	1. Select the slide. 2. Choose the Home tab. 3. Click the Copy button in the Clipboard group.
	1. Select the slide. 2. Press Ctrl+C.
Paste a slide.	1. Select the slide after which you want the new slide or slides to appear. 2. Choose the Home tab. 3. Click the Paste button in the Clipboard group.

Slide Sorter View	
Task	**Procedure**
	1. Select the slide after which you want the new slide or slides to appear. 2. Press Ctrl+V.
Cut a slide.	1. Select the slide or slides you want to cut. 2. Choose the Home tab. 3. Click the Cut button ✂ in the Clipboard group.
	1. Select the slide or slides you want to cut. 2. Press Ctrl+X.
Move a slide.	1. Select the slide (or slides) you want to move. 2. Drag it to the new location.
Duplicate a slide.	1. Select the slide (or slides) you want to duplicate. 2. Press Ctrl+D.

EXERCISE 5

Use Slide Sorter View
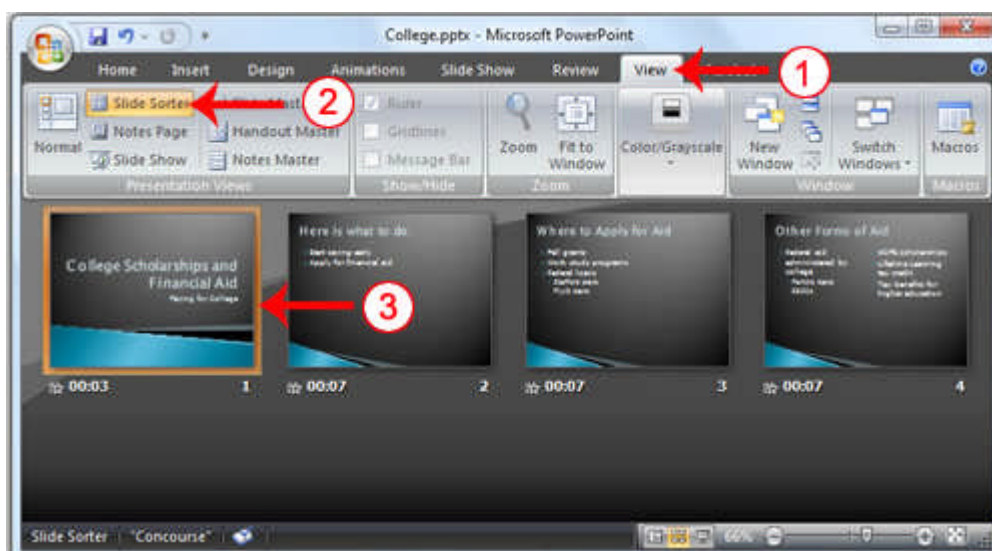
1. Choose the View tab.
2. Click Slide Sorter in the Presentation Views group.
3. Double-click a slide to view it in Normal view.

9. Print

PowerPoint provides you with many printing options. You can print a large view of your slides or you can print your slides as handouts with 1, 2, 3, 4, 6, or 9 slides per page. You can also print your Notes pages or the Outline view of your slides.

To print:

1. Click the Microsoft Office button. A menu appears.
2. Choose Print.
3. Click Print Preview.
4. Click the down arrow next to the Print What field in the Page Setup group and then select what you would like to print. A preview appears onscreen.
5. Click the Print. The Print dialog box appears.
6. Click the down arrow next to the Color/Grayscale field to select whether you want your slides to print in color, grayscale, or black and white. If you are using a black and white printer, choose black and white. You will use less ink or toner.
7. Click OK.

9.1 Print an Outline
EXERCISE 6
Print an Outline
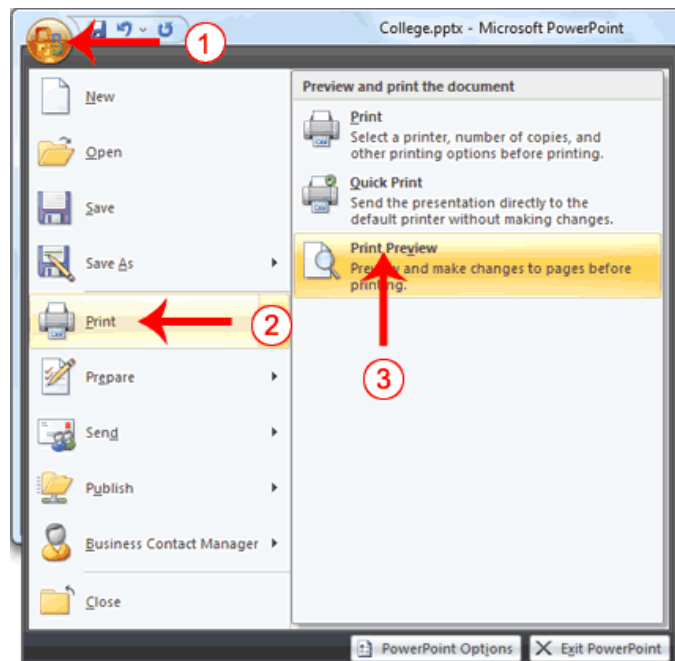
1. Click the Microsoft Office button. A menu appears.

2. Choose Print.
3. Click Print Preview. The Print Preview tab appears.
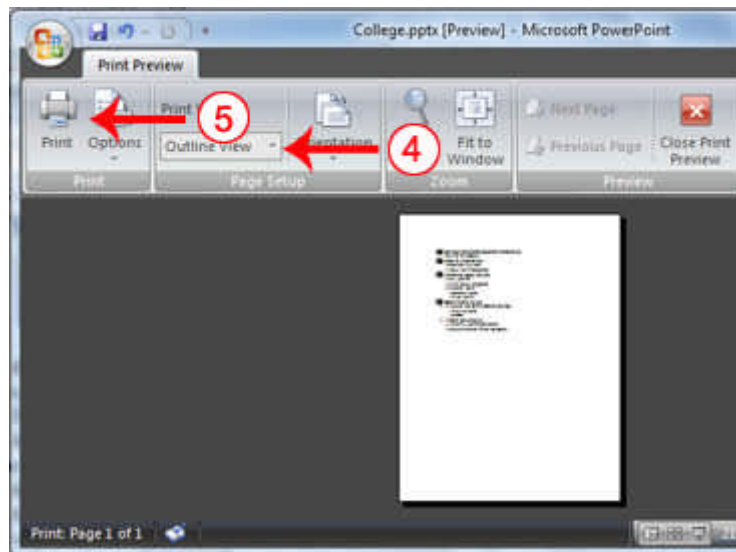
4. Click the down arrow next to the Print What field in the Page Setup group and then select Outline View.
5. Click the Print button [icon]. The Print dialog box appears.
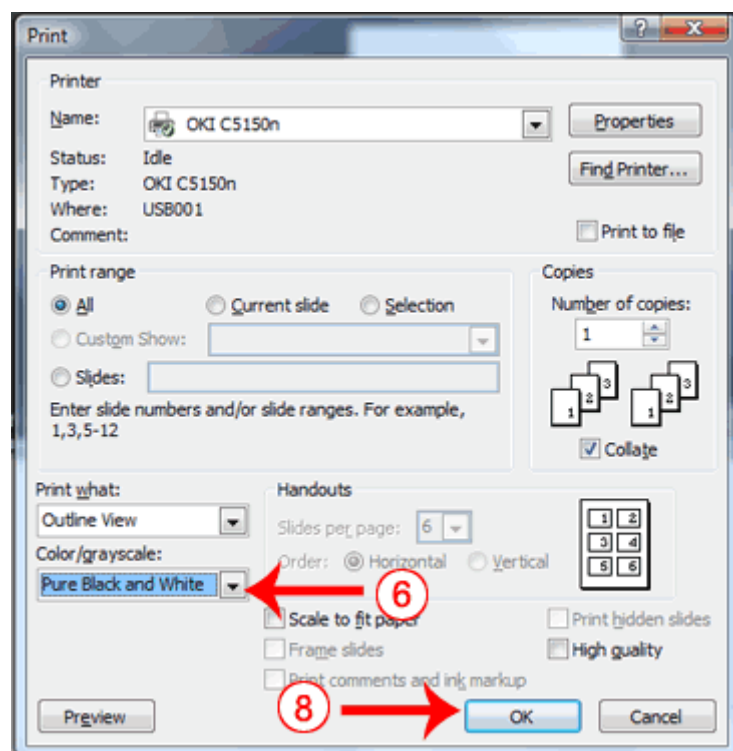
6. Click the down arrow next to the Color/Grayscale field to select whether you want your slides to print in color, grayscale, or black and white. If you are using a black and white printer, choose black and white. You will use less ink or toner.
7. Set the other print settings.
8. Click OK. Your outline prints.

9.2 Print Slides

1. Click the Microsoft Office button. A menu appears.
2. Choose Print.
3. Click Print Preview. The Print Preview tab appears.
4. Click the down arrow next to the Print What field in the Page Setup group and then select Slides.
5. Click the Print button . The Print dialog box appears.
6. Click the down arrow next to the Color/Grayscale field to select whether you want your slides to print in color, grayscale, or black and white. If you are using a black and white printer, choose black and white. You will use less ink or toner.
7. Set the other print settings.
8. Click OK. Your slides print.

9.3 Print Slides as a Handout

1. Click the Microsoft Office button. A menu appears.
2. Choose Print.
3. Click Print Preview. The Print Preview tab appears.
4. Click the down arrow next to the Print What field in the Page Setup group and then select Handouts (4 slides per page).
5. Click the Print button . The Print dialog box appears.
6. Click the down arrow next to the Color/Grayscale field to select whether you want your slides to print in color, grayscale, or black and white. If you are using a black and white printer, choose black and white. You will use less ink or toner.
7. Set the other print settings.
8. Click OK. Your handouts print.

Lesson 13

INTERNET

13.0. Objective

The main objective of this lesson is to explain briefly what is Internet and how to take Internet connectivity and hardware requirements. This lesson also explains the browsers needed to search the Internet. Various search techniques adopted by search engines are also discussed to enable you to retrieve web information available in the Internet.

After studying this lesson you will be able to know
- what is Internet
- types of Internet connectivity
- Internet services
- search engines
- search strategies
- searching methods

Structure

1. Introduction
2. Internet Access
3. Internet Services
      3.1 World Wide Web (WWW)
      3.2 Communication
      3.3 Data Transfer
4. Net Searching
      4.1. Search Strategies
5. Search Engines
6. Subject Directories
7. Gateways and Subject-Specific Databases
8. Reading Web Addresses
      8.1 Determining the Authenticity of Web Page
9. Starting Search
      9.1 Creating a Search Statement
      9.2 Boolean Searches
      9.3 Proximity Operators
      9.4 Field Searching, Title Searching and Domain Searching

1. Introduction

The Internet is a global system of interconnected computer networks. It is a *network of networks* that consists of millions of private, public, academic, business, and government networks. It uses the standard Internet protocol suite (*TCP/IP*) to serve several billion users worldwide. The Internet carries an extensive range of information resources and services, such as

the inter-linked hypertext documents of the World Wide Web (WWW) and the infrastructure to support email. Internet is a super high way of information. In the present day IT environment almost everyone is depending on Internet to get information for one thing or the other. Information is now available in the form of World Wide Web through Internet. World Wide Web is a store of interlinked information which is stored in the computers in the form of Hyper Text.

2. Internet Access:

Internet access connects individual computer to the Internet. Internet Service Providers (ISP) offer Internet access to the public in different types of access. Most Internet access was from personal computers and workstations directly connected to local area networks or from dial-up connections using modems and analog telephone lines. Now Broadband access such as ISDN, DSL, Leased Line, Cable and Wireless are being provided by many ISPs.

3. Internet Services:

The main services of the internet are World Wide Web (WWW), Communication (email, IRC, Newsgroups etc) and Data transfer (FTP).

3.1 World Wide Web (WWW):

The World Wide Web is a global set of documents, images and other resources, logically interrelated by hyperlinks and referenced with Uniform Resource Locators (URLs). URLs symbolically identify services, servers, and other databases, and the documents and resources that they can provide. Hypertext Transfer Protocol (HTTP) is the main access protocol of the World Wide Web.

World Wide Web browser software, such as Microsoft's Internet Explorer, Mozilla Firefox, Opera, Apple's Safari, and Google Chrome, lets users navigate from one web page to another via hyperlinks embedded in the documents. These documents may also contain any combination of computer data, including graphics, sounds, text, video, multimedia and interactive content that runs while the user is interacting with the page. . Through search engines like Yahoo! and Google, users worldwide have easy, instant access to a vast and diverse amount of online information. Compared to printed media, books, encyclopedias and traditional libraries, the World Wide Web has enabled the decentralization of information on a large scale.

3.2 Communication

Email is an important communications service available on the Internet. Internet telephony is another common communications service made possible by the creation of the Internet. VoIP stands for Voice-over-Internet Protocol, referring to the protocol that underlies all Internet communication. Internet Relay Chat is also an interactive communication available on the Internet. The search engines like Google, Yahoo, Rediff etc. provide free email accounts to the users.

3.3 Data transfer

File sharing is an example of transferring large amounts of data across the Internet. A computer file can be emailed to customers, colleagues and friends as an attachment. It can be

uploaded to a website or <u>FTP</u> server for easy download by others. <u>Streaming media</u> is the real-time delivery of digital media for the immediate consumption or enjoyment by end users.

4 Net Searching:

Having Internet connection from Internet Service Provider is the pre-requisite to conduct search for information on the Internet. Assuming that you have an internet connection, you are explained with procedure to search Internet.

Switch on the computer. Double click on any browser, such as Internet Explorer, Mozaic or Google Chrome, available on your desktop. You can conduct search for information by selecting suitable search engine required for your search.

4.1 Search Strategies

Internet is a super high way of information. In the present day IT environment almost everyone is depending on Internet to get information for one thing or the other. Information is now available in the form of World Wide Web through Internet. World Wide Web is a store of interlinked information which is stored in the computers in the form of Hyper Text. From common man to scholar, everyone who uses the Internet has had the experience of getting hundreds of results when conducted a web search. By choosing the appropriate search engine, controlling the terms that you search for, and using a few tricks, you can make Internet searching faster and more efficient.

5. SEARCH ENGINES

Search engines are huge databases of web page files that have been assembled automatically by machine. Search engines compile their databases by employing "spiders" or "robots" ("bots") to crawl through web space from link to link, identifying and perusing pages. Search engines are best at finding unique keywords, phrases, quotes, and information buried in the full-text of web pages available on computers connected to Internet.

Examples of Search Engines:

- <u>Google</u>
- <u>Ask</u>
- <u>Gigablast</u>
- <u>Yahoo! Search</u>
- Rediff

6. SUBJECT DIRECTORIES

Subject directories, unlike search engines, are created and maintained by human editors, not electronic spiders or robots. The editor review and select sites for inclusion in their directories on the basis of previously determined selection criteria. The resources they list are usually annotated.

Subject directories are best for browsing and for searches of a more general nature. They are good sources for information on popular topics, organizations, commercial sites and products.

EXAMPLES OF SUBJECT DIRECTORIES AND PORTALS :

Subject Directories

- Beaucoup
- LookSmart
- Open Directory Project
- Yahoo

Portals (subject directories serving as home pages)

- Excite
- MSN directory
- Netscape
- Yahoo! directory

7. GATEWAYS AND SUBJECT-SPECIFIC DATABASES

Gateways

There are two kinds of gateways: library gateways and portals. Library gateways are collections of databases and informational sites, arranged by subject, that have been assembled, reviewed and recommended by specialists, usually librarians. These gateway collections support research and reference needs by identifying and pointing to recommended, academically-oriented pages on the Web. See list of examples below.

Subject-Specific Databases (sometimes called "Vortals")

Subject-specific databases, or vortals (i.e., "vertical portals") are databases devoted to a single subject, created by professors, researchers, experts, governmental agencies, business interests, and other subject specialists and/or individuals who have a deep interest in, and professional knowledge of, a particular field and have accumulated information and data about it. See list of examples below.

Use library gateways when you are looking for high quality information sites on the Web. You can be fairly certain that these sites have been reviewed and evaluated by subject specialists for their accuracy and content.

Use subject-specific databases when looking for information on a specific topic, e.g., news links, multimedia files, archives, mailing lists, people, job finders, and thousands of databases devoted to specific topics of interest. Today, more and more of the so-called "main-stream" search engines, subject directories and portals are pointing to these subject-specific databases, using direct links on their home pages.

EXAMPLES OF LIBRARY GATEWAYS

- Academic Information
- Digital Librarian
- Infomine
- Internet Public Library
- Librarians' Index to the Internet
- PINAKES
- WWW.VirtualLibrary.com

EXAMPLES OF SUBJECT-SPECIFIC DATABASES

- Educator's Reference Desk (educational information)
- Expedia (travel)
- Internet Movie Database (movies)
- Jumbo Software (computer software)
- Kelley Blue Book (car values)
- Monster Board (jobs)
- Motley Fool (personal investment)
- MySimon (comparison shopping)
- Roller Coaster Database (roller coasters)
- Voice of the Shuttle (humanities research)
- WebMD (health information)

8. READING WEB ADDRESSES

First, you need to know how to read a web address, or URL (Universal Resource Locator). Let's look at the URL for this tutorial:

http://www.nagarjunauniversity.ac.in/deptdet.asp?id=1005 Here's what it all means:

- "http" means hypertext transfer protocol and refers to the format used to transfer and deal with information
- "www" stands for World Wide Web and is the general name for the host server that supports text, graphics, sound files, etc. (It is not an essential part of the address, and some sites choose not to use it)
- "nagarjunauniversity" is the domain name and usually designates the server's location, in this case, the Acharya Nagarjuna University.
- "ac" is second level domain name
- "deptdet" is the file name
- ".asp " is the file type extension and, in this case, stands for "active server page"

Here is a list of the domains that have been in operation for the past several years and are generally accepted by all:

- .edu -- educational site (usually a university or college)
- .com -- commercial business site
- .gov -- U.S. governmental/non-military site
- .mil -- U.S. military sites and agencies
- .net -- networks, internet service providers, organizations
- .org -- U.S. non-profit organizations and others

8.1 Determining the Authenticity of Web Page

You can tell a lot about the authenticity of a page by finding out all you can about its author/publisher. A reputable Web page will usually provide you with the following information:

- Last date page updated
- Mail-to link for questions, comments
- Name, address, telephone number, and email address of page owner

9. Starting Search

It's always a good idea to THINK about your search before you begin. Create a search strategy in your head by asking yourself this question:

What do I want to do?

1. Browse?
2. Locate a specific piece of information?
3. Retrieve everything I can on the subject?

Your answer will determine how you conduct your search and what tools you will use.

1. If you're browsing and trying to determine what's available in your subject area, start out by selecting a subject directory like Yahoo!. Then, enter your search keyword(s) into one of the meta search engines, such as Vivisimo, just to see what's out there.
2. If you're looking for a specific piece of information, go to a major search engine such as Google, or to a specialized database such as Bureau of the Census (for statistics).
3. If you want to retrieve everything you can on a subject, try the same search on several search engines.

In your search statement, if you enter more than one keyword without using any accompanying sign, mark or symbol, the search engine will automatically add either the AND or the OR conjunction to link your search terms together.

9.1 Creating a Search Statement
When structuring your query, keep the following tips in mind:
- Be specific
  EXAMPLE: Hurricane Hugo
- Whenever possible, use nouns and objects as keywords

       EXAMPLE: fiesta dinnerware plates cups saucers

- Put most important terms first in your keyword list; to ensure that they will be searched, put a +sign in front of each one
  EXAMPLE: +hybrid +electric +gas +vehicles
- Use at least three keywords in your query
  EXAMPLE: interaction vitamins drugs
- Combine keywords, whenever possible, into phrases
  EXAMPLE: "search engine tutorial"
- Avoid common words, e.g., water, unless they're part of a phrase
  EXAMPLE: "bottled water"
- Think about words you'd expect to find in the body of the page, and use them as keywords
  EXAMPLE: anorexia bulimia eating disorder
- Write down your search statement and revise it before you type it into a search engine query box
  EXAMPLE: +"south carolina" +"financial aid" +applications +grants
- Use the plus (+) and minus (-) signs in front of words to force their inclusion and/or exclusion in searches.

  EXAMPLE: +meat -potatoes
  (NO space between the sign and the keyword)
- Use double quotation marks (" ") around phrases to ensure they are searched exactly as is, with the words side by side in the same order.
  EXAMPLE: "bye bye miss american pie"
  (Do NOT put quotation marks around a single word.)
- Put your most important keywords first in the string.
  EXAMPLE: dog breed family pet choose
- Type keywords and phrases in lower case to find both lower and upper case versions. Typing capital letters will usually return only an exact match.

  EXAMPLE: president retrieves both president and President
- Use truncation (or stemming) and wildcards (e.g., *) to look for variations in spelling and word form.
  EXAMPLE: librar* returns library, libraries, librarian, etc.
  EXAMPLE: colo*r returns color (American spelling) and colour (British spelling)
- Combine phrases with keywords, using the double quotes and the plus (+) and/or minus (-) signs.
  EXAMPLE: +cowboys +"wild west" -football –dallas
  (In this case, if you use a keyword with a +sign, you must put the +sign in front of the phrase as well. When searching for a phrase alone, the +sign is not necessary.)
- When searching within a document for the location of your keyword(s), use the "find" command on that page.
- Know the default (basic) settings your search engine uses (OR or AND). This will have an effect on how you configure your search statement because, if you don't use any signs (+, - , " "), the engine will default to its own settings.

9.2 Boolean Searches

Boolean logic operators are AND, OR, and NOT, which we use to link words and phrases for more precise queries.

- In Boolean searches, always enclose OR statements in parentheses.
   EXAMPLE: Yosemite (campgrounds OR reservations)
- Always use CAPS when typing Boolean operators in your search statements. Most engines require that the operators (AND, OR, AND NOT/NOT) be capitalized. Other engines will accept either CAPS or lower case, so you're on safe ground if you stick to CAPS.
   EXAMPLE: "immune system" AND homeopathic (medicine OR remedy)

BOOLEAN "AND"

The Boolean AND actually narrows your search by retrieving only documents that contain every one of the keywords you enter. The more terms you enter, the narrower your search becomes.

EXAMPLE: truth AND justice

EXAMPLE: truth AND justice AND ethics AND congress

BOOLEAN "OR"

The Boolean OR expands your search by returning documents in which either or both keywords appear. Since the OR operator is usually used for keywords that are similar or synonymous, the more keywords you enter, the more documents you will retrieve.

EXAMPLE: college OR university

EXAMPLE: college OR university OR institution OR campus

BOOLEAN "NOT" / "AND NOT"

The Boolean NOT or AND NOT (sometimes typed as ANDNOT) limits your search by returning only your first keyword but not the second, even if the first word appears in that document, too.

EXAMPLE: saturn AND NOT car

EXAMPLE: pepsi AND NOT coke

NESTING -- WITH BOOLEAN OPERATORS

Nesting, i.e., using parentheses, is an effective way to combine several search statements into one search statement. Use parentheses to separate keywords when you are using more than one operator and three or more keywords.

EXAMPLE: (hybrid OR electric) AND (Toyota OR Honda)

(For best results, always enclose OR statements in parentheses.)

IMPLIED BOOLEAN OPERATORS

Implied Boolean operators use the plus (+) and minus (-) symbols in place of the full Boolean operators, AND and NOT. Typing a (+) or (-) sign in front of a   word will force the inclusion or exclusion of that word in the search statement.

EXAMPLE: +dementia -alzheimers

Similarly, putting double quotation marks (" ") around two or more words will force   them to be searched as a phrase in that exact order.

EXAMPLE: "green tea"

While full Boolean operators are usually accepted only in the advanced search option of search engines, implied Boolean operators are accepted in the basic search options of most search engines.

9.3 Proximity Operators

Proximity, or positional, operators (NEAR, ADJ, SAME, FBY) are not really part of Boolean logic, but they serve a similar function in formulating search statements.

The NEAR operator allows you to search for terms situated within a specified distance of each other in any order. The closer they are, the higher the document appears in the results list. Using NEAR, when possible, in place of the Boolean AND usually returns more relevant results.

EXAMPLE: phylogeny NEAR ontogeny

EXAMPLE: de Vere NEAR Shakespeare

Even fewer search engines accept ADJ (adjacent to). ADJ works as a phrase except that the two terms, which must appear adjacent to each other in the webpage, can appear in any order.

EXAMPLE: Ernest ADJ Hemingway

EXAMPLE: endangered ADJ species

The above example retrieve both Ernest Hemingway and Hemingway Ernest; endangered species and species endangered.

9.4 Field Searching, Title Searching and Domain Searching

Electronic records, like print records, are organized into separate fields. A typical web page is composed of the following major fields: title, domain, host (or site), URL, and link. When information is entered into a record's field, some search engines allow you to retrieve it by using the correct field label in combination with your search term(s). Where available, field searching on the Web is a very powerful tool. It allows you to specify exactly where you want the search engine to look in the Web document.

EXAMPLE: title: "web search tutorial"

EXAMPLE:

domain:edu AND "Origin of Species" AND Darwin limits your search to educational sites dealing with Charles Darwin and his theory of evolution.

HOST (OR SITE) SEARCHING

If you are seeking information that resides on a specific computer or server, you can narrow your search with a "host" or "site" query.

EXAMPLE: host:www.anucde.info

returns pages hosted at the Acharya Nagarjuna University Centre for Distance education.

Exercise:

1. Try to find the URL of Centre for Distance Education, Acharya Nagarjuna University
2. Open web site of Centre for Distance Education, Acharya Nagarjuna University and find whether it is offering M.L.I.Sc.?
3. Find and collect information (about 2-5 pages) on Colon Classification
4. Search using the following words as phrase and using Boolean operators

Automation of University Libraries in India

UNIT – 4 : Lesson 14:

CDS/ISIS PACKAGE

14.0. OBJECTIVE

The main objective of this lesson is to explain the main window of CDS/ISIS package. It also illustrates how to create database using CDS/ISIS by explaining creation of FDT, Worksheet, FST and Display format.

After studying this lesson you will be able to learn

- history of CDS/ISIS Package
- loading/installing the package
- creating database

Structure

1. **Introduction**
2. **Overview of CDS/ISIS for WINDOWS**
3. **The WINDOWS Version: The Main Menu**
4. **Installation**
   4.1 **Loading the Package**
   4.2 **System Parameter File, Syspar.par**
5. **Creating Database**
   5.1 **Choice of tagging scheme**
   5.2 **Field Definition Table (FDT)**
   5.3 **Data Entry Worksheet**
   5.4 **Default Display Format**
   5.5 **Field Selection table (FST)**
   5.6 **Stop word List**
6. **Exercises**
7. **References**

1. INTRODUCTION

Library automation is the order of the day. Library of Congress, USA is the first library that introduced application of computer in library operations. Since then many software packages have came into existence to use in libraries. CDS/ISIS is one of the library software packages. CDS/ISIS for microcomputers developed by UNESCO (the United Nations Educational, Scientific and Cultural Organization) is one of the widely used information storage and retrieval package. CDS/ISIS which runs under DOS operating system was released in the year 1985. The first version of CDS/ISIS for windows was released in the year

1991. It runs under Microsoft Windows. The Windows version is called WINISIS. The DOS version is written in PASCAL language. ISIS for Windows is written in a combination of languages, primarily C and C++. However the PASCAL interface is given to write programs and integrate into WINISIS.

2. OVERVIEW OF CDS/ISIS FOR WINDOWS

CDS/ISIS for Windows is, as its name implies, a Windows-based system. It allows you to have more than one CDS/ISIS database open. CDS/ISIS was developed for bibliographic information, i.e. information about documents such as books, journal articles or conference proceedings. Usually each record in the database contains information about one document. Many of the features of CDS/ISIS are different from those in database management systems which have been designed for general purposes. The major differentiating feature of CDS/ISIS when compared with other database management systems is in its use of variable length text fields, repeatable fields and unpredicted fields. It also handles subfields and Inverted file for faster searching of the database. Another feature of the package is the flexibility of the screen and printed displays achieved by a sophisticated formatting language. This formatting language gives users of CDS/ISIS a higher level of control over their data than is found probably in any commercial library automation package.

Each database includes a master file and cross-reference file. The master file contains the data and the cross-reference file includes for each record, by sequential master file number, a pointer to where the data belonging to that record occur in the Master file. Database records are numbered from 1.

3. THE WINDOWS VERSION: THE MAIN MENU

At this point we are assuming that CDS/ISIS for Windows has been loaded on your computer and that the machine has been switched on and Windows is running. Open the CDS/ISIS for Windows program by clicking on the WINISIS icon. This will run the program and display the main menu.

Let us look at the drop-down menus from left to right.

Database leads to the functions associated with a database. In other Windows programs, this would usually be F for File. If you have just opened the program by clicking on the WINISIS icon, you will have only four options, **Open**, **New**, **Printer Setup** and **Exit**. Other options are *greyed out* as shown in Figure 1 You will see them in a light shade of grey in contrast with the black of other menus. This is a convention used by most programs which run under Windows which indicates that that option is not at that time available. There may also be a list of the last five databases open on which you may also click to retrieve one. These will always be in black.
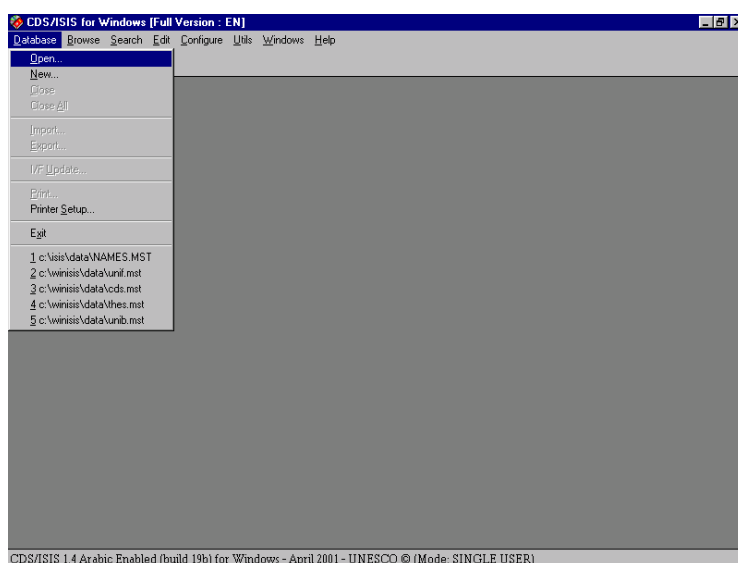
Figure 1 *Opening screen with database drop-down menu*

You open a database by choosing **Open**, or the icon on the very left of the tool bar, a picture of an open card file. This brings up a Window entitled File Selection (Figure 1.2). This is in the usual Windows format giving the possibility of browsing through drives and folders to find the appropriate 'file name' which will be an **mst** file or a **par** file. When you have clicked on a database to open it, all options under **Database** will become accessible. You will see at the same time as a database is opened that more icons appear on the tool bar.
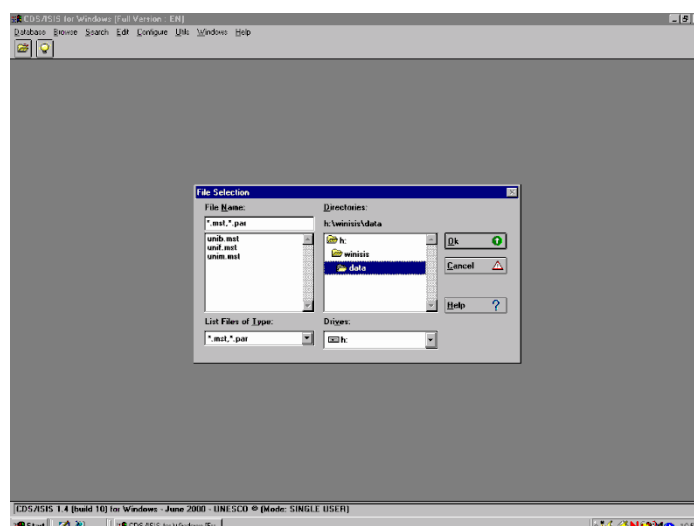
Figure 2 *File selection window*

Close and **Close All** are self explanatory and result in the closing of one or all databases. The other functions which become available are **Import**, **Export**, **I/F Update** (i.e. Inverted File Update) and **Print**. Print is conventionally found on the left hand drop down menu in Windows applications and the other options here are for file maintenance, adding to

a file, extracting a file and indexing the database. **Exit** will close the CDS/ISIS for Windows program and take you back to the Windows desktop.

Browse ({Alt b} from the menu bar) has nine functions which cannot be operated unless a database has been opened. Click on **Database** to view the records in a database in database order. Click on **Search results...** to go to a list of previous searches from where you may view the records retrieved by any earlier search in that session. You may mark any records that you view. Then you can click on **Marked records** to view only those that have been marked. Or you can revert to all records retrieved by selecting **All records.** You may open the dictionary by clicking on **Open dictionary** to see which terms have been indexed in which fields (Figure 3).

Choose **Search** {Alt s} and you will have access to two kinds of search, **Expert Search** or **Guided Search**. It also allows you to go back to a previously saved search (the search may have been saved at any previous occasion) **Recall saved search** or to save the results of the present search for future use: **Save search**. **Close Search Window** is no mystery: it allows you to close the expert or guided search window when you wish to look through the records you have retrieved.

Edit {Alt e} is the gateway to Data entry and modifying the database structure. (If you are running in *read only* mode, you will not have access to this menu.) Data entry functions are accessed by **Data entry** to call up the Data Entry window which lets you edit the record you were looking at in the browse or search window or lets you create a new record. **Delete** will delete the record you are looking at in the data entry window. You can also copy the record you have on screen into the Windows clipboard with **Copy to clipboard** or clear the clipboard by choosing **Clear clipboard**.
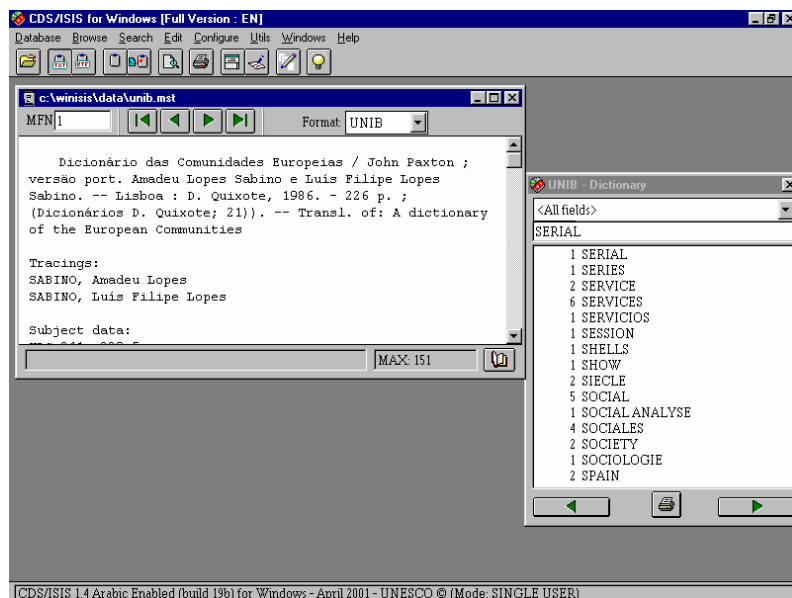
Figure 3 *Dictionary open*

From this drop down menu, you can modify the database you are in via the Field Definition Table or Field Selection Tables. You can also edit or add new Print Formats.

<u>C</u>onfigure {Alt c}allows you to change the language of the menus and other features of the database and many other system settings.

<u>U</u>tilities {Alt u}includes global additions and deletions. Also included is the facility to compile ISIS/Pascal programs.

<u>W</u>indows {Alt w}allows the windows open to be arranged on the screen.

Finally there is a **<u>H</u>elp** drop down menu in the usual Windows style with a contents list and a keyword search.

4. INSTALLATION

4.1 LOADING THE PACKAGE

The package may be distributed on CD-ROM or on two 3.5 inch Floppy disks called 'Disk 1' and 'Disk 2'.

The minimum computer system requirements are an Intel Pentium processor, 16Mb of RAM, 10Mb hard disk space, 3.5 inch high-density floppy disk drive, CD or DVD drive and the operating system Windows.

If you are installing from CD-ROM, place the CD in your drive and it should load automatically. If not, run the program **install.exe** in its root directory. If you are installing from floppy disks, insert Disk 1 in the floppy disk drive and run the program **setup.exe**. When all the files have been copied from both disks, click **OK** to accept the license conditions. The system respond with dialogue "The setup process was successful!" and you can click **OK** to finish. If the shortcut (icon) for CDS/ISIS has not appeared, you can create one using the values:

Target: c:\winisis\wisis.exe
Start in: c:\winisis

Now you can try starting CDS/ISIS for Windows by clicking its icon.

When you install, The Windows version of CDS/ISIS is normally installed on a hard disk in a folder (directory) called **winisis** in **C** drive: so this folder will be **c:\winisis**. The package comes with over 200 files and these are usually installed into a number of subfolders of **winisis** as shown below:

WINISIS
|
```
      --------------------------------------------------------------------------------------
          |        |         |        |          |            |             |            |          |
          bg     ctl3d    data    doc     menu      msg       plugin      prog     work
```

The **winisis** folder itself contains the main ISIS program, **wisis.exe** and an important parameter file, **syspar.par**. It also contains the help file, **isishlp.hlp**, a **readme** file with the latest release notes, and some configuration files.

The **bg** subfolder contains about 30 bitmap (image) files used by the sample database provided. The subfolder called **ctl3d** contains two Dynamic Link Library files (with the filename extension **.dll**). The **data** subfolder is intended to hold CDS/ISIS databases. Each database consists of at least 13 files with different file extensions, e.g.:

cds.mst   The master file for CDS
cds.fdt   The Field Definition Table for CDS
cds.pft   The default print format for CDS
cds.ifp   The inverted file postings for CDS

There are also a few files whose names do not consist of the database name plus a file extension. **acds.fmt** is the first page of the data entry worksheet for CDS. To start with, you can keep all your database files in the **data** subfolder, but if you have several databases they might be better in sub-subfolders, e.g. **c:\winisis\data\cds**.

The **doc** subfolder is intended to hold documentation files. The **menu** subfolder contains the menu items in various languages used by CDS/ISIS. The **msg** subfolder contains one database for each language. The **plugin** subfolder is provided to hold *plugin* programs which will enhance the abilities of CDS/ISIS. The **prog** subfolder is intended for holding additional Pascal programs to be used in conjunction with CDS/ISIS. The final subfolder is **work** and is used to hold *workfiles* created by CDS/ISIS

4.2 SYSTEM PARAMETER FILE, SYSPAR.PAR

Fundamental to the working of CDS/ISIS is the system parameter file called **syspar.par**. The installation program will set up a standard version for you. However, the file gives a lot of flexibility in the way that CDS/ISIS is set up. The file itself has a number of lines, each of which sets a numbered parameter to a particular value, e.g.

3=c:\winisis\msg\

The most important parameters of the syspar.par file are:

```
1=c:\winisis\prog\
2=c:\winisis\menu\
3=c:\winisis\msg\
4=c:\winisis\work\
5=c:\winisis\data\
6=books
```

5. CREATING A DATABASE

A database is usually constructed to store information about some things or persons. For example, a bibliographic database contains information about documents, such as books, journal articles or conference proceedings. A personnel database contains information about employees. The database consists of records and there is generally a one-to-one correspondence between the records and the things described. In a bibliographic database one record may correspond to one book or journal article: in a personnel database one record may correspond to one employee.

In CDS/ISIS terms, a record is made up of a number of *fields*. Each field contains data about some particular aspect or attribute of the thing or person, for example the author, title and year of publication etc., in a bibliographic database, or the name, address and grade in a personnel database. A sample record from a bibliographic database is shown below.

ISBN	9780878150064
Author	F.W. Lancaster
Title	Vocabulary control for Information Retrieval
Imprint	Washington: Information Resources Press, 1972
DDC No.	025.3

It is possible that you might need to store more than one value in a field – for example two authors in the record above. As explained earlier the bibliographic database has the following three special features:

1. A field may have more than one value. For example a book may be written by two or three authors. CDS/ISIS has special provision for this by allowing fields to be defined as *repeatable*: the author field is repeated to contain the second author.
2. A field may need to be divided into subfields for different purposes. For example the author field may be divided into entry element and other elements for cataloguing purpose. CDS/ISIS also allows you to divide up fields into *subfields*. Subfields are designated by a single lower case letter and when entering data this letter is prefixed by a circumflex, ^. Thus the name F.W. Lancaster might be entered as

   ^aLancaster^bF.W.

If data are divided up like this, the user can specify different treatment of different parts of the field. For example, the entry element could be made searchable but not the

other elements.

5.1 CHOICE OF TAGGING SCHEME

Before you create a database with CDS/ISIS you need to decide on a format, i.e. what fields will be used and how you will record the data in them. The choice of fields is not final: you can modify them later.

There are quite a lot of 'standard' bibliographic and other formats existing, such as the national MARC formats, UNIMARC and the Common Communication Format. If you are contemplating exchanging data with other organizations, it would be a good idea to find out what they are using and to agree on a common format. However, if you expect to be quite self-contained you are at liberty to make up your own format to suit your own purposes.

Each field in CDS/ISIS must have a numeric 'tag' to identify it. This is a number between 1 and 999. If you are making up your own format you could number your fields 10, 20, 30, etc., so there is room to slot others in between them later. If you are using a standard data structure you have to follow the tags allocated for the fields in that format.

When you have decided on your format you can start up CDS/ISIS and choose **Database** and select **New**. You are then asked to give the database a name of up to six characters. Then choose OK.

In CDS/ISIS, once you have decided on your format and started creating database you will be required to complete following four forms in setting up the database, otherwise the system does not allow you to exit from the system.

1. Field Definition Table (FDT)
2. Data Entry Worksheet
3. Display Format
4. Field Selection Table (FST).

5.2 FIELD DEFINITION TABLE (FDT)

The FDT defines the fields that may be present in the database and certain parameters for each field. The window of the FDT contains different boxes which are described below. You enter the values in the boxes at the top of the dialog box. It is better to be careful while defining FDT, although CDS/ISIS allows you to change it later. The boxes are as follows:

(a) Tag -- You can use the up and down arrows if you like to select the number, or type it in.

(b) Name -- this is to help you identify the field. It can be up to 31 characters long and can contain spaces. When you come to set up the data entry worksheet, this name will

be used as the prompt for the field, but you can override it there. It is also used to specify the field in the "Guided Search" form.

(c) Type – The values for the type of field are Alphabetic, Numeric and alphanumeric. It is better to use Alphanumeric which can accommodate letters, numbers and special characters.

(d) Rep[eatable]. If the fields you are defining contain multiple occurrences, e.g. several authors or several descriptors, click this checkbox.

(e) Pattern/subfields. If you are dividing the field into subfields, you should list the subfields here (without punctuation or spaces) e.g. abc

When you have entered the data for each field, either click the **Add** button or press {Enter} to add the field to the table (displayed in the large box). If you need to correct the details for any field, just click on that entry in the large box and the details will be copied into the boxes used for editing. If you need to remove an entry, highlight it and click the **Delete Entry** button. You can sort the fields in ascending or descending order of the tag number. You can also alter the order of fields by selecting a field and clicking the up-arrow or down-arrow key. The fields defined need not have to be in numeric order, though that is better and clear. You can save your work in the middle while defining FDT by clicking **Save** button. After entering all the fields, click the **OK** button with the green arrow to go on. An example of an FDT is shown in the following figure.

Figure 4 *Example of a Field Definition Table (FDT)*

5.3 DATA ENTRY WORKSHEET

You will enter data into the database using a worksheet, rather like an input form. CDS/ISIS allows you to have more than one worksheet. The main choice is which fields you want to be on the worksheet. If you only have one worksheet then normally you will want them all, and you need only to click the button with the double arrow to effect this. If you want to have selected fields, or to change the order of fields on the worksheet, you can select fields one at a time and either double-click the field or click the button with the single arrow. The order need not have to be by ascending tag number.

You can make the worksheet do more by highlighting one of the Data Entry Fields (when you have moved some onto the worksheet) and clicking the button showing a pencil and paper. This brings up a dialog box with some further options:

Description: This allows you to use a different name on the worksheet from the name you have used in the FDT.

Default value: Certain fields of the database will always contain the same value, e.g. 'eng' for language 'English', you can put this in as a default value. It will then already be filled when you use the worksheet, but you can alter the value when it does not apply.

Help: You may enter a 'Help' message for the field that will be displayed at the bottom of the data entry window when the user is entering data in that field. It is often useful to give an example, e.g.

> Enter entry element with subfield ^a, and other elements of the author name with subfield ^b. e.g. ^aWalton^bC.J. for C.J. Walton.

Validation format: In order to avoid data entry mistakes CDS/ISIS provided provision to formulate certain rules to check the format of the data entered, e.g. the length must be a certain number of characters, or the field may only be present if another field is absent. The rule is written using the formatting language provided by CDS/ISIS for display and printing of records. An example that might be used in the specification for field 110 is shown below:

> if p(v100) and p(v110) then 'You cannot have two main entries' fi

The *if* expression p(v100) tests for field 100 being present *and* field 110 being present. It will cause a message box to appear after the user tries to enter data in field 110 if there is already field 100 present. Data entry cannot proceed until the data are removed from field 110. Another easy kind of validation is to test that the contents of a field are the right length,

> e.g. if size(v8) > 40 then 'Field 8 is too long' fi

However, if you make a mistake in writing a validation rule it may be impossible ever to satisfy it and you will never be able to get beyond this field in data entry. It is therefore not recommended for beginners.

Pick-list definition. A pick-list enables the user to display a list giving a choice of values for a particular field during data entry. In the pick-list definition box you enter **choice** followed by *two colons* and a format that will produce the list. The first line produced by the format will appear as the title of the list box during data entry. For example:

choice::'Languages'/'English'/'French'/'German'/'Spanish'

The values here are all unconditional literals. 'Languages' will be taken as the title of the list box and 'English', 'French', 'German', and 'Spanish' will be the choices displayed as shown in the following Figure.
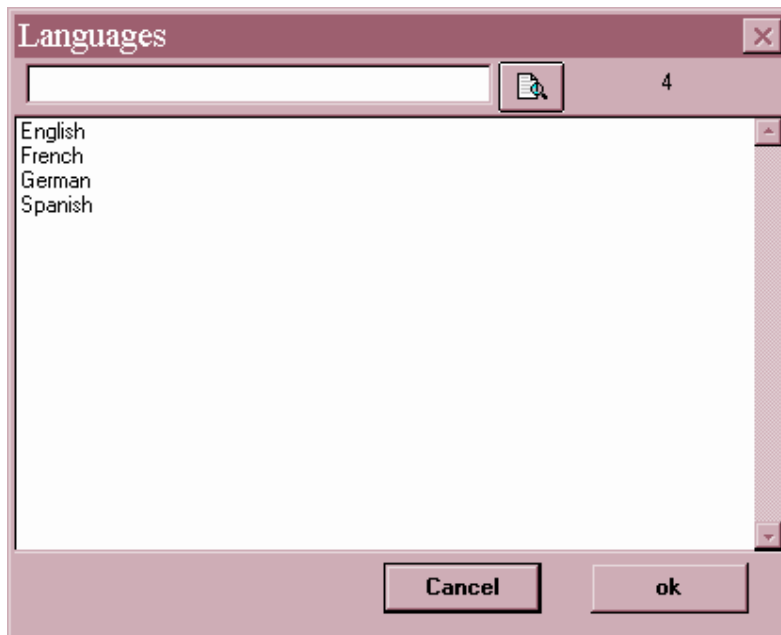
Figure 5 *Example of a pick-list*

The first box below the title is to allow the person doing data entry to search for a desired value: he/she can enter the term or the beginning of the term and click the button with the magnifying glass.

OK. Click the **OK** button to go back to the Worksheet definition screen.

If you have entered any Data Entry Fields by mistake, you can remove them using the button with the left-pointing arrow. You can alter the order of fields on the worksheet by selecting the field to be moved and clicking the ↑or ↓ button. A validation rule applying to

the record, rather than an individual field, can be entered by clicking the **Record Validation** button. For example in Format you could have:

if a(v200) then 'Record must contain a title.' fi

This will generate an error message if the user has entered a record without any data in field 200 and then tries to save it. Again caution is advised: a badly written rule may mean that you can never save the record. When you have set up the worksheet, click the button with the green arrow pointing right.

5.4 DEFAULT DISPLAY FORMAT

The display format means the way that the records will appear when you use browse the database or display search results. Display formats can also be used in producing printed output. There must be at least one display format for the database and that must have the same filename as the database. You can always create more formats, or modify existing ones, later.

A message box appears asking "Do you want Winisis to launch the Print Format Assistant?" and you can choose **Yes** or **No**. If you are new to CDS/ISIS, or if you just want temporary format to save time, click **Yes**. You are then given the choice of five pre-defined formats. The order of fields will be the same as in the Field Definition Table.

Normal style. This uses font 2 (normally Times Roman) and colour 4 (normally blue) and gives a display with the field names in one column and the data in the next.

CDS/ISIS DOS compatible format. This is similar to the Normal style but it uses only black text and Courier font.
Decorated format. Three fonts and various colours feature in the format. The record number(MFN) and the name of the database appear in a box and the field names appear in italics.

HTML normal. This is a format using very basic HTML (HyperText Markup Language), the language used to create pages for the World Wide Web. No HTML tags are included to separate the contents of one record from the next.

HTML table with headers. This again incorporates HTML tags and displays field names and their contents in the form of a table.

Once the format has been created, it will be displayed in case you wish to edit it. The next lesson gives you the detailed description of the formatting language. However, following is minimum basic things to create display format:

(a)   Fields are specified by using v (for variable) in front of the tag: thus v100

means display the contents of field 100.

(b)   Text between single or double inverted commas forms a *literal* and will appear in the display just as it is written.

(c)   The slash (/) means start a new line here.

A simple format for a database containing fields 100, 200 and 300 could be:

        v100/v200/v300

This would display field 100, field 200, by field 300 in consecutive lines. e.g.

        9785643214789
        Good Governance
        Ramana, O.V.

To display the fields on the same line, they should be separated by comas. e.g.

        v100,v200,v300

This would display the above example as:

        9785643214789GoodGovernanceRamana, O.V.

When you have finished writing the display format, click the green arrow to proceed further.

5.5 FIELD SELECTION TABLE (FST)

CDS/ISIS has two ways of finding information in the database. One method is free text searching which is a 'serial' or 'sequential' search, and the second method is to make use of the index or inverted file. The first method is likely to be a slow process when the database contains more than a few hundred records. The second method, using an index, is the normal way of searching. CDS/ISIS allows you to set up the index automatically and refers to it as the index or inverted file. (The list of terms in the index without the details of their occurrences is also referred to as the terms dictionary.)

The selection of terms from the database records to go on to the index file is controlled by the Field Selection Table (FST). The selection of fields depends upon three rules:

i. Which fields from the record are to be indexed (e.g. you want authors indexed but not the publisher or the number of pages).

ii. How the index terms are to be constructed from the data in the selected fields (called the *indexing technique*). For example, do you want the title 'Harvesting of

Rice in India' as a whole field under 'H', or do you want it split up into separate words so that 'Rice' can be searched under 'R' and India can be searched under 'I'?

iii. You can also specify a list of stop words which are not to be used on their own as index terms, e.g. 'in', 'of' and 'the'.

CDS/ISIS allows much flexibility in specifying each of these three rules. It is important to consider them carefully, since they determine what searches will be possible on the database. If you index authors as separate words, then records of 'Shakespeare, William' will appear under 'William' and under 'Shakespeare'. You cannot search him as 'Shakespeare, William'. If you index titles as whole fields, then 'The Concise Oxford Dictionary of Quotations' cannot be searched under 'Dictionary' or under 'Quotations'. It is, in fact, possible in CDS/ISIS to index the same field in more than one way.

If you have divided the field into subfields, you can index different subfields by different techniques (or some subfields but not others).

Each line of the Field Selection Table comprises three elements: the Tag or Name, the Technique and the Format. You need to make an entry in the table for each field you want to index (i.e. to make searchable) and if the same field is indexed in two ways you need two entries for it.

Again if you are unsure about writing FSTs it would be a good idea to engage the services of the Dictionary Assistant. This will give you a dialog box like the one in the following Figure.
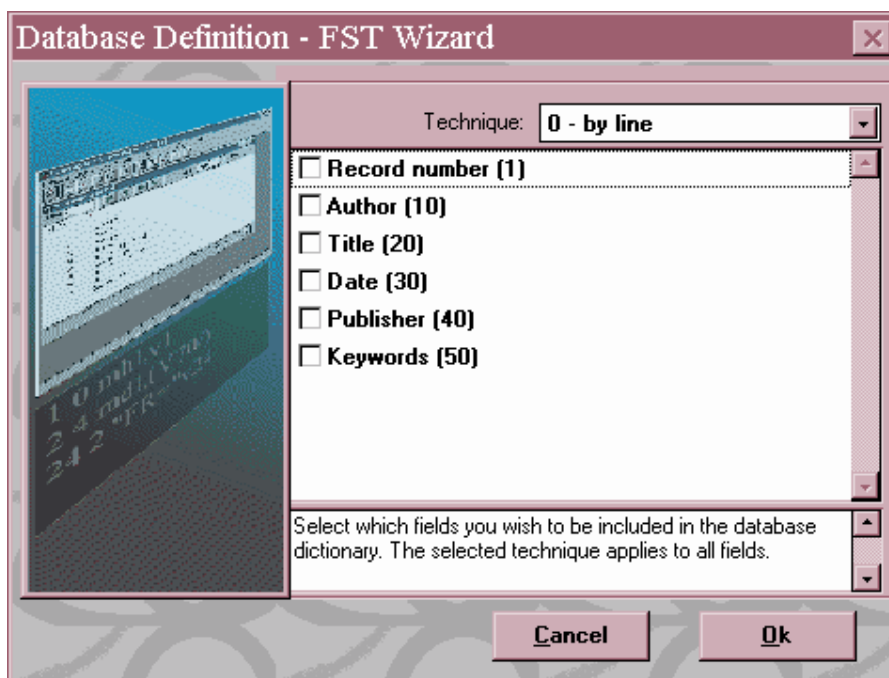
Figure 6 *Dictionary Assistant dialog box*

All you need do is to choose which technique to apply and which fields to index. The list box on the right shows the techniques available. The two most commonly used are 0 – by line and 4 – by word.

0 means that the whole field contents will be indexed as a single term.

1 means index each subfield separately and so is relevant only if the field is divided into subfields.

2 means index only words or phrases which have been entered between angle brackets, e.g. <inflation rate>.This technique can be used to select particular terms from a lengthy piece of text such as an abstract. Some CDS/ISIS users like to enter descriptors this way and use technique 2 to index them.

3 is similar to 2 but indexes terms entered between slashes, e.g. /Business Women/

4 signify that each word in the field will be indexed separately (except stop words). If the field is divided into subfields, you must specify mode mhlor mdlin the extraction format.

Now click the check boxes against the fields you want to be indexed (i.e. searchable) and finally click **OK**. The FST is then displayed and you can edit it if necessary. Using the Dictionary Assistant, all the fields selected are indexed by the same technique: if you want to apply different techniques to different fields, you will need to make changes here.

Each entry in the FST has three parts. In the top part of the dialog box the entry being edited is shown in three separate boxes. In the Entries box each entry is shown on one line with spaces between the three parts.

The first value will be same as the tag of the field from which the terms come. The second value, the indexing technique, specifies how the index terms are to be extracted as explained above. The third column, the format, shows the terms are to come from which field in the record. As in the display format, fields are specified with *v* in front of their tags.

So, if the title field has a tag 200 and we want to index each individual word, the entries would be:

   Tag/Name: 200 Title Technique: 4   Format: v200

and if the author field is 300 and we want to index the author name as a whole:
      Tag/Name: 300 Author Technique: 0   Format: v300

If we want to index only subfield a of field 100 we could specify
      Tag/Name: 3 0 0 Author Technique: 0   Format: v300^a

This dialog box works in a similar way to the one for the FDT. When you have entered the data for each field, the focus will be on the **Add** button. Either click on the button or press **{Enter}** to add the field to the table (displayed in the Entries box). If you need to correct the details for any entry, just click on that entry in the Entries box and the details will be copied into the boxes used for editing. If you need to remove an entry, highlight it and click the **Delete** button. An example of an FST is shown below.

You need not be too concerned to get the Field Selection Table right first time. It is best to try it out on a few sample records and look at the index terms produced. If they are not what you want, edit the FST and then regenerate the inverted file.

Figure 7 *Example of Field Selection Table (FST)*

When you have completed your entries in the Field Selection Table, click the **Terminate** button. You are then asked to confirm that you want the database to be created. Click **Yes.** You are then invited to select a database to work on.

5.6 STOPWORD LIST

If you are indexing a field by separate words (indexing technique 4) you may want to prevent common, non-informative words such as 'an' or 'the' from being indexed. This can be achieved by setting up a *stop word list* for the database. Words on the stop word list will not be indexed using indexing techniques 4 (though they may still appear as part of phrases produced with other indexing techniques). Note that there can only be one stop word list for a given database, not different lists for different fields. The stop word file needs to be set up outside CDS/ISIS using a text editor or word processor. An example of stop word file is

shown below.

```
 -------------------------------------------------------------------------------
 A
 AN     AND
 BY      FOR
 FRM IS
 IT NOT
 THE
 WITH
```

It must have the same name as the database and the file extension **stw** (e.g. **books.stw** for the database BOOKS). It must reside in the same folder as the FDT file for the database. The file must contain one stop word on each line with no preceding s[aces, and the words must be in capital letters.

Although you may be able to think of hundreds of words that are not useful as search terms, it is usually not necessary to list more than the most common twenty or so.

6. EXERCISES:

1. Create database with field names Author, Title, Publisher, Year of publication.
2. Create database with fields Author, Title, Imprint, Collation, Subject descriptors, Call number and Accession number. Give your name as database name. Make the author field repeatable with subfields entry element and other elements. Make the Imprint and Collation fields contain sub fields to accommodate AACR prescriptions of these fields.

7. REFERENCES:

1. Mini-Micro CDS/ISIS 2.3 Reference Manual & CDS/ISIS Pascal Manual / Division of software development and applications. UNESCO. – New Delhi : NISSAT, DSIR, 1989

Lesson 15

DATA ENTRY AND SEARCHING

15.0 Objective

The objective of this lesson is to explain creation of records, editing of records and about data entry. This lesson also explains searching methods that can be employed in retrieving information from CDS/ISIS database. By now you have learned from the previous lesson about how to set up your database using CDS/ISIS package. It is best to put in say six records and check that they can be searched and displayed as you would like before starting on full scale data entry.

After studying this lesson you will be able to

- create records in the database
- edit records
- browse the database
- search the database with different techniques

Structure

1. Create a New Record
2. Editing Records
 2.1 Overview of the Edit Function
 2.2 Using the Keys
        2.3 Adding Fields
 2.4 Deleting Fields
 2.5 Validation
 2.6 Moving to another Field or Record
3. Editing a range of records
4. Deleting Records – Logically and Physically
5. Default Values
6. Browsing the Database
7. Updating Inverted File
8. Searching
 8.1 Guided Search
 8.2 Expert Search
 8.3 Display search results
 8.4 Browse Function
 8.5 Display format
 8.6 Marking Records
 8.7 Dictionary display
9. Advanced Searching
 9.1 Truncation
 9.2 Logical operators

1. CREATE A NEW RECORD

Switch on the computer and execute WINSIS, a window will appear. Choose **Database ⇒ Open** and select the database you wish to open by double-clicking on its name which you have given while creating the structure (e.g. BOOKS). To create new record, click on the blank page icon. Empty fields will appear on the screen and the MFN box will contain **???**. Whatever you type goes into the top box and will be added to the contents of that field when you press {Enter} or finish by clicking on the text of another field. When you have completed a record and saved it, it will be allocated the next available MFN. The detailed procedure to enter records into database is explained to you in the following sections as rules for editing a record apply equally to entering data in new records.

2. EDITING RECORDS

2.1 OVERVIEW OF THE EDIT FUNCTION

Choose **Database ⇒ Open** and select the database you wish to open by double-clicking on its name (e.g. BOOKS). The database will then open displaying the first record in the database. Then choose **Edit ⇒ Data entry** and the data entry window will appear as in Figure 1. The record displayed when the database is opened will be displayed in the data entry window.

The display is divided into parts. The MFN is displayed towards the top left of the screen. If you are in a database which already contains some records, select or type the number and press {Enter}. The record with that number or the last record in the database if the number is greater will be displayed. A data entry box is at the top in which is displayed the text of the first field. Below is a list of the fields which exist in the record.

The first field will be highlighted. You may also see empty fields depending on the setting of **Show empty fields in data entry** option on the **Configure ⇒ System Settings⇒ Display** dialog box. If empty fields are not visible, you can click on the magnifying glass icon in the bottom right corner and those fields will be represented by empty boxes on the screen. If the first field displayed on the screen is empty, the data entry box will be empty. Any text typed into the box will be displayed against that field in the display below on pressing the {Enter} key. The field below will then be highlighted and its data appear in the data entry box. Alternatively you can click in a different field. The top box will display the highlighted field and the cursor will be placed at the start of that box waiting for a key to be pressed.

If you are not displaying empty fields you may add a field by clicking on the combo box labeled **Add field**. Click on the field you wish to add to select it, or else start typing its name. At the bottom of the window you will see a box which indicates the size of the field being edited (e.g. 25 bytes) and a box which contains the help message for the field that was supplied when the worksheet was created.

2.2 USING THE KEYS

You can use the {Delete} and {Insert} keys in the usual way. {Insert} will act as a toggle between insert and overtype. {Home} will take you the start of the field and {End} to the end of the field.
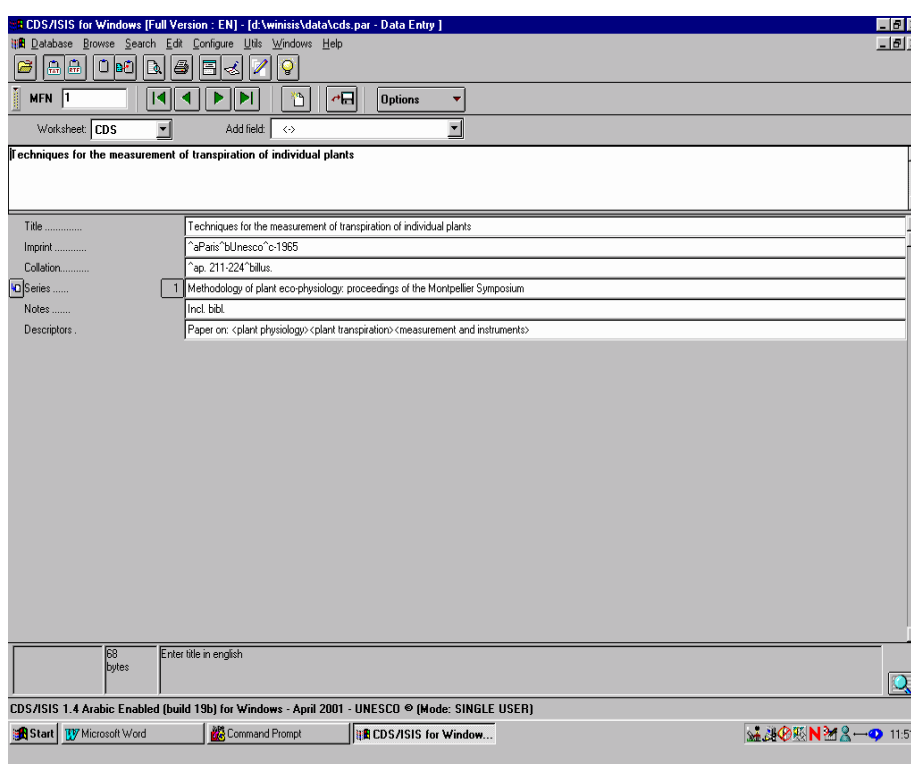
Figure 1 *Data entry*

You may cut and paste data in the usual Windows way. You can highlight a section by dragging the mouse from the start to end of the section with the left mouse button pressed.{Ctrl x} will cut that section and copy it to the clipboard, {Ctrl c} will copy it to the clipboard. {Ctrl v} will insert the text at the point where the cursor is. Additionally CDS/ISIS for Windows uses the function key {F2}. This will delete the field you are editing and remove the field completely from the display. Pressing {Esc} key will revert to how the field was before you began to edit the record.

2.3 ADDING FIELDS

If you wish to add a new occurrence of a field which is already present in the record, you may do so if the field is repeatable, by clicking on the button to the left of the field name. A blank field will appear into which you may enter data as you wish.

If you need to enter several values in the same field, use this repeatable field option. Alternatively, you can separate the repeats with % signs. If the field has not been defined as repeatable in the Field Definition Table, you cannot add multiple occurrences in data entry.

When there are different worksheets, correct worksheet, note that any field which contains data will be hidden if it is not present in the selected worksheet.

2.4 DELETING A FIELD

Click on the field and press {F2}.

2.5 VALIDATION

CDS/ISIS for Windows has a number of different validation procedures. When a data base is created, in the Field definition table (FDT), each field is designated repeatable or non-repeatable, type of data (alphabetic, numeric or alphanumeric) and subfield codes if present in that field. CDS/ISIS strictly adheres to parameters defined in the FDT. When the database was created the designer could indicate that certain fields were mandatory. If these are not entered the record cannot be saved.

2.6 MOVING TO ANOTHER FIELD OR RECORD

When you have finished editing the field click on another field you wish to edit or save the record and move to another. When you have finished editing all the fields you wish, click on the icon of a floppy disk and the record will be saved. To move to another record, edit the number in the MFN window and press {Enter}. If you have not saved the previous record, you will get the message: **Record was changed. Save?** Click on the **Yes** button and the record will be saved.

3. EDITING A RANGE OF RECORDS

You can edit a record or a range of records whether you have found the record(s) by browsing a database or by doing a search. From the main menu bar, choose **Edit ⇒ Data entry** and the data entry window will appear with the record you have on your main database display screen. You can move onward in the database by clicking on the right-facing triangle or backward by clicking on the left-pointing triangle. If you want to edit records 15-20, with the database open but with **Data Entry** closed, type 15 in the box marked **MFN**. Choose from the menu bar **Edit ⇒ Data Entry** and the record in the data entry window will be record number 15. Make changes to that record, click on the floppy disk to save it. Then click on the right-pointing triangle to move to the next record (or on the left-pointing to move

backwards).

4. DELETING RECORDS – LOGICALLY AND PHYSICALLY

To delete a record from the database: retrieve the record as for editing. Then when you are sure that the correct record is in the data entry window, select **Options ⇒ Delete record**. It will then not appear during searching. However, the data remain in the record and you may later undelete the record. Select from the data entry window: **Options ⇒ Undelete record.** If you want to get rid of the record altogether, the only way is to Export the whole database and then Import it again.

5. DEFAULT VALUES

Sometimes you need to create several records with same data in one or more fields, e.g. you are cataloguing several books in a series with the same series title and imprint. To save having to type these data in each time, it is possible to set some *default values* which will be filled in already in the data entry window.

If you have a record which you would like to use as a model, select the record and display it in the data entry worksheet. Then select **Options ⇒ Define Default values [Model]** Modify the record and save it. That will now be the model. Any new record will be based on the model. When you no longer wish to use the model, select **Options ⇒ Clear Default values [Model]**

6. BROWSING THE DATABASE

You can see the records what they look like in your display format, i.e. the *output format* rather than in the worksheet which is the *input format*. To do this, close Data entry. Click on the right hand triangle button and you will see the record you have entered last. The format in which the records are displayed will be the display format written into the database definition. You can change the format when you see it in use.

Click on the Format drop-down menu and try each format. You will see the format *ALL*. Click on that and the display will list all the fields in the record as entered. Other formats will give different displays of the same record as per the description of the format.

7. UPDATING THE INVERTED FILE

To update the inverted file, choose **Database ⇒ I/F Update**. The Inverted file maintenance screen is displayed. Select **OK**. The MFN of each record is listed while it is being inverted. At the end of the process, click on the Completed button.

Whenever new records are added or the existing records are edited you have to update the inverted file. Otherwise the changes you made in the database will not reflect in search. However you have provision to set automatic updating of inverted file by choosing **Configure**

⇒ **System Settings** ⇒ **Options** and clicking on **Automatic .Inv. File Update**.

8. SEARCHING

CDS/ISIS provides two methods of search. They are Expert search and Guided search. To search the database, choose **Search** on the menu bar. You can then choose either **Expert Search** or **Guided Search**. Guided Search gives you a search form with separate text boxes in which you can enter search terms. Expert Search gives you a form with one large text area in which you enter your search expression. The same basic principles of searching apply in either case.

8.1 GUIDED SEARCH

The form for a Guided Search is shown in Figure 2 below.
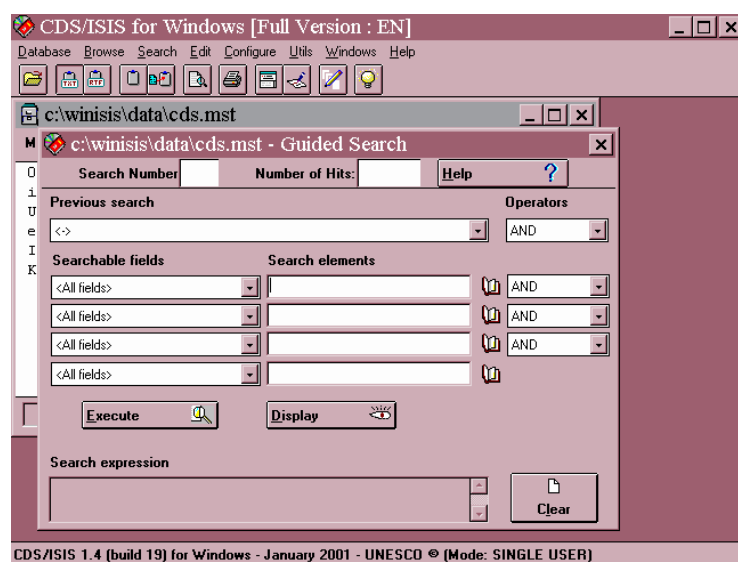
Figure 2 *Guided search form*

You can enter up to four *search elements*. For each one, you can specify whether to search in All Fields (i.e. all inverted fields, as specified in the Field Selection Table for the database) or you can select a particular field from a drop-down list box.

You can also choose to combine a previous search (if you have done one) with your new search elements. Finally, if you enter more than one search element, you can choose the logical operator with which to combine the terms: AND, OR or NOT from a drop-down list box. When you open the form, the operators are set by default to AND.

To search for, e.g. PLANT PHYSIOLOGY, type it in one of the search elements boxes. Click the Execute button. The Search Number box will then show 1, the Number of Hits box will show the number of records containing that term, and the Search Expression box will show the term you entered.

After doing a search you can display the record(s) you have found by clicking the Display button.

8.2 EXPERT SEARCH

The form for an Expert Search is shown in Figure 3.
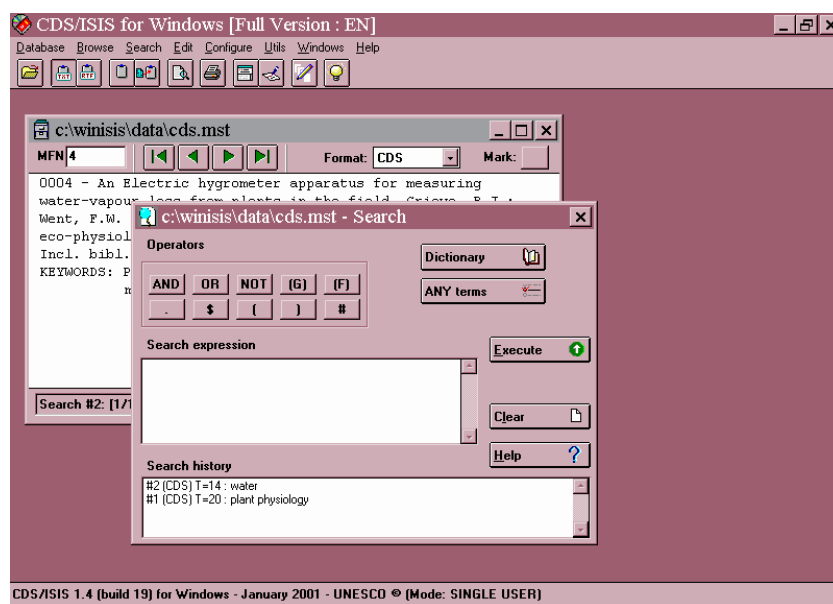
Figure 3 *Expert search form*

To search for e.g. PRIMARY EDUCATION, type it in the **Search Expression** box. You can enter your search in upper- or lower-case letters or a mixture. Then click the **Execute** button or press {Enter}.

The Search History box will show a message like:

 #4 (BOOKS) T=2: primary education

This means that for search number 4 on the database BOOKS, there were two records retrieved and the search was for PRIMARY EDUCATION. To display these records, double-click on the relevant line in the Search History box. CDS/ISIS provided provision for automatic display of search results by configuring the settings.

8.3 DISPLAYING SEARCH RESULTS

CDS/ISIS Windows version or WINISIS provides provision to configure and select one of the following three display options.

(a) Default Search Display: With this setting, the **Display** button is not available in

Expert Search and you need to double-click on the relevant entry in the Search History display.

(b) Alternate Search Result Tool Bar: This is similar to the Default Search Display, but at the top of each record a bar is displayed giving information on the search number, the hit being displayed and total number of hits, and the option to Stop.

(c) Display Search Results in a Table: Clicking the **Display** button shows for each hit its record number (MFN) and the first field (if present) defined for that database. To see a fuller version of a record, click on it and it will be displayed in the right-hand window.

The search term(s) will be highlighted where they occur in the records. The example in Figure 4 shows one record retrieved by searching for PLANT in the CDS database. You can turn highlighting off or on using the checkbox. You can also chose the colours used in highlighting.
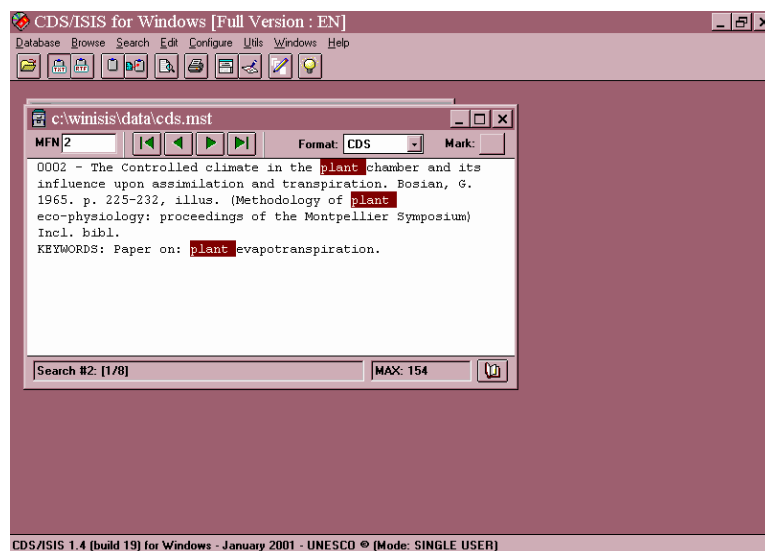
Figure .4 *Highlighting of retrieved terms*

8.4. BROWSE FUNCTION

Another way of looking at the results of a search is to choose **Browse** from   the menu bar and then **Search Results**. You will be presented with a list of the searches you have done (Search History) and you can select the one you want.

8.5 DISPLAY FORMAT

The format in which the records are displayed will be the display format written into the database definition. The *default* format, which is used if you do not specify otherwise, is

the one with the same name as the database. It is possible to have more than one format for a database. You can change to another format by choosing from the Format drop-down menu.

You will see a special format listed, which is not part of the database definition, called *ALL*. This displays the records as they are stored on the system with each field preceded by its numeric tag. It is useful for checking records and investigating problems. An example of a record in the *ALL* format is shown in Figure 5.
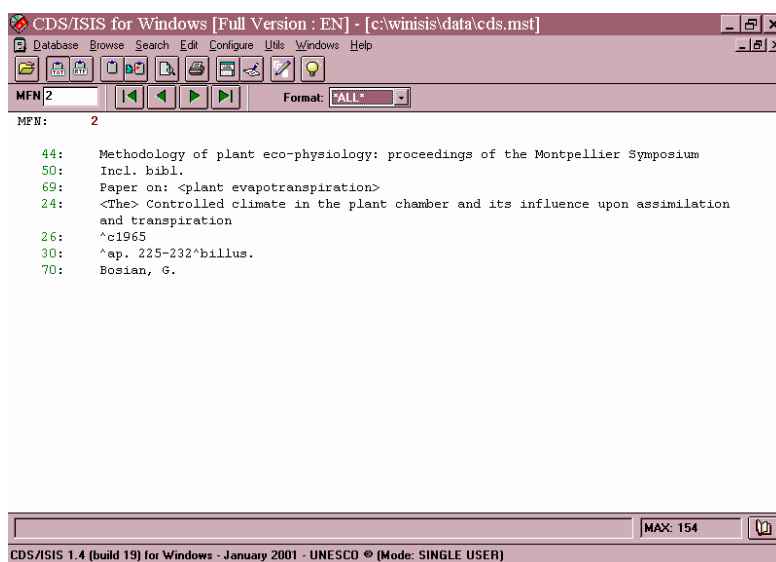
Figure 5 *Record displayed in the ALL format*

8.6 MARKING RECORDS

When you are looking through the results of a search, you may decide that some records are relevant to your need but others are not. You can *mark* the relevant ones by clicking the **Mark** check box: a V appears in the box. Then in the **Browse** menu you can choose **Marked Record** to browse through the marked records only and in the **Print Setup** dialog box you can click the **Marked Records Only** check box.

8.7 DICTIONARY DISPLAY

The method of searching described above works by the computer looking for the term in the inverted file of the database being searched. If it finds the term there, it gets the number of hits: if not, it reports zero hits. Your search will only succeed if you enter the search term exactly the way it is in the inverted file. You can then find the term as entered in the inverted file by clicking the **Dictionary** button on the Expert Search form or one of the Book icons on the Guided Search form. The display will start from the beginning of the file (in the order of figures 0 - 9 then letters A - Z). You will then get a display of the form shown in Figure 6.
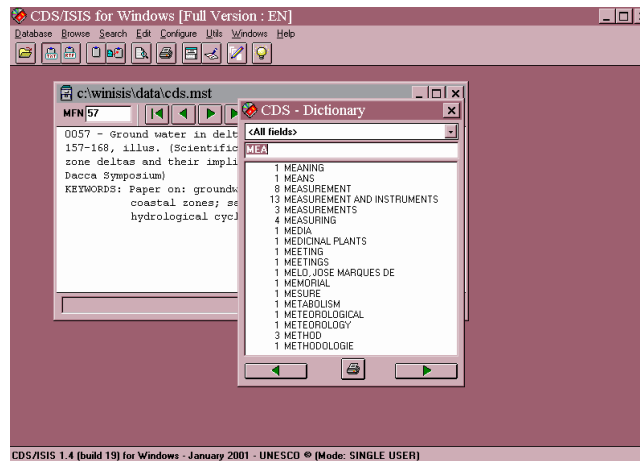
Figure 6 *Dictionary display*

If you now want to search for the records containing one or more of the terms displayed, you can drag that term from the dictionary to the search expression box. Select the term by clicking once on it. Hold down the left mouse button and move the mouse pointer across to anywhere in the search expression box. Then release the mouse button. On the Expert Search form, if you drag across a term when there are already terms in the Search Expression box, the new term will be combined with the + (OR) operator. On the Guided Search form, you need to drag each term to a separate box: the dragged term replaces any term already there. The Searchable Field is not set automatically if you have selected a field in the dictionary display.

9. Advanced Searching

9.1 TRUNCATION

The *truncation* facility allows you to look for a number of words or terms starting with the same letters. For example, you might want to look for any item to do with agriculture: it would be useful to search the terms AGRICULTURAL, AGRICULTURE, AGRICULTURALIST, etc. This can be done using the *truncation symbol* which is a dollar sign in CDS/ISIS. You would therefore enter the search as

AGRICULTUR$

9.2 LOGICAL OPERATORS

It is frequently necessary to combine two or more terms in a search, for example to find items about ECONOMICS of TRANSPORT, or a book by GRAHAM on MATHEMATICS. This can be done by using *logical operators*, of which there are three.

0. **AND:** This operator would be used in the examples just given. In the first case we want

to find those items each of which has the index term ECONOMICS *and* TRANSPORT. On the Guided Search form you would enter ECONOMICS in the first Search box, leave the Operator next to it as AND and enter TRANSPORT in the second Search Elements box. This is shown in Figure 7.
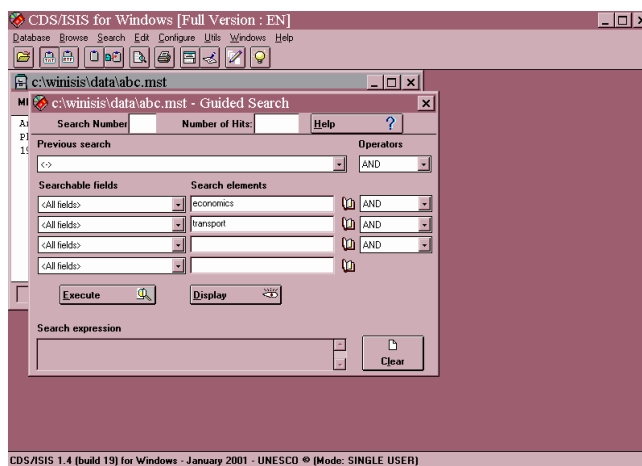
Figure 7 *Guided search using the AND operator*

On the Expert Search form you would enter ECONOMICS, click the AND button, then enter TRANSPORT. This is shown in Figure 8. For simplicity, we will write the search in this section as:

ECONOMICS *AND* TRANSPORT

You actually enter it in one of the two ways described. In the display of the Search Expression the AND operator will appear as an asterisk, *.
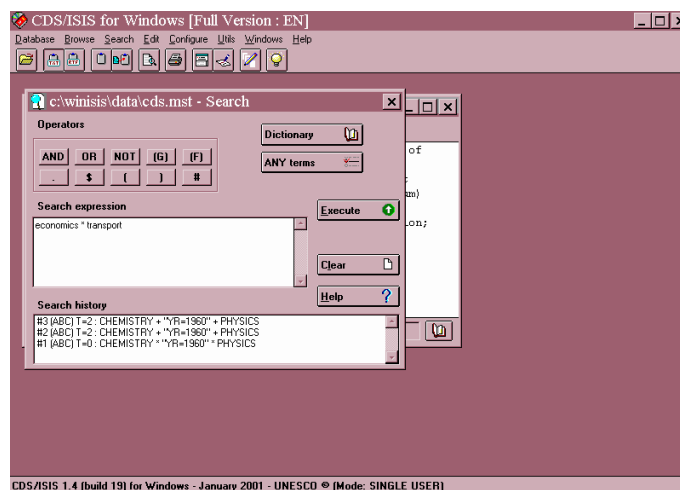
Figure 8 *Expert search using the AND operator*

In the second example, the record should contain the author GRAHAM *and* the subject term MATHEMATICS, so you should enter:

GRAHAM *AND* MATHEMATICS

In general terms, we could say that the AND operator *narrows* the search. Looking for ECONOMICS *AND* TRANSPORT is more specific than looking just for ECONOMICS.

1. **OR:** This operator is useful for linking together several synonyms or related terms each relevant to the concept you are looking for. If you were trying to find everything about education in your database you might enter the search as:

    EDUCATION *OR* SCHOOLS *OR* UNIVERSITIES *OR* TEACHING

    This means that each item retrieved must contain the term EDUCATION *or* SCHOOLS *or* UNIVERSITIES *or* TEACHING.

    The effect of the OR operator is to *broaden* the search: you expect to find more items if you look for EDUCATION *or* SCHOOLS *or* UNIVERSITIES *or* TEACHING than if you look just for EDUCATION. In the display of the Search Expression the OR operator appears as a plus sign, +.

2. **NOT:** Sometimes you might want to exclude records with a certain term from your search. For instance, you might want to find all items in your database about STRUCTURAL ADJUSTMENT but which do not come from your own institute. In this case you would use the NOT operator, e.g.

    STRUCTURAL ADJUSTMENT *NOT* INSTITUTE OF DEVELOPMENT
    STUDIES

In the display of the Search Expression, the NOT operator appears as a circumflex, ^.

9.3 ANY FILES

You may find that there is a group of search terms which you often use together linked by OR. For example, if your information centre is responsible for East Africa, you might often need to search for

SOMALIA *OR* ETHIOPIA *OR* KENYA *OR* UGANDA *OR* TANZANIA

To save having to spell out the countries each time, you could set up an *ANY* file. Then in Expert Search you would only need to click the **ANY** button and select **ANY EAST AFRICA** from the list, or in Guided Search you would just type ANY EAST AFRICA.

The ANY file has to be created outside CDS/ISIS using a text editor or word processor. It needs to be held in the same folder as the database to which it refers, and to have the name of the database with the extension **.any**. For example, if you have a database called BOOKS, the corresponding ANY file should be named books**.any** and this file

should be in the same folder as **books.mst**.

The format of the ANY file is as shown below:

```
AN  EAS  AFRICA        SOMALIA
AN  EAS  AFRICA        ETHIOPIA
AN  EAS  AFRICA        KENYA
AN  EAS  AFRICA        UGANDA
AN  EAS  AFRICA        TANZANIA
```

The individual terms (SOMALIA, ETHIOPIA, etc.) must be one on each line, and they must start at position 31 on that line.

9.4 PROXIMITY OPERATORS

Suppose that you have inverted the title field with indexing technique 4, i.e. as keywords. If you then want to search for titles containing 'New York', you might search for:

NEW *AND* YORK

This would find titles containing both the word NEW and YORK, but the words might not be *adjacent*. For example, there might be a title 'New buildings in York'. In fact the words might not even have come from the same field: there might be an author 'New' and a place of publication 'York'. To avoid such a situation you could specify that the words must occur next to each other in the field by using the *adjacency operator*, which is a full stop:

NEW . YORK

9.5 BRACKETS

The logic in search statements can sometimes get confused. You might want to look for any items about 'lions or tigers in Kenya or Uganda'. It would be tempting to enter the search as

LIONS *OR* TIGERS *AND* KENYA *OR* UGANDA

The results will not be as you expected since the *AND* operator is processed before the *OR* operator by the computer. The best way to avoid this kind of confusion is probably to do the search in small stages:

1. LIONS *OR* TIGERS
2. KENYA *OR* UGANDA
3. #1 *AND* #2
However, you can use brackets to show what is to be combined first:
(LIONS *OR* TIGERS) *AND* (KENYA *OR* UGANDA)

9.6 FIELD IDENTIFIER

If you wish, you can specify that a search term should only be retrieved if it occurs in a particular field. On the Guided Search form, you can specify one of the Searchable Fields for each Search Element by clicking on the arrow to the left of the Element box. ("Searchable fields" are those included in the Field Selection Table.) This opens a drop-down list of searchable fields and you can select the one you want. Figure 9 shows a search for NEW as an author. Note that if you drag a term from the Dictionary, the field that the term occurs in is not automatically entered in the Searchable Fields box.

On the Expert Search form, you can specify the field using a slash *and* brackets. For example, if the author field is 100: NEW/ (100)
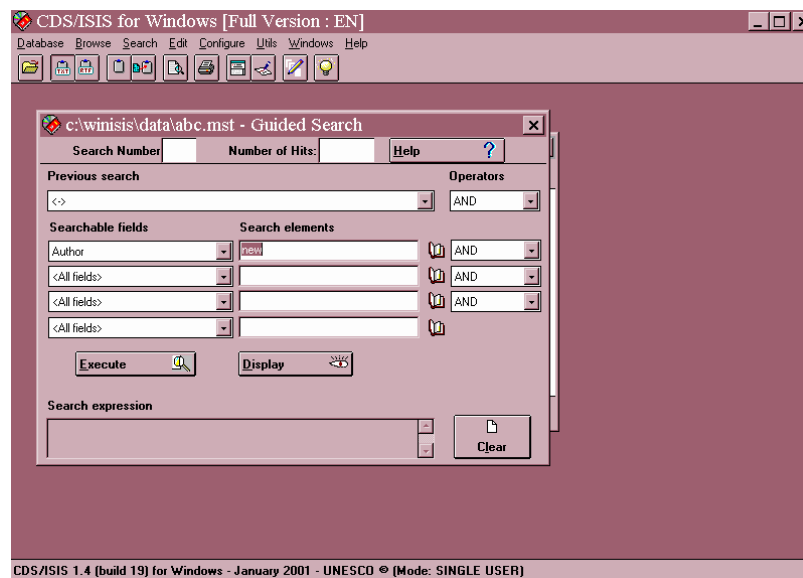
Figure 9   *Choosing the field in Guided Search*

If you drag a term from the Dictionary after selecting a searchable field, it is automatically copied with its field identifier.

9.7 FREE-TEXT SEARCHING

This facility is available in Expert Search only. The normal method of searching in CDS/ISIS is through inverted file. So the database can be searchable through the fields which you have selected in Field Select Table (FST). However, there is another method of searching which does not depend on the inverted file. Rather, it depends on scanning through the records in the whole database (or a subset of the database) one-by-one looking for a word or term that you specify. This is a much slower process. The advantage is that you can look for any term anywhere in the record, whether the field is indexed or not and whether the word is a stop word

or not. This kind of searching is often known as *serial searching*, because the records are searched serially. CDS/ISIS calls it *free-text searching*. It is specified by using a question mark at the beginning of the search and using the same *formatting language* as provided by CDS/ISIS. The colon (**:**) is used to mean 'contains'. Thus we could enter:

> ? v260 : **'McGraw-Hill'**
>
> **This would look** for those records where field 260 contains the word (or literal) 'McGraw-Hill'. To search the whole text of the record, use v0, e.g.
>
> ? v0 : 'Shakespeare'
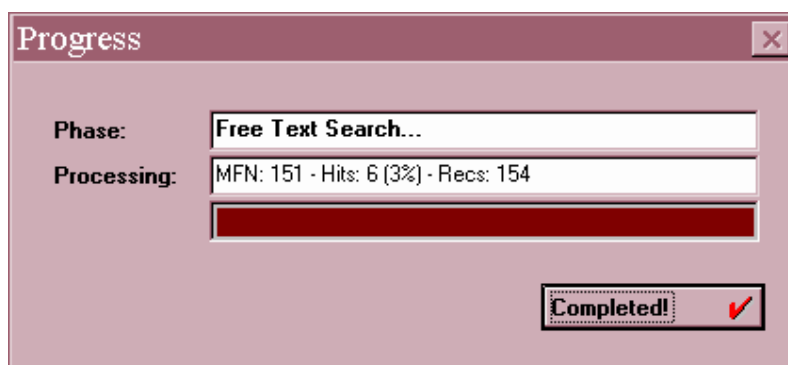
Figure 10 *Free-text searching – progress message*

After you enter a free-text search, you will see a display of the kind shown in Figure 10. You will see the MFN advancing as the search proceeds through the database and if any records match your search statement they will be added to the figure for 'Hits'. The '%' number shows what percentage of the records scanned so far match your search statement. When the search is complete, you can click the **Completed** button and display the records found just as with direct searching.

9.8 SAVING SEARCHES

If you have a search that you may need to repeat in the future, you can use the *Save search* facility. Carry out the search using the Guided or Expert Search form. If you used Guided Search, close the search form. Then choose **Search ⇒ Save Search**. The search history is displayed: click on the search you want to save. Then choose a folder and filename for the saved search. To rerun the saved search in the future, choose **Search ⇒ Recall Saved Search**. Select the filename and click **OK**. The search will run and the results will be displayed. The search will appear in Search History and can be combined with other terms if required.

10. REFERENCES:

1. Mini-Micro CDS/ISIS 2.3 Reference Manual & CDS/ISIS Pascal Manual / Division of software development and applications. UNESCO. – New Delhi : NISSAT, DSIR, 1989

Lesson 16

THE FORMATTING LANGUAGE, SORTING AND PRINTING OF RECORDS

16.0   Objective

The objective of this lesson is to explain the formatting language of the CDS/ISIS which is useful to display and print the records. The formatting language also helps in creating inverted file which is useful in searching the database. This lesson also describes the sorting and printing methods given in CDS/ISIS package

After studying this lesson you will be able to

- learn formatting language of CDS/ISIS
- learn sorting of records
- printing of records

Structure

1. INTRODUCTION
2. FIELD, SUBFIELD AND OCCURRENCE SELECTORS
3. MODES
4. LAYOUT
5. LITERALS
6. REPEATABLE GROUPS
7. SPECIAL FEATURES
8. PRINTING
   8.1 PRINTING USING THE CLIPBOARD
   8.2 PRINTING AND SORTING FACILITIES – PRELIMINARIES
   8.3 GENERAL
   8.4 PRESENTATION
   8.5 MARGINS
   8.6 LAYOUT
9. SORTING
   9.1 SAVING YOUR PRINT SPECIFICATION
10. REFERENCES

1. Introduction

Once database is created and data entered, you may need to display and print the records or part of the record. For this CDS/ISIS provided powerful formatting language. A good

understanding of this formatting language enables you not only to print or display the records but also to enter terms from the record on to the index file and to select parts of the record for sorting or exporting to another database. It also helps in writing validation rules and pick-lists for data entry forms.This lesson is written from the point of view explaining   the printing and   displaying operations. However, the same formatting language is used in the other three cases.

For the purposes of example, the following record will be used:

300 ^aTanenbaum^bV.S.
200 ^aComputer Networks

Upper or lower case letters can be used in the formatting language
e.g.mhu v300*or* MHU v300*or* MhU V300*etc.*
Carriage returns can be used within a display format to make it easier to read, but they have no effect on the display itself.

2 . FIELD, SUBFIELD AND OCCURRENCE SELECTORS

As we have seen, the contents of a field are selected by using v and the field tag, e.g. v300. (v stands for 'variable'.). This will select all the subfields present, if the field is divided into subfields. To select the subfield 'a' of field 300, use the circumflex and the subfield tag, e.g. v300^a. If you want to select several subfields from the same field, you need to repeat the field number, e.g. v300^a, v300^b

If you want to select a particular occurrence of a repeating field, specify it in square brackets, e.g. v300[1]will select the first occurrence of field 300.

To select the number of the record in the database (called the Master File Number) use MFN(6). This will give a number with six digits, e.g. 000045. To make it shorter, specify the number of digits in brackets, e.g. MFN(3)will produce 045.

3 . MODES

There are three modes available.
proof - data will be displayed exactly as entered in the record, i.e.

^aTanenbaum^bV,S.
^aComputer Networks

heading - angle brackets in the data are ignored. Subfield markers are converted to punctuation: ^a is converted to a semicolon and space (unless it comes at the beginning of a field). ^bto ^i are converted to a comma and space all others are converted to a full

stop and space. So, the example will come out as

> Tanenbaum, V.S.
> Computer Networks

data - It is just like heading mode, but each field will be followed by a full stop and two spaces. This provides a simple way of separating the occurrences of a repeating field. The example will thus appear as

> Tanenbaum, V.S.
> Computer Networks

Each of these modes can be specified as 'upper case' or 'lower case'. If you choose upper case, all letters will be converted to capitals, e.g. SHAKESPEARE, WILLIAM

If you choose lower case, all letters will be left as they are (not all converted to small letters) e.g. Shakespeare, William

The mode is specified by **m**; followed by **p** for proof, **h** for heading or **d** for data; and followed by **u** for upper case or **l** for lower case. Thus you could specify:

> mhl v300

The mode specification applies throughout a format until another mode is specified. Thus in the format mhu v100, v200, v300, mhl v400 fields v100, v200 and v300 will be converted to upper case and field 400 will be left as it is. There is no necessity to specify a mode. If you do not specify the mode, the 'default' mode of mpl will be used. If you are specifying data to go into an inverted file (i.e. you are writing the Field Selection Table) all letters are converted into upper case anyway.

4. LAYOUT

A common requirement is to indent one or more fields when printing a record,
> e.g. SHAKESPERE, William
> Hamlet

This can be done by specifying the number of spaces to indent in brackets after the tag, e.g. v300/v200(5). This will display

> SHAKESPERE, William
> Hamlet

If the field is long, you may want to indent subsequent lines by the same amount, or by different amounts, you can specify two numbers in the brackets - one for the first line and one for all subsequent lines, e.g. v10/v20(5,10)

Indenting applies only if the field is the first item to be printed on that line. To start a

new line within a display format, use a slash. For example, v300/v200will produce:

        SHAKESPERE, William
        Hamlet

However, slashes will never produce a blank line, even if you use two or more. To produce a blank line (e.g. between records in a printout) you should use hash marks. One hash will go on to the next line, and two will produce one blank line. So the format v300##v200will result in

        SHAKESPERE, William

        Hamlet

5. LITERALS

When you write v300within a format, you do not want 'v300' to appear literally in the printout, but rather the contents of field 300, e.g. ' SHAKESPERE, William'. However, you may want to specify some text or punctuation that you do want to appear literally, e.g. Author: in front of the author's name. This text is known as a *literal*.

Three types of literal can be used in CDS/ISIS:

(i)   Unconditional literals. These are specified by putting the text in single quote marks, e.g.'Author: 'v300/'Title: 'v200.This will produce the display:

        Author: SHAKESPERE, William
        Title: Hamlet

Because this type of literal is *unconditional* it will appear even if there are no data in the field, e.g. no author's name in field 300:

        Author:
        Title: The Tempest

Note that literals can be used to supply spaces and punctuation. If we wanted a space, hyphen and space between author and title we could write v300 ' - ' v200 which would give

        SHAKESPERE, William - Hamlet
However, the space, hyphen and space will appear even if there is no author or title.

(ii) Conditional literals. These are displayed only if their associated field is actually present. They are written between double quote marks. Thus   "Author: "v300/"Title: " v200will produce for the first example:

        Author: SHAKESPERE, William
        Title: Hamlet
        and for the second:
        Title: The Tempest

You may need to use a comma to show whether a conditional literal is conditional on the field before it or the field after it. For example, in V300 " - " v200 is the punctuation conditional on field 300 or field 200 being present? A comma will remove the ambiguity, e.g. v10 " - ",v20shows that it is conditional on field 300.

(iii) Repeatable literals. If you have a repeated field (e.g. several authors) you can choose whether the literal should appear with each of them, e.g.

```
 Author: Shakespeare, William
Author: Maxwell, Simon
Author: Joekes, Susan
```

or just once, e.g.

```
 Author: Shakespeare, William
        Maxwell, Simon
        Joekes, Susan
```

A *repeatable literal* is written between vertical bars.

For example: |Author: |v300

A common requirement with repeating fields is to print some punctuation after each occurrence except the last one, e.g.

Shakespeare, William; Maxwell, Simon; Joekes, Susan

Here, a semicolon is printed after each name but not after the last name. This can be achieved using a plus sign, e.g. v300+|; |

6. REPEATABLE GROUPS

Another common requirement with repeated fields is to display the repeats one on each line, e.g.

```
Shakespeare, William
Maxwell, Simon
Joekes, Susan
```

If you write the format as v300/, the three names will be run together and there will only be a new line at the end:

 Shakespeare, WilliamMaxwell, SimonJoekes, Susan

The same problem occurs if you try to invert a repeated field, or to sort on a repeated

field: only one index term or sort key is produced. It can be solved by using brackets to form a *repeatable group*, e.g. (v300/). V300 and the slash (new line) now form a *group*. Every time v300 repeats the new line repeats too. So the result will be:

Shakespeare, William
Maxwell, Simon
Joekes, Susan

7. SPECIAL FEATURES

In CDS/ISIS for Windows, provides Font table and Colours table so as to make it possible to control the appearance of the display or printout quite precisely. You can specify font size, character style (bold, italic or underline) and format the paragraphs using rules and codes provided. It is possible in the formatting language to display a picture as part of the format or as the background to the record display. The picture should be in the form of a **.bmp** or **.jpg** file and be stored in the folder specified for Patterns/Images. CDS/ISISIS windows version also provided rules to write commands (IF THEN) for dealing complicated conditions of display and to link different records (REF and L functions) within and from different databases. In the Windows version of CDS/ISIS it is possible to display a record containing a hypertext link.

8. PRINTING

There are two main ways in which you can print records from a CDS/ISIS database. One is to display a record on the screen and copy it onto the Clipboard and then into an application that allows printing, e.g. Word for Windows. You can copy several records, but one at a time.

If you have more than a few records to print, you can make use of the sophisticated printing and sorting facilities of CDS/ISIS for Windows. To do this, choose **Database ⇒ Print**, or click on the Printer icon on the toolbar. The Print Setup Window is shown in Figure 1. There are five dialog boxes provided for specifying your printing requirements: the second to fifth boxes (Presentation, Margins, Layout and Sorting) are accessed by clicking on their tabs. It is possible to send the output either to your default printer or to a file in Postscript format for printing on an appropriate printer.
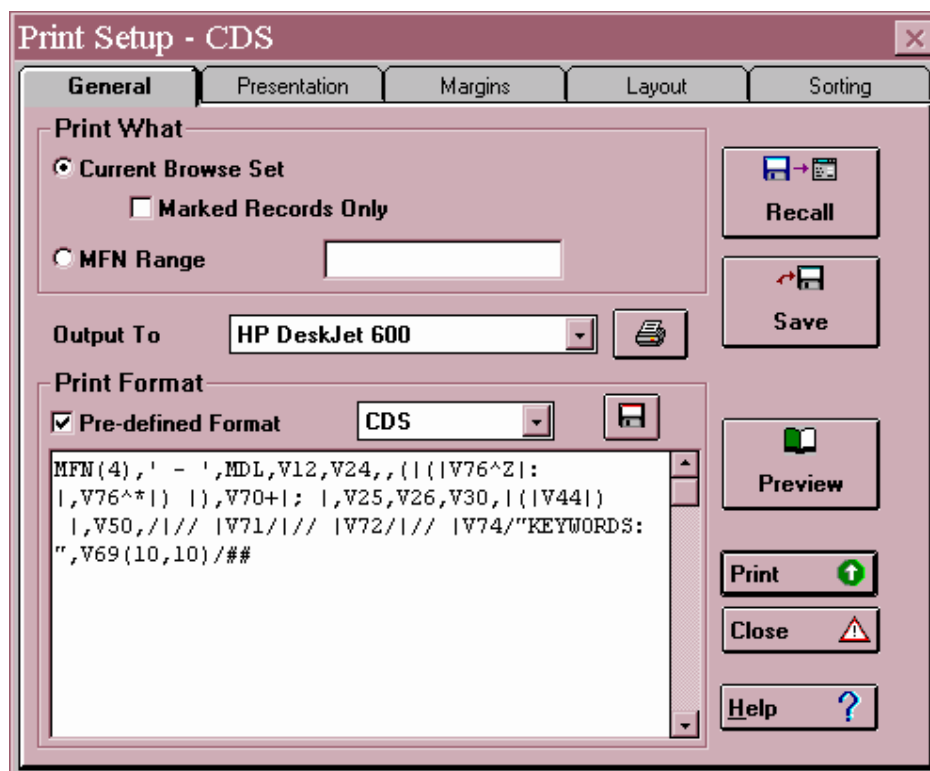
Figure 1 *Print Setup Window*

8.1 PRINTING USING THE CLIPBOARD

The Clipboard provides temporary storage for data you want to transfer. You can cut or copy data from a record displayed on the screen onto the Clipboard and then transfer those data into another application. Data put onto the Clipboard remain there until you clear the Clipboard or quit Windows. The Clipboard in CDS/ISIS operates in two *modes*. You can switch the Clipboard mode by clicking on one of the two buttons **[TXT]** and **[RTF]** on the Toolbar. The default mode is *Text Mode.* The second mode is *Rich Text Format (RTF) mode.*

8.2 PRINTING AND SORTING FACILITIES - PRELIMINARIES

If you wish to use the printing and sorting facilities, there are a couple of things worth thinking about before opening the Print Setup dialog.

1. Although you can write a print format in the General dialog box, it is easy to use the display format that you set up in the database definition, which will have the same name as the database. An example is shown in Figure 2.

Record format

      Field 300 : author
      Field 200 : title

    (a)   Display format
v300^av300^b/v200

Arora, R.P. Plant
Diseases
Chalam, G.V.
A history of the Telugu speaking peoples
Clarendon, Earl of
History of the Germany

  (b) Display format v10/v20###

Arora, R.P. Plant
Diseases

Chalam, G.V.
A history of the Telugu speaking peoples

Clarendon, Earl of
History of the Germany

Figure 2 *Formatting for line spaces between records*

2. You need to have decided which records from the database you want to print.

    You can open the Print Setup window by clicking the Printer button on the toolbar or by choosing **Database ⇒ Print**. There are then dialog boxes which can be opened by means of their tabs.

8.3 GENERAL

    The first dialog box to complete is called "General". This allows you to say what and where to print and to define the print format. It is shown in Figure 8.1. You need to select the records to print either as the results of a search or by Master File Numbers (MFNs). This is done by clicking on one of the option buttons **Current Browse Set** or **MFN Range**. Current Browse Set means the set of records retrieved in your last search. In this case, you can also click on the check box **Marked records only** if you have marked some records. If you choose MFN Range, you should enter your selection of MFNs in the text box. Some possible formats for this are:

   17   Print record number 17
   -5   Print records up to number 5

    60-   Print from record 60 onwards
    19-30   Print records 19-30
    -5,17,19-30,60-Print this combination of ranges

You could print the whole database by choosing an appropriate range of MFNs. Next you can specify where the output from the printing should go by means of the **Output to** combo box. It should be showing the printer configured as your default printer. The button with the Printer icon next to this combo box allows you to change your printer settings if necessary. Alternatively you can send the results to a file in Windows-ASCII, or Postscript format. This has the advantage that you can check the output file on the screen before sending it to paper. You could then use a word processor to paginate the text and do other editing if necessary.

The print format can either be one which you have defined and named already or one which you now write in the large text area. When you are using a predefined format, the **Predefined Format** checkbox is crossed. There are also some command buttons down the right-hand side of the dialog box. **Recall** allows you to call up a previously saved print worksheet. **Save** allows you to save your worksheet so that you can produce similar prints in the future without having to repeat all your work. **Preview** lets you see what the first page will look like before printing.

8.4 PRESENTATION

This dialog box allows you to add titles, headers and footers to your print. It is illustrated in Figure 3. At the top of the dialog box there is a combo box allowing you to edit these objects:

    First title
    Second title Third
    title Header
    Footer

Figure 3 *Presentation dialog box*

"First", "second" and "third titles" are three pieces of text which you can have printed on your printout. Each one can come on a separate page at the beginning (as a "cover"), at the top of the first page of records, or at the top of every page of records. The *header* comes at the top of every page and the *footer* comes at the bottom of every page. For each "title" you would like on your printout, you select it from the first box, then click the boxes for "Use as a cover" and "Keep title on all pages" if you wish. The remaining boxes apply also to headers and footers. The text for the object you type into the large area. You can pick alignment of the text to the left, to the right, or have it centred by clicking on the appropriate button. You can choose to have the text in italic, bold, underlined or combinations of these. The font and font size can
be selected from the two boxes on the right.

As an example, the following three titles might be set up:

First title: INSTITUTE OF DEVELOPMENT STUDIES

             [ ]   Use as a cover   [X] Keep title on all pages

Second title: **Accessions list**

             [X]   Use as a cover   [ ] Keep title on all

Third title: July 2001

        [ ] Use as a cover

The first page of the printout (the cover) will be printed only as:

Accessions list
      The second page will have the heading:

INSTITUTE OF DEVELOPMENT STUDIES July 2001
      followed by the records being printed,
      and the third page will have the heading:
INSTITUTE OF DEVELOPMENT STUDIES

8.5 MARGINS

Here you define what area of the page you want to print on. The dialog box is illustrated in Figure 4.
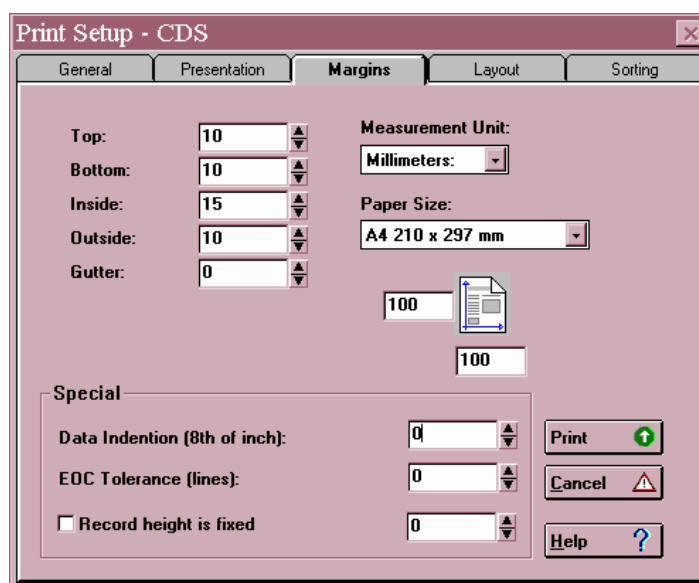
Figure 4 *Margins dialog box*

You can define the size of the margin at the top of the page, the bottom of the page, the left hand side (**Inside**) and the right hand side (**Outside**). If you are intending to bind your printout down the left hand side, you can specify extra space to be added to the inside margin (**Gutter**).

The Measurement Unit can be selected from a combo box as Millimetres, Centimetres, Inches or Twips. The Paper Size can be set to A4, Letter, Legal or User Defined. In the last case you then set the height and width of the paper in the boxes next to the diagram.There are three further boxes in the "Special" frame. **Data Indention** is most useful for indenting

records with respect to headings when you are producing sorted listings.

EOC (i.e. End Of Column) tolerance. If a record will not fit the space available at the bottom of a page, CDS/ISIS will print part of it on that page and the rest of the record on the next page (or column). The End of Column Tolerance means how many lines space must be left at the bottom of the page for CDS/ISIS to start printing a record. If you set it to 3, a record might be split as shown below.

World Conservation Strategy. International Union
for the Conservation of Nature and Natural Resources, in
co-operation with the United Nations Environment

Programme and the World Wildlife Fund. IUCN: Gland,
Switzerland, 1980.

Figure 5 *A record split between pages*

Finally you can set **Record height is fixed** and the measurement. This makes it possible to specify the height of the record when printed. If the text does not fill it some blank space will be added: if the record is too long it will be truncated.

8.6 LAYOUT

In this dialog box you can specify more about the page layout and the number of columns. It is illustrated in Figure 6. Firstly there is a frame to do with columns. There is a spin box for the number of columns across the printed page (set by default to one) and one for the space between the columns, using the current unit of measurement (set by default to10). Then there are three radio buttons for choosing no decoration, a line between the columns, or a border round each column, respectively. Next you can choose whether there should be a maximum number of records per page or column and if so what that number should be. This could be useful in printing labels or cards.
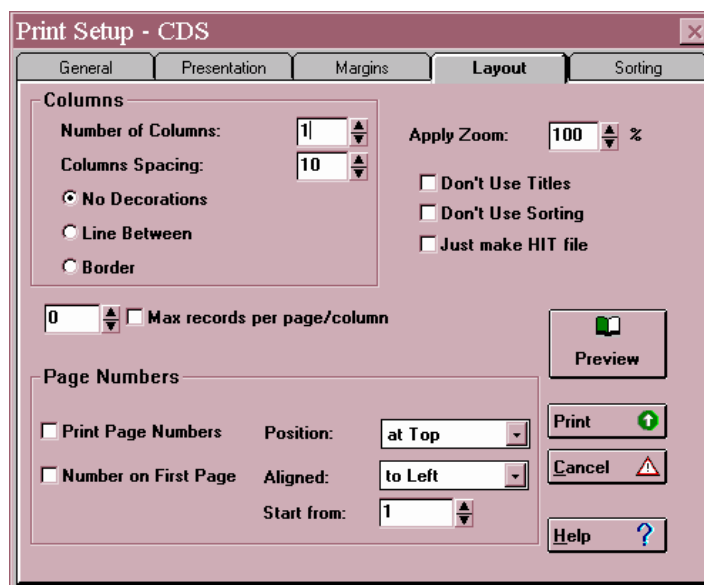
Figure 6 *Print setup – Layout dialog box*

Below that, the frame allows you to ask for page numbers and say where they should appear. There is a check box to request that page numbers are printed and a separate one for a page number on the first page of printout. Then you can choose from a combo box whether the number comes at the top or bottom of the page, and from the next box whether the number appears on the left, centre or right of each page. Alternatively, you can ask for the numbers to be placed on the inside or outside of each pair of pages. You can pick the first page number to be used by means of a spin box, e.g. if there was a 10 page introduction to your listing you could start it at page 11. At the top right of the page, there is a spin box for applying a "zoom" factor. By default it is set to 100% but you can vary it between 50 and 120%. It allows you to fit more or fewer records on a page by varying the font size, but with no changes to your print format.

Then there is a group of three check boxes. The first two are for **Don't use titles** and **Don't use sorting**. If you are using a format which you have set up and saved on a previous occasion, but on this occasion you don't want to include the titles or you don't want to have the records sorted, you can "turn off" these features by means of the check boxes. (If you do not use sorting, the records will be printed in order of ascending MFN, i.e. the order that they are on the database.)   The third one **Just make HIT file** provides a way of sorting the database into a different order.

There are also command buttons on this page to Preview the printout, start Printing, Cancel, or ask for Help.

9. SORTING

Sorting dialog box provided by WINISIS is illustrated in Figure 7.
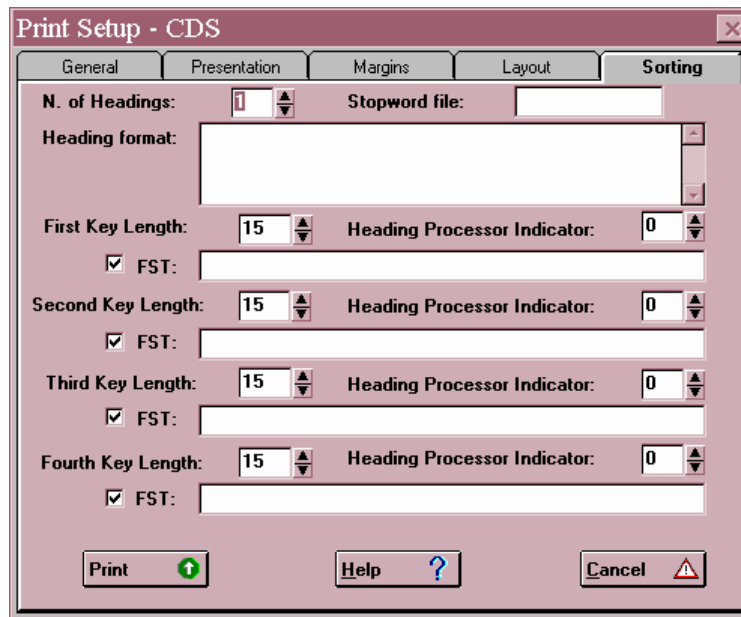
Figure 7 *Print setup – Sorting dialog box*

a. N[umber] of headings. This actually means the number of *levels* of heading to be used. The maximum heading levels is four. The number will usually be one less than the number of *sort keys*. If the first field in the description is the one you are sorting on, you will want no headings at all.

b. Stopword file. The name of the stop word file should be entered here.

c. Heading format. You can provide your own format for printing the headings, using the formatting language or you can let CDS/ISIS construct the heading format itself.

d. Sort key parameters. Up to four sort keys may be specified. If two records have the same primary sort key, they will then be sorted by secondary sort key and so on. For each sort key, you must give three pieces of information:

i. *Key length.* This defines how many characters are taken from the specified field to form the sort key.

ii. *Heading processing indicator.* There are four combinations numbered 0 to 3. Depending upon the purpose proper indicator is to be selected.

0. Headings don't repeat. Records don't repeat.
1. Headings don't repeat. Records repeat.
2. Headings repeat. Records don't repeat.
3. Headings repeat. Records repeat.

iii. *A Field Selection Table.* This is written in the same way as the Field Selection Table for inversion. For sorting to take place the box next to "FST"

must be checked. The check box provides a temporary way of "turning off" one or more FSTs. Instead of writing out the FST, you may use an FST which you have already prepared in Database Definition Services. You enter here its name preceded by an at sign, e.g. @SORT.

You can now click the **Print** button to put your specification to the test.

9.1 SAVING YOUR PRINT SPECIFICATION

You may want to produce similar printouts at regular intervals, e.g. a printed catalogue every quarter, or a list of new accessions every month. You may therefore find it useful to enter the values once, test them, and then save your specification. Click the **Save** button on the General page to save a specification. You are asked to give it a file name and choose a folder: the name is given an extension **.wpr.** Next time you want to print with this specification, go into Print Setup, click **Recall** and select the **.wpr** file.

10. REFERENCESs

1. Mini-Micro CDS/ISIS 2.3 Reference Manual & CDS/ISIS Pascal Manual / Division of software development and applications. UNESCO. – New Delhi : NISSAT, DSIR, 1989

Lesson 17

EXPORTING, IMPORTING, BACKING UP AND MODIFICATION OF DATABASE

17.0 OBJECTIVE

The main objective of this lesson is to explain how to exchange the database with the help of Export and Import features available in CDS/ISIS package. This lesson also explains how to take backup and restore the database. Sometimes you will probably wish to make some modifications to the original definition. CDS/ISIS allows modification of database any number of times.

After studying this lesson you will be able to

- Export database
- Import database
- Backup the database
- Restore the database
- Modify the database

Structure

1. Introduction
2. ISO 2709 Structure
3. Export into ISO 2709 Format
4. Import a n ISO 2709 File
5. Backing Up and Restoring a Database
6. Modification Of Database
  6.1 Modifying the Field Definition Table
  6.2 Modifying the Worksheet or Creating a New one
  6.3 Modifying the Field Selection Table
  6.4 Modifying or Adding Print Formats
7. Modifying the Data
  7.1 Global Add (Range)
  7.2 Global Delete (Range)
  7.3 Global Replace
      7.4 Global Add (Search)
  7.5 Global Delete (Search)
  7.6 Modification by Exporting and Importing
8. Conclusion
9. References

1. INTRODUCTION

Library is a growing organism as stated by 5th Law of library science by S.R.Ranganathan. Consequently library catalogue also grows continuously. The library bibliographic database

(Catalogue) also grows continuously. So as a precautionary measure the database is to be backed up periodically to save the database. Hence CDS/ISIS provided Backup and Restore facility to avoid exigencies arises by computer breakdown, hard disc crash etc. Library catalogue controls the documents of the library. In order to meet the universal availability of publications one has to achieve regional bibliographic control and universal bibliographic control. To achieve bibliographic control regional and union bibliographic databases are to be created by pooling database from different libraries. For example 'Indcat' is a union catalogue database of documents available in Indian universities. There are different library software packages that are being used for creation of bibliographic database in libraries. Hence Export and Import features are must for any library software to facilitate exchange of data between libraries and to pool data at regional, National and International level. The export and Import feature of the software converts the data into common communication standard structure and facilitate exchange of data.ISO 2709 is one such common record structure to facilitate exchange of data.

After you have been using your database for some time, you will probably wish to make some modifications to the original definition. For example, there may be fields in the definition that you have never used, or you might realize that you missed out some data elements. You might want to be able to search on elements which have not been indexed or you might find that elements are not being indexed in the way you had intended. You may want an additional worksheet for a particular task. You might want to alter the print format, or you might want several print formats for different purposes.

2. ISO 2709 STRUCTURE

The export function of CDS/ISIS allows you to copy some or all of the records in a database into another portable file. The import facility allows you to bring data from elsewhere into your own database. During exporting or importing you can use a *Field Selection Table*

(a) to limit the parts of the record you allow to be transferred
(b) to move data from one field to another on transfer.

So another use of these functions is to reformat the database by exporting and then re-importing the same records. The record structure which is used for exporting and importing is known as *ISO 2709* because it follows the International Organization for Standardization's standard 2709.

A file of two records in ISO 2709 format is shown in Figure 1.

```
-------------------------------------------------------------------------------------------------------
004330000000012100045000440078000000050001200078069007900090024006900169026002
30023
803000210026107000160028207000130029~Methodology of plant eco-physiology:
proceedings of the Montpellier Symposium~Incl. bibl.~Paper on: <plant physiology><plant
transpiration><measurement and instruments>~Techniques for the measurement of
transpiration of individual plants~^aParis^bUnesco^c~1965~^ap. 211-
224^billus.~Magalhaes, A.C.~Franco,
C.M.~#0037600000000109000450004400780000000500012000780690037000900240100000
```

12702600
0700227030002100234070001100255~Methodology of plant eco-physiology: proceedings of the Montpellier Symposium~Incl. bibl.~Paper on: <plant evapotranspiration>~<The> Controlled climate in the plant chamber and its influence upon assimilation and transpiration~^c1965~^ap. 225-232^billus.~Bosian, G.~#

Figure 1 *A file in ISO 2709 format*

(Here ~ has been used as field separator and # as record separator)

3 . EXPORT INTO ISO 2709 FORMAT

Open the database from which you are going to export. Use the Open File icon, or choose **Database ⇒ Open**, then the database you want to use. The exporting function is reached by choosing **Database ⇒ Export**. A dialog box will open asking you for the name to be given to the ISO file. You can choose whether it should go on to the hard disk, a floppy disk. It is customary to give the ISO file a name with the extension **.iso**, e.g. **mar01.iso**. Then click the **OK** button.

A dialog box will appear as in Figure 2. The meaning of the various choices is explained below. You can accept most (if not all) of the default values offered.

Figure 2 *Export dialog box*

1 *Name of output ISO file.* This will be the filename you have just chosen, but you can alter it here.

2 *Field separator.* If this is left blank, the program will use the ISO 2709 standard field separator.

3 *Record separator.* If this is left blank, the program will use the ISO 2709 standard field separator.

4 *Export Range of MFNs / Search results/From sorted HIT file.* You can limit the records exported either by giving a range of MFN numbers or by means of a previous search. You cannot limit by both but you can limit to marked records only. Exporting from a sorted hit file is used to sort the records in a database into a new order.

5 *Range: from MFN ... to MFN ...* If you want to limit by MFN, specify the limits here, e.g. From MFN   1 to MFN   50

6 *Reformatting FST.* If you do not want to reformat the records for exporting, leave this blank.

7 *Renumber records from MFN.* You can make the MFNs of the exported records start from a different value from what they start from in your database. You can generally leave this blank.

8 *Output Tag containing MFN.* Sometimes you will need to transfer the MFN into one of the tagged fields. You can choose any field number which is not already in use, e.g. 99, and the program will copy the MFNs into that field in the exported records.

Gizmo conversion file. You can leave it blank.

When you have completed the dialog box, click the **OK** button. The computer should then start to export records.

4 . IMPORTING AN ISO 2709 FILE
This section covers transferring records from a file in ISO 2709 format into a CDS/ISIS database. The database definition must have been set up before importing records, though the database can either be empty or already have records in it.

First open the database into which you want to import. Then choose **Database** ⇒ **Import**. You are asked for the name of the ISO file to import from - choose the correct disk, folder and filename. Note that only filenames with the extension **.iso** are displayed unless you change **List files of type...** to *.*. Click the **OK** button.

A dialog box will appear as in Figure 3. Most of the choices are similar to those in the export dialog box.
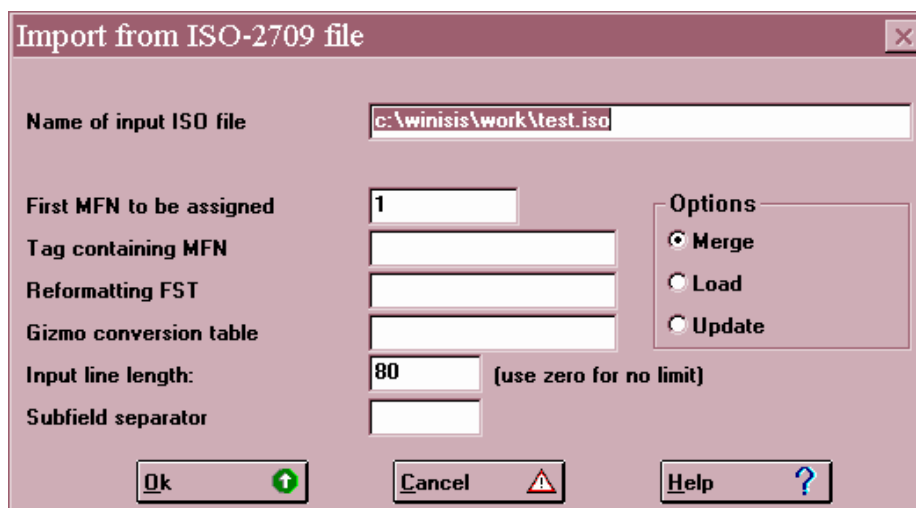
Figure 3 *Import dialog box*

1 *Name of input ISO file.* This will be the name of the file you wish to import.

2 *First MFN to be assigned.* You can normally leave this as the default value, 1. If you make it greater than the number of records already in your database, the incoming records will be given MFNs starting from the value specified.

3 *Tag containing MFN.* You can take the MFN from a numeric field present in the ISO 2709 record being imported. This will override anything you have answered at choice 2. The MFN will be removed from the field specified when the record has been imported.

4 *Reformatting FST.* If you do not want to reformat the records during importing, leave this blank.

5 *Gizmo conversion file.* As in exporting you leave it blank.

6 *Input line length.* This is the number of characters per line in the ISO file. 80 is the default in the Windows version. However, if you are importing from another package which adheres more strictly to ISO2709, there may not be any line breaks and you should set this value to 0.

7 *Subfield separator.* Normally this is the circumflex **^** in CDS/ISIS.

8 *Options: Load/Merge/Update.* Be careful what you choose here as you could lose an existing database! The choices are:

   Merge. This means that the imported records will be added to any existing ones. If the imported records have MFNs and these clash with existing MFNs they will not be imported.

Load. This means that any existing records are lost and you end up with only the imported records. But you will be asked to confirm. OK / Cancel

Update. This works like Merge, except that if an incoming record has the same MFN as an existing one it will overwrite the existing record, i.e. *update* it.

When you have completed the dialog box, click the **OK** button. The record(s) should then be imported: the program displays the MFNs as it runs.

5. BACKING UP AND RESTORING A DATABASE

You should take regular backups of your database(s) to avoid loss of work when the systems are breakdown. Before you make a backup, make sure that the inverted file is updated. You will have to use the Windows Backup facility or a file compression program Winzip.

6. MODIFICATION OF DATABASE

Modification of database includes changes in FDT, Worksheet, FST and Display formats of the database.

6.1 MODIFYING THE FIELD DEFINITION TABLE

The most common type of modification is to add extra fields to the database. This entails adding to the Field Definition Table (FDT). To do this choose **Edit ⇒ Field Definition Table** from the main menu bar. This opens up the **Data Base Definition - Field Table** window. You can add, delete or modify the existing fields. Click on **OK** when you have finished. If you add a new field, you will also need to add it to a worksheet, a print format, and possibly to the Field Select Table. If you delete a field from the FDT, the field will not disappear in existing records but you will not be able to enter any more data into this field. You may therefore want to remove it from the worksheet(s). If you have already entered data in this field in existing records, you can change the print format(s) to stop them displaying.

6.2 MODIFYING THE WORKSHEET OR CREATING A NEW ONE

If you have added a field in the Field Definition Table, you must add it to a worksheet. Select **Edit ⇒ Data entry Worksheets** and the default worksheet will be displayed. You should see any extra field you have added displayed in the **Fields** window. Double Click on the new field and that field will be added to the data entry fields box and hence to the worksheet.

6.3 MODIFYING THE FIELD SELECTION TABLE

Select **Edit ⇒ Field Selection Tables** and the table will be displayed. Add the field you want to be indexed along with all parameters Click **Add**. Click **OK** to save it. Modifying the FST does not alter the entries for records which have been inverted already. When you say **YES** to **Update inverted file?**, CDS/ISIS only considers records which have been added or modified since the last update. Therefore, for the new FST to take

effect on existing records, you will have to choose from the main menu bar **Database ⇒ I/F Update** and click the **Full Inverted File Generation** radio button and **OK**.

6.4 MODIFYING OR ADDING PRINT FORMATS

This is one of the most common modifications required. Chose from the main menu **Edit ⇒ Print Formats**. Select **New**. If you are modifying the current format then click on the check box **Don't clear current format** and the current format. Give the format a new PFT name and click **OK.** You will then be able to amend the format and produce a variation on the earlier one.

7. MODIFYING THE DATA

Modifying data in the normal is explained in the data entry lesson. CDS/ISIS for Windows has three very powerful utilities for making global changes to the database. That means making the same change across sets of records. There are three separate functions: Global add, Global delete and Global replace. It is always better to take the backup of the database before using these functions. **Global add** will add a field to every record selected. **Global delete** removes a complete field from every record **Global replace** replaces selected text in a field with text required. Note that these functions cannot be opened while the Data Entry Worksheet is open. These functions can be used by selecting **Utils** While database is open. Following figures show the global add windows.

7.1 GLOBAL ADD (RANGE)

With the database open, select **Utils ⇒ Global Add Range).**

Enter the range of MFNs, e.g. 1/50. If you enter nothing it will add the field to every record. Select the field tag using the spin box.
Add the text to be entered in this field.

Note that a new field will be created, for each field added. This will be created even if the field is already present and the field is not repeatable. The field will be created even if it is not in the FDT.

You may want the field to be created only if it is not already present. Click on **Add if not present**.

How could you use this? You could add in an author field the text 'Anon.' to every record which does not have an author field. Let's do it in the first 50 records only.

Here (Figure 4) is the screen displayed ready to run.

When you click on **OK,** a Progress window comes up, very useful in a very large database, and you will see on the window the MFN of the record being processed
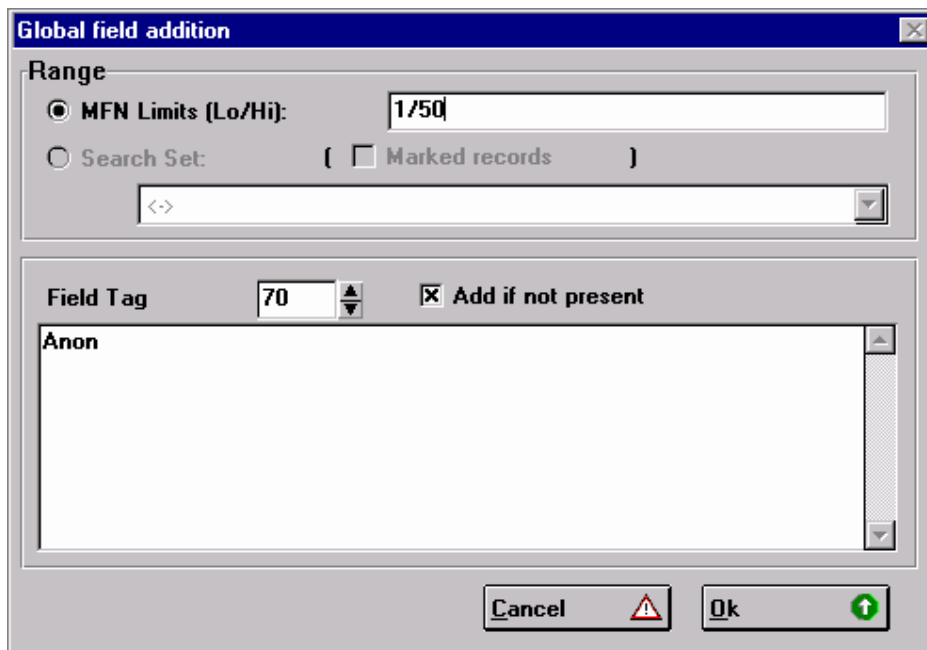
Figure 4 *Global Add (Range) window*

Click on the completed button when it appears and then check some records to ensure it has worked correctly.

7.2 GLOBAL DELETE (RANGE)

With the database open, select **Utils** ⇒ **Global Delete (Range)**. Enter the range of MFNs, e.g. 350/355

If you enter nothing in range, Global Edit will remove all instances through the entire database of the field you select in the next step.

Select the field tag using the spin box. Press **OK**.

The field will be deleted from every record selected. Note that if you wish to delete only certain words in a field, use Global replace (below).

7.3 GLOBAL REPLACE

Global replace allows you to search for a particular string of characters and replace them by another string. You can limit this to particular fields, subfields or occurrences of a field. You can get it to select text for change taking into account case or ignoring it. You can tell it to select whole words only. You can get it to prompt you before it makes any particular replacement.

You may enter the range of records on which you wish to make the global edit. Click on the button and enter the range as e.g. 55/90. If you leave the MFN limits button set and do not enter a range the global edit will not be performed; it will go through all the stages but nothing will be changed and no error message will appear.

If you have not made any searches in that database since opening it, **Search set** and **Marked Records** will be greyed out. Otherwise you can select a search set for the global edit to be done on instead of using a range.

The **Marked records** selection which can be used if you have just separately marked records in the last search you made is not reliable.

You must enter the text you wish to replace in the **Text to find** box. If you enter nothing you will get a message 'No text to search for'. Enter the text you wish to replace it with in the next box. If you enter nothing there, you will get the message

You are DELETING some text!
NO NEW TEXT HAS BEEN SPECIFIED! Are you sure?

If you click on the **Yes** button, the text will be deleted and replaced by nothing. If you click **No** the Replace Text Window will appear again with all values empty so you have to start again. If you click on **Cancel**, the Global Replace utility closes.

If you click the case sensitive button the replacement will check the case of the original and if different from that entered in **Text to find** it will not change it. If you click on **Whole words only** it will select character strings only found between two spaces or the beginning or end of the field. It does not change anything immediately preceded by a subfield identifier. Thus, **the** will be changed if it is a complete word but not if it is another word like 'there'. It will not change if it is at the start of a subfield.

In the **Tags** box you can specify replacement in one or more fields. Enter each field separated by commas. If you want it to replace the text only in certain subfields, you can specify as many subfields as you like: e.g. afgh, but it will change the text in any of the subfields specified in any of the fields selected. You cannot specify to make a change in subfield a of field 26 and subfield b in field 30. To do this you should run Global Replace separately for each.

You can convert punctuation to a subfield identifier. Here is an example. You may have an author in field 70 and you may wish to replace comma space by ^b in the first 100 records in your database. Let's do it only in second occurrences of the field.

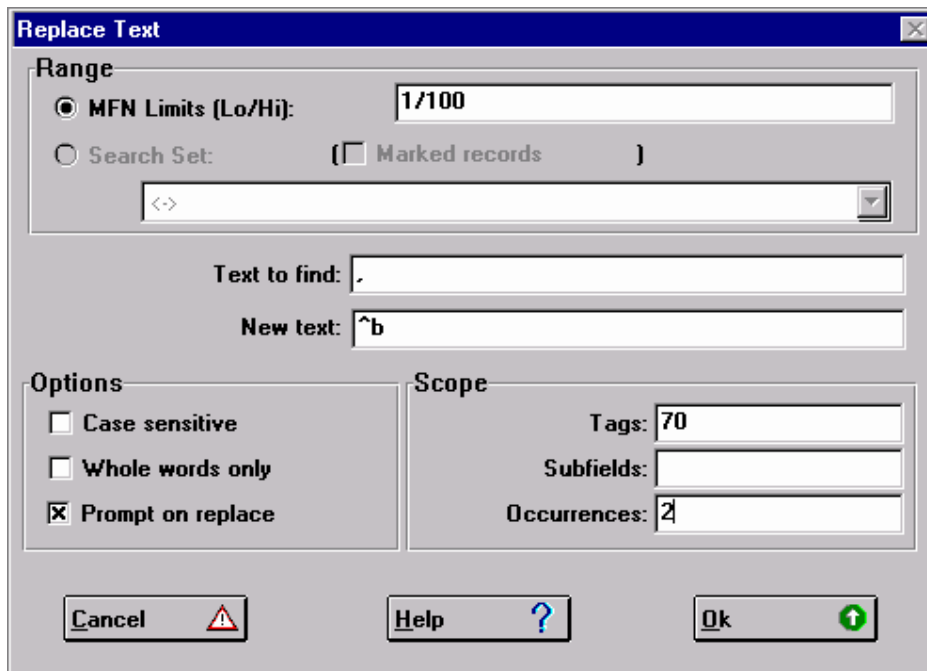Following figure shows the global replace window.

Figure 5 *Global Replace window*

7.4 GLOBAL ADD (SEARCH)

To add a field to every record you have just retrieved with a particular search, with the database open, select **Utils** ⇒ **Global Add (Search)**.

Click on search set and select a search you have just made by clicking on the button at the right of the combo box and clicking on the search

Select the field tag using the spin box. Add the text to be entered in this field.

Note that a new field will be created, for each field added. This will be created even if the field is already present and the field is not repeatable. The field will be created even if it is not in the FDT.

You may want the field to be created only if it is not already present. Click on **Add if not present**.

When might you use this? Let's assume that every bibliographic record in a database includes a language code in field 41. Let's say we would like to add a note 'Foreign Language Material' in field 500 to those records describing non-English-language material. Select those records with language code not ENG:

? v41 <> 'ENG'

Select the search set in the global edit window. Select field tag 500 and enter in the text box

'Foreign Language material'

and the text will be added in field 500. If field 500 is not repeatable and the field already exists, it will still add the field, unless you click the check box **Add if not present.**

7.5 GLOBAL DELETE (SEARCH)

With the database open, select **Utils ⇒ Global Delete (Search)**.

Click on **Search set** and select a search. If you do not select a search you will delete the field you select in every record.

Select the field tag you wish to delete using the spin box. Choose **OK**.
The field will be deleted from every record selected. Note that if you wish to delete only certain words in a field, use Global replace (10.6.3).

7.6 MODIFICATION BY EXPORTING AND IMPORTING

Another way to make changes to all the records in a database is through the export and import functions on the **Database** menu. In either process you can use a field select table (FST), which allows you to make changes to the data. In particular, if you want to move data automatically from one field to another. This can only be done through exporting and importing.

8. Conclusion

CDS/ISIS is a text oriented non-numeric database management software developed by UNESCO in Pascal language. It is designed exclusively to handle library bibliographic data, whose special features are variable fields and records, repeatable fields, unpredicted fields. The software has best feature to export data into ISO2709 to facilitate exchange of records between libraries. The package also provides Pascal interface to develop own programs to automate other library house-keeping operations.

9. References

1. Mini-Micro CDS/ISIS 2.3 Reference Manual & CDS/ISIS Pascal Manual / Division of software development and applications. UNESCO. – New Delhi : NISSAT, DSIR, 1989