

2

ENHANCING THE USE OF SOFTWARE

UNIT OUTCOME

Students will be able to:

- recognise to choose appropriate software tools to solve problems, illustrate ideas, and clarify thinking in other subjects chosen for study in Grade 11.

2.1 USING APPLICATION SOFTWARE

Software refers to the operating instructions and applications that allow computers to process the numbers, pictures, sounds, and text we enter into them. In Grades 9 and 10, you have studied about *Application Software*. We know that application software is the software that is designed to satisfy a particular need of a particular environment. Some examples of application software are:

- (i) Word Processing Software
- (ii) Presentation Software
- (iii) Spreadsheet Software
- (iv) Desktop Publishing Software
- (v) Database Management Software

In this Unit, we will enhance the use of application software.

● Word Processing

Overview

Word processing software was originally designed as a replacement for the typewriter. Now-a-days word processing program such as MS-Word 2007 can support photos and drawings, mathematical calculations, text in table format, text in varying sizes, shapes, colors and even sound bites.

Creating a Document

Using MS-Word 2007, we can create a variety of documents such as memos, letters, reports, research papers, brochures, announcements, newsletters, envelopes, labels, and much more.

To start Word 2007,

Click *Start* → *All Programs* → *Microsoft Office* → *Microsoft Office Word 2007*

A blank document namely *Document1* is created. Figure 2.1 shows the Word 2007 document screen elements.

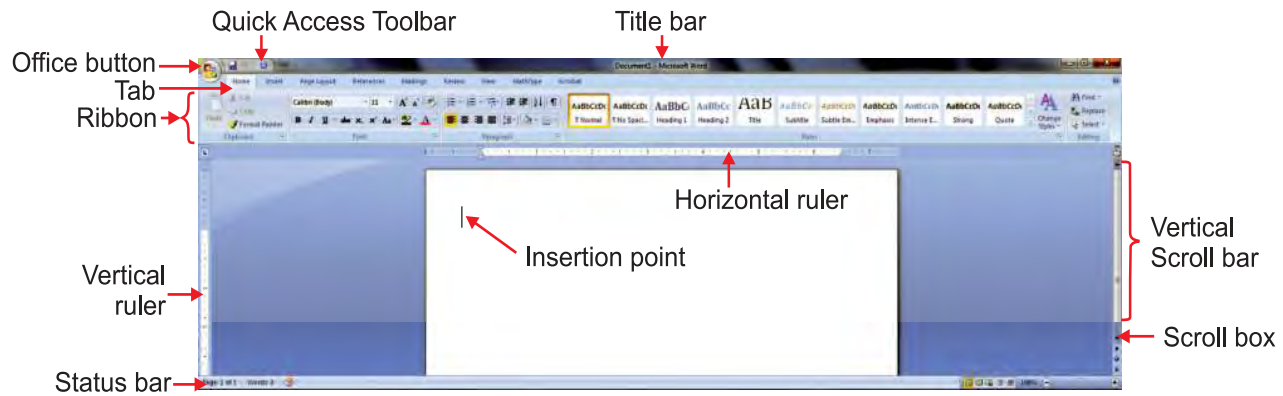


Fig. 2.1: Word 2007 document screen elements

Now, you can type the text as per your need in the document you have just created and save it for future use. You can also open an existing document.

Editing and Formatting Documents

You can edit and format word documents using Word's powerful editing and formatting features. Editing includes inserting, replacing, deleting text, using Undo and/or Redo and spell checking etc. Formatting can include tasks as changing the font; aligning and indenting text; changing line and paragraph spacing; and inserting elements such as bullets, numbers, tables and pictures, etc.


To edit a document in Word 2007, perform the following steps:

1. Open a document.
2. To insert text, position the insertion point in the desired location and then type the text. You can delete the text by pressing the *Backspace* key or *Delete* key.
3. If you make a change to text, such as deleting selected text, and then change your mind, use the *Undo* and/or *Redo* buttons on the *Quick Access* toolbar.
4. For spell checking, click the *Review* tab and then click the *Spelling & Grammar* button in the *Proofing* group. Ignore or change as needed. Click *OK* when check is complete.
5. Save the document by clicking the *Save* button on the *Quick Access* toolbar (or press *Ctrl + S*).

To format a document in Word 2007, perform the following steps:

1. Open a document and select some text from the document.
2. Click the *Font* group dialog box launcher (or press *Ctrl + D*).
3. To change the font, choose desired font. To apply font effects, click desired effect check box.
4. Click *OK*.
5. You can use the various buttons on *Paragraph* group in *Home* tab for aligning the text (*Left*, *Center*, *Right*, and *Justify*), line and paragraph spacing, inserting bullets and numbering.
6. Save the document.

Section Breaks

Sections are independent parts of the text that can be formatted independently. Section breaks are used to create sections within your MS-Word document. To see the section breaks have your *non-printing characters* turned on (use *CTRL + SHIFT + 8* or  under *Home* tab to hide/display the non-printing characters). There is **no keyboard shortcut** to insert a section break.

There are situations when you want to insert a section break in a Word document before the application does it automatically. Section breaks are very helpful when creating books or reports. For each section, you can specify formatting, such as header and footer appearance, sequence of page numbers, page orientation (portrait or landscape), and page margins.

To insert the section breaks, perform the following steps:

1. Open a word document and type some text in it (if it is newly created).
2. Place the cursor where you want the section break.
3. Click the *Page Layout* tab.
4. Click the *Breaks* button (see Fig. 2.2).
5. You will get a *Page Breaks* and *Section Breaks* window (see Fig. 2.3).

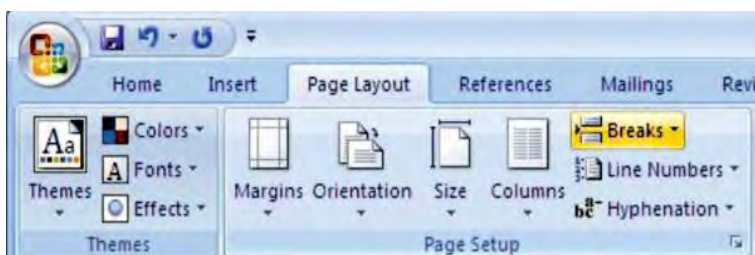


Fig. 2.2: Clicking *Breaks* button

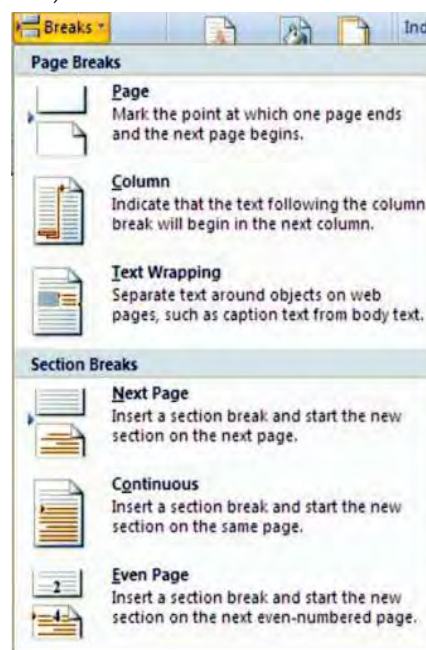


Fig. 2.3: *Page Breaks* and *Section Breaks* window

6. Now you can choose from four types of section breaks:
 - (i) *Next Page* inserts a section break and starts the new section on the next page. Useful when you start a *new chapter*.
 - (ii) *Continuous* inserts a section break and starts the new section on the same page. Useful when you want to have *different formatting within one page*.
 - (iii) *Even Page* inserts a section break and starts the new section on the next even-numbered page. If you want your chapters to *always begin* on the *even page*, use this one.
 - (iv) *Odd Page* inserts a section break and starts the new section on the next odd-numbered page. If you want your chapters to *always begin* on the *odd page*, use this one.

The *most used* is *Next Page*.

7. Pick the one you want and your section break *is in place*.
8. Repeat as many times as needed.
9. Save the document.



To display/hide the non-printing characters, use **CTRL + SHIFT + 8** or  under *Home* tab.

Mail Merge

You use mail merge when you want to create a set of documents, such as a birthday invitation that is sent to many friends and relatives or a sheet of address labels. Each letter or label has the same kind of information, yet the content is unique. For example, in letters to your friends and relatives, each letter can be personalized to address each of them by name. The unique information in each letter or label comes from entries in a data source.

To mail merge in Word 2007, perform the following steps:

1. Click *Start Mail Merge* in the *Start Mail Merge* group in the *Mailings* tab and select the type of document you would like to create (see Fig. 2.4).

For example, you can select *Letters*, *Envelopes*, or *Labels*. Or, select *Step by Step Mail Merge Wizard* for more help creating your document.

2. Click *Select Recipients* in the *Start Mail Merge* group in the *Mailings* tab to add recipients to the mailing. You can select *Type New List* (see Fig. 2.5). You can also opt to *Use Existing List* or *Select from Outlook Contacts*.



Fig. 2.4: Clicking *Start Mail Merge*



Fig. 2.5: Clicking *Type New List* in *Select Recipients*

3. In the *New Address List* box shown in Fig. 2.6, begin entering your contacts (if the predesigned fields satisfy your need otherwise you can delete or insert field(s) you want).

To delete or add fields to your mail merge document, click the *Customize Columns* button on the *New Address List* dialog box (see Fig. 2.6). The *Customize Address List* dialog box opens (see Fig. 2.7). Click *Add*, *Delete* or *Rename* to alter the field types. You can also use the *Move Up* and *Move Down* buttons to rearrange the order of the fields. When you have done all the changes, click *OK*.



Fig. 2.6: *New Address List* box to add recipients to the mail merge database

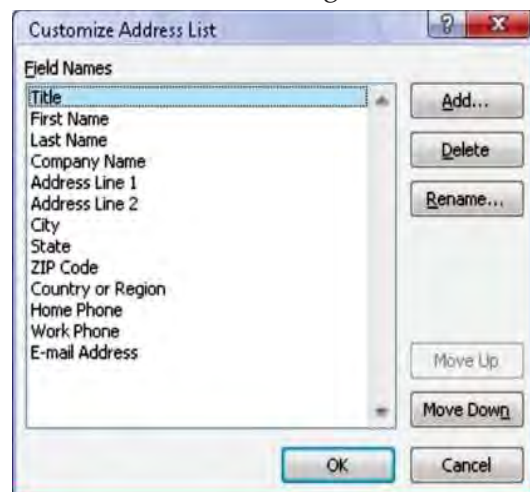


Fig. 2.7: *Customize Address List* dialog box for adding and deleting fields

After customizing the field(s), if it was required, you can use the *Tab* key to move between fields in the *New Address List* dialog box. Each set of fields is referred to as an entry. To add additional recipients, click the *New Entry* button. To delete an entry, select it and click *Delete Entry*. Click *Yes* to confirm the deletion.

After adding all your recipients, click *OK* on the *New Address List* dialog box. Name the data source and click *Save*.



Useful Tip

After typing the data in the last field of the last record, do not press the *Tab* key. If you do so, a new blank record will be created.

- To insert a field into your document, click *Insert Merge Field* in the *Mailings* tab (see Fig. 2.8). Select the field you would like to insert. The field name appears where you have the cursor located in your document.

You can edit and format the text surrounding the field. Formats applied to the field will carry over to your finished document. You can continue to add fields to your document.

- Before you print your letters, you should preview them to check for errors. In particular, pay attention to spacing and punctuation surrounding the fields. You should make sure that you have inserted the correct fields in the correct places.

To preview the letters, click *Preview Results* in *Preview Results* group in the *Mailings* tab (see Fig. 2.9). Use the arrows to navigate through the letters.

- You may notice an error in the data for one of your documents. You cannot alter this data in the merge document. Instead, you will have to fix it in the data source. To do this, click *Edit Recipient List* in the *Start Mail Merge* group in the *Mailings* tab (see Fig. 2.10).

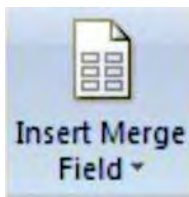


Fig. 2.8: Clicking *Insert Merge Field* for inserting a field into the document

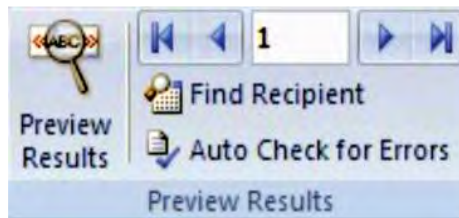


Fig. 2.9: Clicking *Preview Results* for previewing the Mail Merge letters

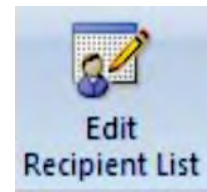


Fig. 2.10: Clicking *Edit Recipient List* for correcting errors in Mail Merge fields

In the box that opens, you can alter the data for any of your recipients. You can also limit the recipients. Simply uncheck the box next to recipients' names to omit them from the merge operation. When you have made the corrections, click *OK*.

- After you have reviewed your documents, you are ready to finalize them by completing the merge. Click the *Finish & Merge* button in the *Finish* group in the *Mailings* tab (see Fig. 2.11).

You can select *Edit Individual Documents*, *Print Documents*, or *Send E-mail Messages*. If you select *Print Documents* or *Send E-mail Messages*, you will be prompted to enter a range.

- Click *Edit Individual Documents* at the drop down list.

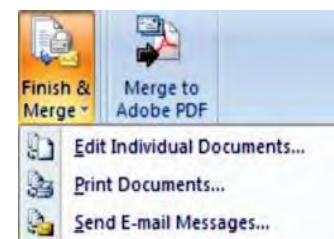


Fig. 2.11: Clicking *Finish & Merge* for finalizing the Mail Merge documents

9. At the *Merge to New Document* dialog box, click the *OK* button. The letters are merged with the records and displayed in a new document.
10. Save the merged letters in the normal manner and name the document.

Header & Footer

Headers and footers are areas in the top, bottom, and side margins (the blank spaces outside the printing area on a page) of each page in a document. You can insert or change text or graphics in headers and footers. For example, you can add page numbers, the time and date, a company logo, the document title or file name, or the author's name.

You can also specify different headers and/or footers for the first page and the rest of the document. Or, if you insert section breaks, you can even give every single page in your Word document a different header and footer!

To insert header and footer in Word 2007, perform the following steps:

1. Open an existing Word document or create a new one and type some text in it.
2. Click the *Insert* tab.
3. Click *Header* button in the *Header & Footer* group (see Fig. 2.12).



Fig. 2.12: Clicking Header button

4. Click desired option at drop-down gallery (see Fig. 2.13). It inserts a header in the document.



Fig. 2.13: Inserting Header in a document





You can edit the header by clicking the *Insert* tab, clicking the *Header* button in the *Header & Footer*, and then clicking *Edit Header* at the drop-down list.

5. Click the *Close Header and Footer* button in *Close* group in *Design* tab (see Fig. 2.14) or double-click in the body of the document. This makes the document active and dims the header. Now you can edit your document text.
6. To insert footer, click the *Insert* tab. Click *Footer* button in the *Header & Footer* group. Click desired option at drop-down gallery. Footer is inserted in the document.
7. To exit the footer, double-click in the body of the document.
8. Scroll through the document and observe how the header and footer appear on each page.
9. Save the document.



Fig. 2.14: Clicking *Header and Footer* to exit header



You can work with headers and footers the same way you work with the body of your document. You can click on buttons in tabs. This means you can change the font and formatting. You can also copy text from the body of your document and paste it into a header or footer or vice versa.

● Presentation Software

Overview

Presentation software such as MS-PowerPoint 2007 allows users to create slide shows that can be viewed on the computer or projected onto a large screen. The shows can include clipart, graphs and charts, photos, drawings, video clips, sound, and text. The slide transition effects provide the attention-getting movement those appeals to sales people and teachers.

Preparing a Presentation

You can prepare a presentation using a template provided by PowerPoint or create your own presentation. Preparing a presentation consists of general steps such as creating and editing slides; adding enhancements to slides; and saving, running, previewing, printing, and closing a presentation.

To start PowerPoint 2007,

Click *Start* → *All Programs* → *Microsoft Office* → *Microsoft Office PowerPoint 2007*

A blank presentation namely *Presentation1* is created. Figure 2.15 shows the PowerPoint 2007 window screen elements.

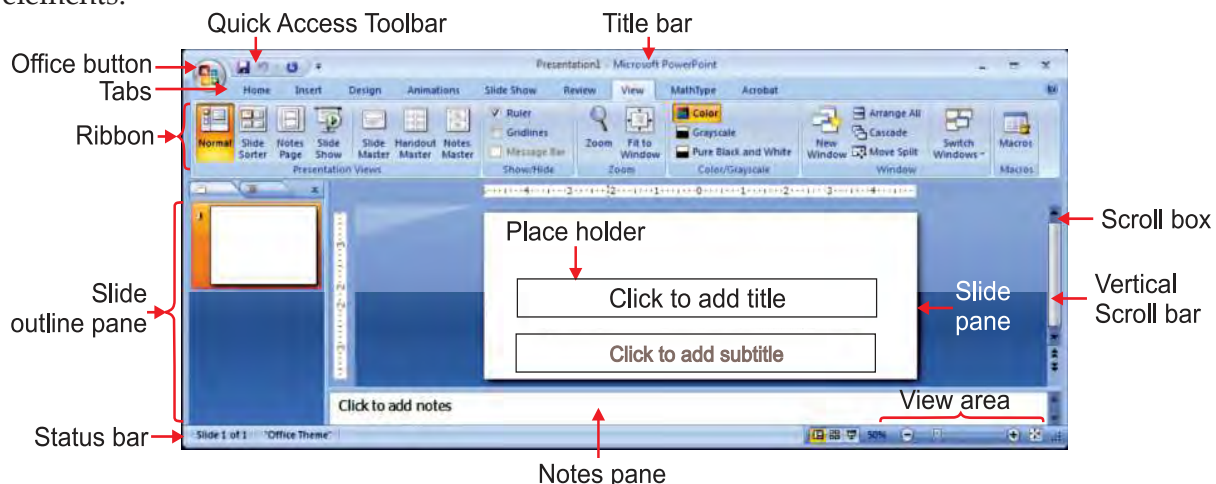


Fig. 2.15: PowerPoint window screen elements

To create and run the presentation with Installed Template, perform the following steps:

1. Click *Office Button*.
2. Click *New*.
3. Click *Installed Templates* option.
4. Double-click the desired template.
5. To run the presentation, click the *Slide Show* tab and then click *From Beginning* button in the *Start Slide Show* group.
6. Read the information in the first slide and then click the left mouse button. Continue reading the information in the slides and clicking the left mouse button to advance to the next slide. When a blank screen displays, click the left mouse button to end the slide show.
7. Save the presentation by clicking the *Save* button on the *Quick Access* toolbar.
8. Close the presentation by clicking the *Office Button* and clicking *Close* at the drop-down list.

To create your own presentation, perform the following steps:

1. Click *Design* tab.
2. Click desired theme in *Themes* group.
3. To add slide, click *Home* tab.
4. Click *New Slide* button. Enter some text and figures on the slide.
5. Continue to add more slides if you want.
6. To save the presentation, click the *Save* button on *Quick Access* toolbar.
7. The *Save As* dialog box appears. Identify the location to save a file and type presentation file name.
8. Press *Enter* key.



A *placeholder* is a location on a slide marked with a border that holds text or an object. You can use keys on the keyboard to move the insertion point to various locations within a placeholder in a slide.

To add transition and transition sound to all slides in presentation, perform the following steps:

1. Open the presentation.
2. Click *Animations* tab.
3. To add transition, click *More* button at right side of transition icons and then click desired transition at drop down gallery. Finally click *Apply To All* button.
4. To add transition sound, click *Transition Sound* button arrow and then click desired transition at drop down gallery. Finally click *Apply To All* button.
5. Save the presentation.

To print the presentation, perform the following steps:

1. Open the presentation.
2. Click *Office Button*.
3. Point to the *Print* option, and then click *Print Preview*.
4. Click the *Print* button in the *Print* group in the *Print Preview* tab.
5. At the *Print* dialog box, click *OK*.
6. Click the *Close Print Preview* button.

7. Switch on the connected printer. Click *Print*.
8. At *Print* dialog box, specify how you want the presentation printed.
9. Click *OK*.

Editing and Formatting Slides

You can edit and format slides and slide elements to customize and personalize the presentation. Editing can include functions such as rearranging and deleting slides; cutting, copying, and pasting text; changing the font, paragraph alignment, and paragraph spacing; and changing the design theme, theme color, and theme font. You can add insert clipart images, pictures in presentations. Customization of presentations by formatting of objects and text boxes is also possible in PowerPoint 2007.

To delete and move slides in PowerPoint 2007, perform the following steps:

1. Open the presentation.
2. To delete slide, click *Slide Sorter* button in view area on *Status* bar. Click desired slide. Press the *Delete* key.
3. To move slide, click *Slide Sorter* button in view area on *Status* bar. Drag slide to desired location.
4. Save the presentation.

To cut/copy and paste text in slides, perform the following steps:

1. Open the presentation.
2. Select a slide.
3. To cut and paste text, select the text and click *Cut* button in the *Clipboard* group in the *Home* tab. Position insertion point at the desired location and click the *Paste* button in the *Clipboard* group.
4. To copy and paste text, select the text and click *Copy* button in the *Clipboard* group in the *Home* tab. Position insertion point at the desired location and click the *Paste* button in the *Clipboard* group.
5. Save the presentation.

To apply fonts and font effects, perform the following steps:

1. Open a presentation.
2. Select the text.
3. To change the font and font size, click the desired button in the *Font* group in the *Home* tab.
4. To apply font effects such as bold, italic, underline, case, color etc., click the desired button in the *Font* group in the *Home* tab.
5. Save the presentation.



You can apply font by using the *Font* dialog box that can be opened by clicking the *Font* group dialog box launcher in the *Font* group in the *Home* tab.

To insert an image or clipart in a presentation, perform the following steps:

1. Open a presentation.
2. Click the slide on which you want to insert the image or clipart.
3. Click *Insert* tab.
4. Click *Picture* button or *Clip Art* button.
5. At *Insert Picture* dialog box, navigate to desired folder or at *Clip Art* task pane, type desired category, and then press *Enter* key.

6. Double-click the desired picture file or clip art image. Arrange the picture or clip art in the slide and resize it if necessary.
7. Save the presentation.

To insert text box in a presentation, perform the following steps:

1. Open the presentation.
2. Click *Insert* tab.
3. Click *Text Box* button.
4. Click in the slide or drag to create text box.
5. Save the presentation.

● Spreadsheets

Overview

Spreadsheet software can be used for both simple and complex calculations. Current versions such as MS-Excel 2007 can also support graphics and perform some database tasks, such as sorting.

Because the formulas are used to do calculations, you can ask, “If I spend only Birr 100 per day on coffee in my office instead of Birr 500, how much money will I save at the end of the month?” When you replace one value with another, the program will recalculate your budget automatically.

Creating Workbooks

We know that a *document* in MS-Excel is made of one or more *worksheets*. A document in Excel is called a *workbook*. In other words, a workbook is the group of worksheets that belong to the same document.

To start Excel 2007,

Click *Start* → *All Programs* → *Microsoft Office* → *Microsoft Office Excel 2007*

Figure 2.16 shows the Excel 2007 screen elements.

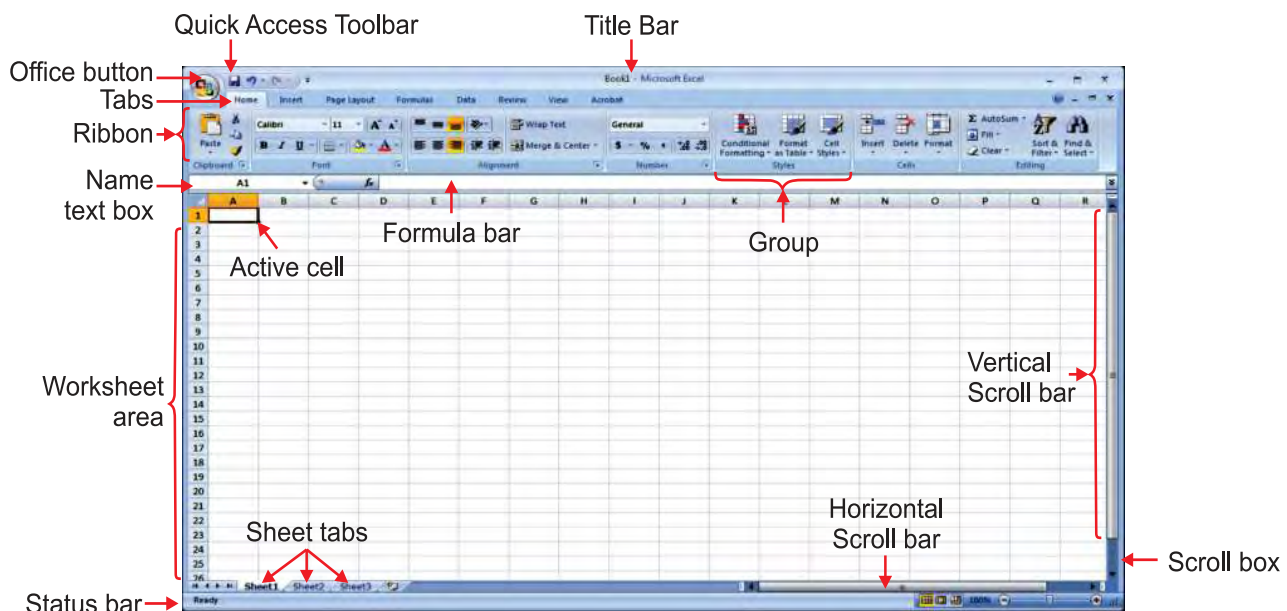


Fig. 2.16: Excel 2007 screen elements

When you start MS-Excel, it directly creates a workbook for you. Each worksheet in Excel contains 16,384 columns and 1,048,576 rows. An Excel Workbook initially contains three worksheets labeled *Sheet1*, *Sheet2*, and *Sheet3*. You can use that workbook as per your need. At any time, you can create a new workbook.

A worksheet is primarily made of cells that are used to enter data. There are different types of values that can be entered in a cell. We can enter labels in columns or rows to create the worksheet layout. To put a value in a cell, click that cell and type the value you want. We can create formulas to add, subtract, multiply, or divide to calculate the desired results.



To create a workbook based on the templates provided by MS-Excel, click the *Office Button* and click *New*. This would display the *New Workbook* dialog box. In the left frame, under *Templates*, you can click a category of your choice.

Editing and Formatting Worksheets

The contents of a cell can be edited directly within the cell or in the *Formula* bar. Clearing a cell can involve removing the cell contents, format, or both. The *Spelling* feature is a useful tool for correcting typing errors within a worksheet. After completing a spelling check, you should proofread the worksheet since the spelling checker will not highlight all errors and cannot check the accuracy of values.

To edit a cell in Excel 2007, perform the following steps:

1. Open the worksheet.
2. Double-click the cell to be edited.
3. Insert and/or delete text.
4. Press *Enter* key or click another cell.
5. Save the worksheet.

To spell check in Excel 2007, perform the following steps:

1. Open the worksheet.
2. Click *Review* tab.
3. Click *Spelling* button.
4. Click *Ignore Once*, *Ignore All*, *Change*, or *Add to dictionary* as needed.
5. Save the worksheet.

You can insert/delete rows and columns using the *Insert/Delete* button in the *Home* tab. Also, the contents of a cell or the range of cells can be moved and copied to another location in the worksheet.

To insert/delete rows and columns in Excel 2007, perform the following steps:

1. Open the worksheet.
2. Select the rows or columns.
3. Click *Insert/Delete* button on the *Home* tab.
4. Click *Insert Sheet Rows/Insert Sheet Columns*.

Or

Click *Delete Sheet Rows/Delete Sheet Columns*.

5. Save the worksheet.

To move or copy cell(s) contents in Excel 2007, perform the following steps:

1. Open the worksheet.
2. Select the cell or range of cells, *i.e.*, source cell(s).

3. Click *Cut* or *Copy* button.
4. Select starting destination cell.
5. Click *Paste* button.
6. Save the worksheet.

Excel allows you to apply formatting attributes and add color to enhance the appearance of the worksheet and draw a reader's attention to important titles, totals, or other results.

To change font, font size and font attributes, perform the following steps:

1. Open the worksheet.
2. Select cell(s).
3. Click *Font* button arrow or *Font Size* button arrow or desired attribute button (bold, italic, underline etc.).
4. Click desired font or desired size.
5. Deselect cell(s).
6. Save the worksheet.




1. You can use the *Format Cells* dialog box (press *Ctrl + Shift + F* to open the dialog box) from the *Font* tab selected to change the font, font size, font style, and color of text.
2. Click *Undo* button on the *Quick Access toolbar* or press *Ctrl + Z* to reverse the last action. Click *Redo* button on the *Quick Access toolbar* or press *Ctrl + Y* to redo the last action. Excel 2007 stores up to 100 actions that can be undone or redone and you can repeat actions as many times as you need. Some actions (such as *Save*) cannot be reversed with *Undo*.

Using Functions and Creating Charts

Excel's built-in functions make the task of writing formulas easier. The functions are grouped by category such as statistical, financial, data, and logical. The *Insert Function* dialog box is available to assist us in locating and creating function. Charts can be easily created to emphasize or compare data sets.

To use the built-in functions in Excel 2007, perform the following steps:

1. Open the worksheet.
2. Make the desired cell active.
3. Click the *AutoSum*  button arrow in the *Editing* group in the *Home* tab.
4. Click the desired function.
5. Type or select the argument range.
6. Press *Enter* key or click *Enter* button on the *Formula Bar*.
7. Save the worksheet.

To create charts in Excel 2007, perform the following steps:

1. Open the worksheet.
2. Select the cells containing the data you want to chart.
3. Click *Insert* tab.
4. Click *Column/Pie/Bar* button in the *Charts* group.
5. Click desired type chart.
6. Move and/or resize as required.
7. Apply design options.
8. Save the worksheet.

If condition with AND or OR

From Grade 10, you know that “IF” function of Excel is a conditional construct that displays one or the other value in a cell based on the condition applied. If the condition is true, one value is displayed otherwise the other value is displayed.

The syntax of IF function is:

IF (Condition, Value if True, Value if False)

The three items between the parentheses are the arguments of IF function. Here, *Condition* is what you want to test for.

Value if True is what you want to do if the answer to the first argument is TRUE.

Value if False is what you want to do if the answer to the first argument is FALSE.

You can use the AND, OR, NOT, and IF function to create conditional formulas.

AND(): It returns TRUE if all its arguments are TRUE; returns FALSE if one or more argument is FALSE. The syntax of AND()function is:

AND(logical1, logical2, ...)

Here, logical1, logical2, ... are 1 to 255 conditions you want to test that can be either TRUE or FALSE.

For example,

=AND(TRUE,FALSE) will result FALSE.

=AND(3+4=7,3+5=8) will result TRUE.

Now, open a new spreadsheet, and perform the following steps:

1. Widen the B column, as we will be putting a message in cells B2 and B3.
2. Now click in cell A1 and type *Data*, click in cell B1 and type *Description(Result)*.
3. Type the numbers 40 and 105 in cells A2 and A3 respectively. Now, type the formulas
=AND(1<A2,A2<100) and
=IF(AND(1<A3,A3<100),A3,"The value is out of range")
in cells B2 and B3 respectively.

Press *Enter* key to see the results. Figure 2.17 shows the result of these formulas.

	A	B	C	D	E	F	G
1	Data	Description(Result)					
2	40	TRUE					
3	105	The value is out of range					
4							

Fig. 2.17: Use of AND

In the above example, make sure that all the commas and double quotes are in the correct place; otherwise Excel will give an error message.

OR(): It returns TRUE if at least one of the arguments is TRUE; returns FALSE if all arguments are FALSE. The syntax of OR() function is:

OR(logical1, logical2,...)

Here, logical1, logical2,... are 1 to 255 conditions you want to test that can be either TRUE or FALSE.

For example,

=OR(TRUE) will result TRUE.

=OR(3+4=8,3+5=9) will result FALSE.

Again, open a new spreadsheet, and perform the following steps:

1. Widen the B column, as we will be putting a message in cells B2 and B3.
2. Now click in cell A1 and type *Data*, click in cell B1 and type *Description(Result)*.
3. Type the numbers 40 and 105 in cells A2 and A3 respectively. Now, type the formulas
=OR(1>A2,A2>100) and
=IF(OR(1<A3,A3<100),A3,"The value is out of range")
in cells B2 and B3 respectively.

Press *Enter* key to see the results. Figure 2.18 shows the result of these formulas.

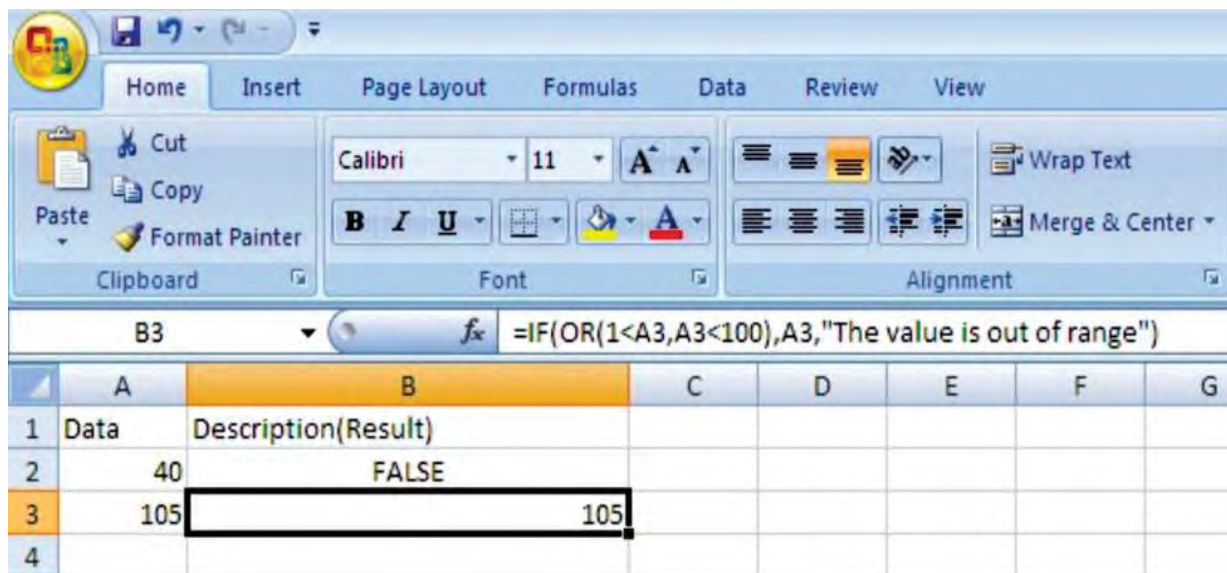


Fig. 2.18: Use of OR

ACTIVITY 2.1

USE APPROPRIATE SOFTWARE TOOLS *e.g.*, SPREADSHEET PACKAGE TO SOLVE A MATHEMATICAL PROBLEM

In small groups, the students will use appropriate software tools *e.g.*, spreadsheet package to solve mathematical problem.

Problem: Suppose we want to find the distance traveled if an athlete runs around a football field five, six and seven times. It is given that the length of the field is 109.80 meters and its breadth is 48.80 meters.



Formula Used: The distance traveled is simply the field’s perimeter multiplied by the number of laps. The perimeter of a rectangular field is the sum of the distances of each side of the field, or

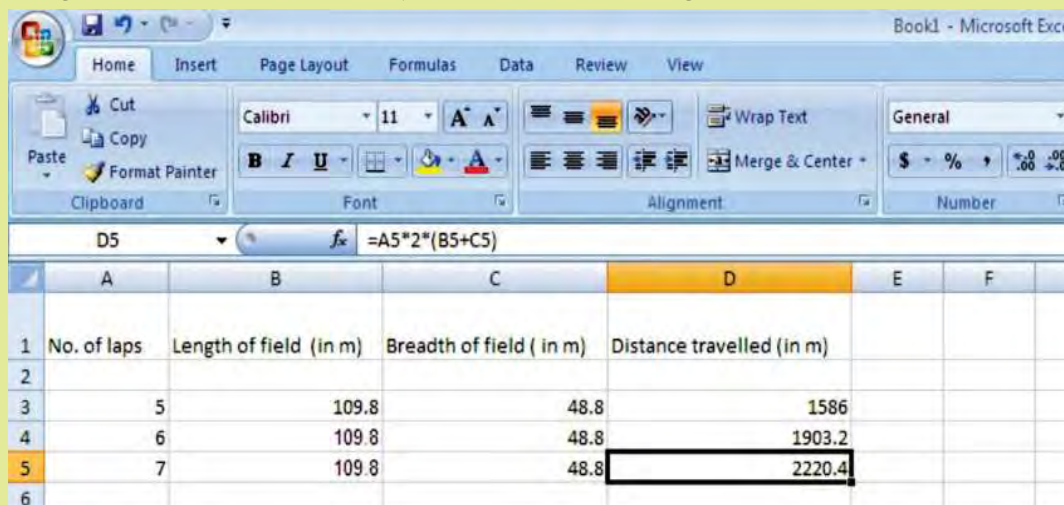
$$\text{Perimeter} = 2 \times (\text{Length} + \text{Breadth}) \text{ units}$$

Using Spreadsheet Package to Solve the Problem

Excel is very useful when solving algebraic equations. The program, however, will not actually perform itself any algebraic operations; you must supply the proper formula.

To solve the given problem using Excel 2007, perform the following steps:

1. Start MS-Excel 2007.
2. Open a new worksheet. Widen the cells so that the data and results may be visible properly.
3. Type the data in the cells (see Fig. 2.19).
4. Click cell D3. Type the formula $=A3*2*(B3+C3)$ in *Formula Bar* and press *Enter* key.
5. Excel calculates and displays the result in cell D3 (see Fig. 2.19).
6. Copy and paste the formula of cell D3 in cells D4 and D5 to get the other two results in cells D4 and D5 (see Fig. 2.19). The worksheet may look like the following:



	A	B	C	D	E	F
1	No. of laps	Length of field (in m)	Breadth of field (in m)	Distance travelled (in m)		
2						
3	5	109.8	48.8	1586		
4	6	109.8	48.8	1903.2		
5	7	109.8	48.8	2220.4		
6						

Fig. 2.19: Solving a mathematical problem using Excel 2007

7. Save the worksheet for future use.
8. Close MS-Excel 2007.

● Publishing Software

Overview

Desktop publishing programs are used to create professional quality documents that combine text and other visual elements in non-linear arrangements. MS-Publisher 2007 is designed specifically to handle the various desktop publishing needs of individuals and small organizations.

Publisher makes it easy to efficiently create a wide range of publications, from simple flyers (one-page, one-sided publications that are designed to be read at a glance) to complex brochures. Even novice users are able to work productively in Publisher.

Creating New Publication

When you first start Publisher 2007, you see the *Getting Started with Microsoft Office Publisher 2007* window, from which you can start a new publication or open an existing one.

To start Publisher 2007,

Click *Start* → *All Programs* → *Microsoft Office* → *Microsoft Office Publisher 2007*

The *Getting Started with Microsoft Office Publisher 2007* window opens (see Fig. 2.20).



Fig. 2.20: Publisher 2007 Getting Started window

To create and save a publication based on a template, perform the following steps:

1. Choose a publication type from *Publication Types* in the left pane of the *Getting Started with Microsoft Office Publisher 2007* window.
2. In the *Publication Types* list, click the publication category you want.
3. In the right pane, set the publication options and then click *Create*.

A publication based on the selected template opens in a new Publisher program window (see Fig. 2.21)

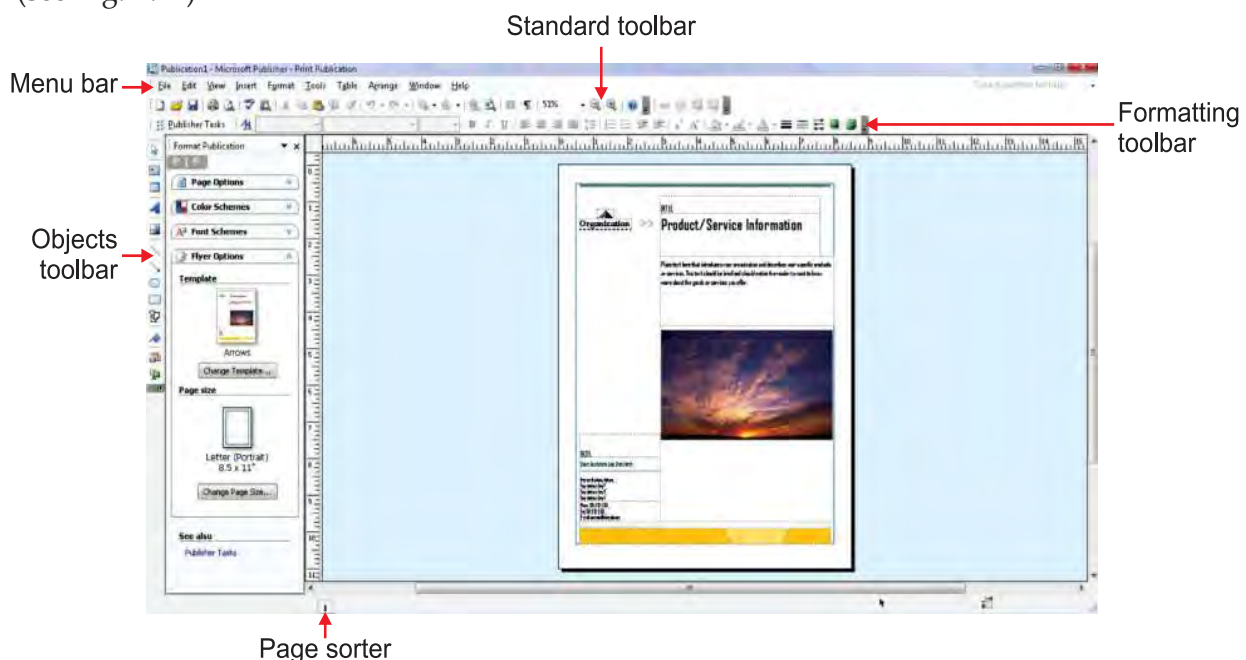


Fig. 2.21: Publisher 2007 program window screen elements



The Publisher program window displays all the tools you need to customize the publication. You can perform most tasks by clicking commands on menus or buttons on toolbars. Common tasks are available in the *Format Publication* task pane to left of the publication workspace.

4. To save a publication, click *Save As* on the *File* menu.
5. Click the *New Folder* button on the toolbar of the *Save As* dialog box.
6. Type a name for the folder, press *Enter* key and name the file if necessary.
7. Click *Save*.



Useful Tip

If you are already working on a publication, then you can display the *Getting Started with Microsoft Office Publisher 2007* window by clicking *New* on the *File* menu (but not by clicking the *New* button on the Standard toolbar).

To open an existing publication, perform the following steps:

1. Open Publisher 2007.
2. In the *Recent Publications* pane of the *Getting Started with Microsoft Office Publisher 2007* window, click *From File*.
3. In the *Open Publication* dialog box, browse to and select the file you want to open.
4. Click *OK*.

To print preview and print a publication, perform the following steps:

1. Open the publication you want to print.
2. To print preview it, on the *Standard* toolbar, click the *Print Preview* button. Click *Close* to Close Print Preview.
3. To print it, on the *File* menu, click *Print*.
4. In the *Print* dialog box, make the settings as per your need.
5. Click *OK*.
6. Click *Close* on the *File* menu.



Useful Tip

If several publications are open and you want to quit Publisher, you do not have to close the publications first. You can simply click *Exit* on the *File* menu.

To create a business card, edit a logo and add it to the Content Library, perform the following steps:

1. In the *Publications Types* list, click *Business Card*. In the center pane, click the design you want.
2. In the right pane, under *Customize*, select the *Color scheme*, *Font scheme*, and *Business Information*.
3. Under *Options*, select the *Page size* and whether to include a logo image. Then click *Create*.
4. On the *Objects* toolbar, click the *Design Gallery Object* button, and in the left pane of the *Design Gallery*, click *Logos*. If necessary, enlarge the gallery window by dragging its border so that you can see the logos in the center pane.

5. In the center pane, click the style of logo you want to create, set any other options necessary, and then click *Insert Object*.
6. Now drag the logo to the area of the publication you want.
7. On the *Arrange* menu, click *Ungroup*, and then click a blank area of the publication to release the selection and enable editing of the individual logo elements.
8. Finally make any edits and add any images you want to the logo. Then select the elements in the logo (hold down the *Shift* key as you click each item), and group them.

● Database Management

Overview

Database software such as MS-Access 2007 is designed to keep track of information. They allow you to rearrange it alphabetically, numerically, or chronologically. Or you can filter the data to display only those items that match your criteria, such as names of students who scored more than 90% marks in Grade 10.

Database software can easily do calculations, such as showing monthly subtotals and an annual total for school expenses, but complex mathematical calculations should be done using the spreadsheets.

Table 2.1 shows some database objects.

Table 2.1: Some Database Objects

<i>Object</i>	<i>Description</i>
Table	Organizes data in fields (columns) and records (rows). A database must contain at least one table. The table is the base upon which other objects are created.
Query	Used to display data from a table that meets a conditional statement and/or to perform calculations. For example, display only those records in which the city is Addis Ababa.
Form	Allows fields and records to be presented in a different layout than the datasheet. Used to facilitate data entry and maintenance.
Report	Prints data from tables or queries.

Table 2.2 shows the basic elements of a database.

Table 2.2: Basic Elements of a Database

<i>Element</i>	<i>Description</i>
Field	A single component of information about a person, place, item, or object.
Record	All fields related to one logical unit in the table such as a student, teacher.
Table	All of the related records for one logical group.
Database	A file containing related tables and objects.



A *primary key* is a field, which provides a unique identification for each record in the table. The primary key must contain unique data for each record.

Creating Database

A database is comprised of a series of objects used to enter, manage, and view data. In a database the data is organized in the form of tables. A table contains information for related items such as students, employees, and inventory etc., broken down into individual units of information. Access 2007 is different from the other applications within the Microsoft Office suite 2007.

To start Access 2007,

Click *Start* → *All Programs* → *Microsoft Office* → *Microsoft Office Access 2007*

The *Getting Started with Microsoft Office Access* window opens (see Fig. 2.22).



Fig. 2.22: Getting Started with Microsoft Access screen

Click the *Office Button* and then click *Open* at the drop-down menu, or click the *More* hyperlink in the *Open Recent Database* pane or click the name of an existing database in the *Open Recent Database* pane.

The Access 2007 screen appears (see Fig. 2.23).

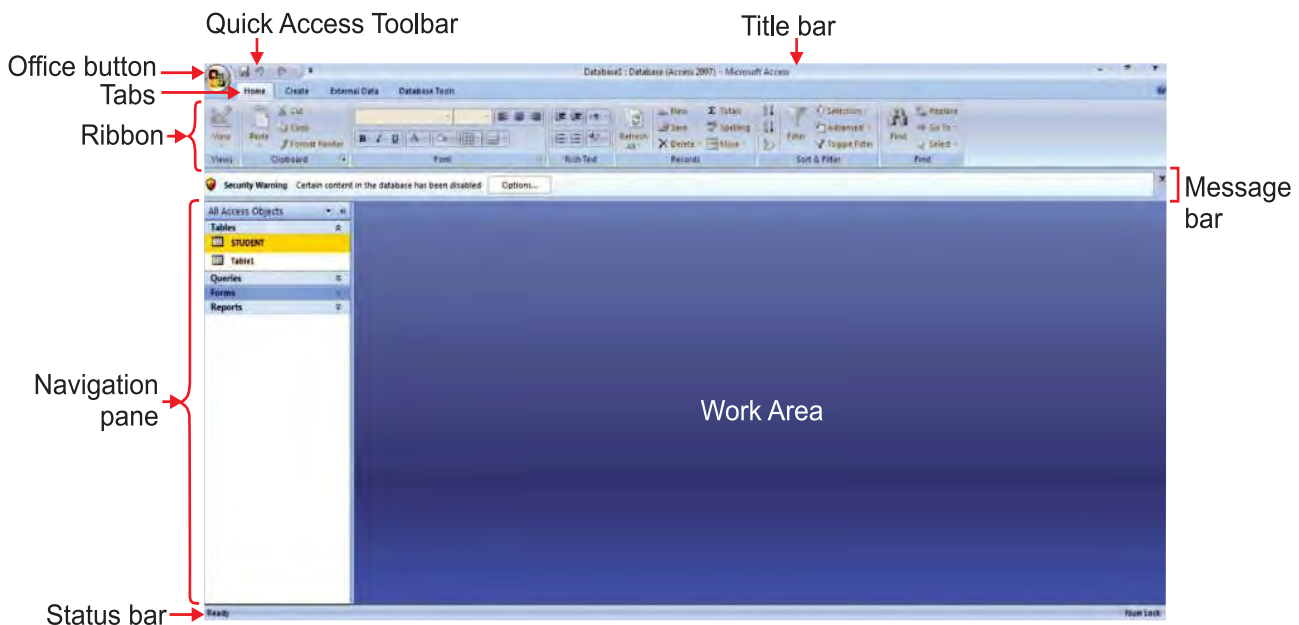


Fig. 2.23: Access 2007 screen elements

When you create or open a database, it opens in a database window. The navigation pane displays the names of objects (*e.g.*, Tables, Queries, Forms, and Reports etc.).

To open and close the existing objects in Access 2007, perform the following steps:

1. Start Access 2007.
2. Open the database file.
3. Double-click object name in navigation pane (it displays the names of the objects within the database grouped by tables).
4. Click the *Close* button at the top of right corner of the work area.
5. Click the *Office Button* and then click *Close Database* at the drop-down menu.

To add records to an existing table in Datasheet view, perform the following steps:

1. Open the table.
2. Click the *New* (blank) record button in the *Record Navigation* bar or click *New* button in the *Records* group in the *Home* tab.
3. Type data in the fields. When you press *Tab* or *Enter* key after typing the last field, the record is saved automatically.
4. Close the table.

To add records to an existing table in Form view, perform the following steps:

1. Open the form.
2. Click the *New* (blank) record button in the *Record Navigation* bar or click *New* button in the *Records* group in the *Home* tab.
3. Type data in the fields. When you press *Tab* or *Enter* key after typing the last field, the record is saved automatically.
4. Close the table.

To delete records in a datasheet and form, perform the following steps:

1. Open the table datasheet or form.
2. Make the record to be deleted active.
3. Click *Delete* button in the *Records* group in the *Home* tab.
4. Click *Yes*.

1. Always back up the database file before deleting record(s).

2. Check that you are deleting the correct record before clicking *Yes*. Click *No* if you have selected the wrong record by mistake.

3. The field values in ID (when you create a new table by adding records, Access 2007 automatically includes a field named ID that is defined as the primary key) are not dynamic—they do not change once the number has been assigned in the field. The numbers in the navigation bar are dynamic and update to reflect the current number of records that exist in the table.



To sort records by single field, perform the following steps:

1. Open the table to be sorted.
2. Click in the column by which you want to sort.

3. Click *Ascending* or *Descending* button in the *Sort & Filter* group in the *Home* tab.
4. Close the table. Access saves the sort order when the table is closed.

To create a table by adding records, perform the following steps:

1. Click the *Create* tab.
2. Click *Table* button in the *Tables* group.

A blank datasheet appears. Notice that a column with the field name *ID* has been created automatically. Access 2007 creates *ID* as an AutoNumber field in which the field value is assigned automatically as you enter each record.

3. Type records in blank datasheet.
4. Double-click *Field1*.
5. Type desired field name.
6. Press the *Enter* key or click outside field.
7. Repeat Steps 4–6 for remaining columns of the table.
8. Click the *Save* button on the *Quick Access* toolbar.
9. In the *Save As* dialog box, type the name of the table.
10. Press the *Enter* key or click *OK*.

To create a table in Design View in Access 2007, perform the following steps:

1. Click the *Create* tab.
2. Click *Table Design* button in the *Tables* group.
3. Type the field names, change data types, add descriptions, or modify other field properties, as you want.
4. Assign primary key (make active desired primary key field and click *Primary Key* button in the *Tools* group in the *Table Tools Design* tab).
5. Click the *Save* button on the *Quick Access toolbar*.
6. In the *Save As* dialog box, type the name of the table.
7. Press the *Enter* key or click *OK*.

Creating Queries and Forms

Queries and forms are objects based on tables and are created to extract, view, and maintain data. Queries can be used to view specific fields from tables that meet a specific criterion. Forms provide a user-friendly interface for entering, editing, deleting, and viewing records in tables.

To create a query in Design view in Access 2007, perform the following steps:

1. Click the *Create* tab.
2. Click the *Query Design* button in the *Other* group.
3. Double-click the required table in *Show Table* dialog box.
4. Close the *Show Table* dialog box.
5. Add the required field names from the field list box to columns in the design grid.
6. Click the *Save* button.
7. Type the query name and click *OK*.

8. Click the *Run* button in the *Results* group in the *Query Tools Design* tab. The result is displayed in *Datasheet view*.
9. Close the query.

To create a form in using Form Wizard in Access 2007, perform the following steps:

1. Click the *Create* tab.
2. Click *More Forms* button in the *Forms* group.
3. Click *Form Wizard* at the drop-down list.
4. Choose the table for which you want to create form.
5. Select fields to include in the form.
6. Click *Next*.
7. Choose the form style.
8. Click *Next*.
9. Type the form title.
10. Click *Finish*. The completed form appears in *Form view* in the work area.
11. Close the form.

Main/Sub Reports

A sub report is a report that is inserted in another report. When you combine reports, one of them must serve as the main report that contains the other report. A main report is either *bound* or *unbound*. A bound report is one that can display data and has a table or query specified in its *Record Source* property. An unbound report is one that is not based on a table or query (that is, the *Record Source* property of the report is empty).

We create reports to generate professionally designed printouts of information from tables or queries.

To create report using Report tool, perform the following steps:

1. Click Table object in the navigation pane. Here, we select STUDENT table.
2. Click *Create* tab (see Fig. 2.24).

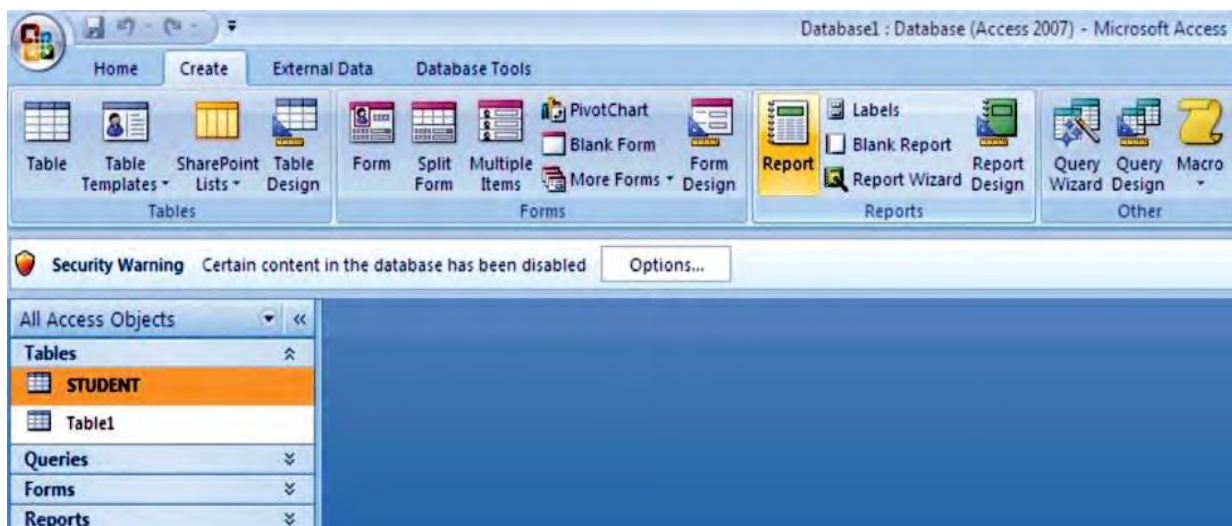


Fig. 2.24: Clicking *Create* tab



A table or query must be selected first before clicking the *Report* button (see Fig. 2.24).

3. Click the *Report* button in the *Reports* group. A report is generated (see Fig. 2.25).

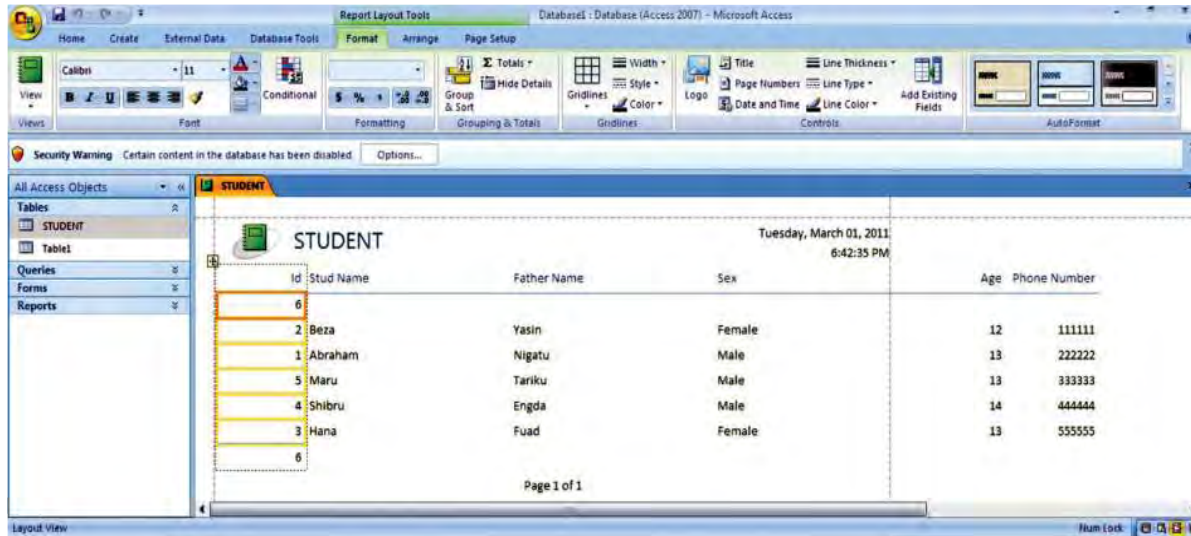


Fig. 2.25: A created report

4. Save the report.

To insert a subreport in a report, perform the following steps:

1. Open the main report in *Design view*. Then double-click the *Report Selector* to display the *Property sheet* pane (see Fig. 2.26).

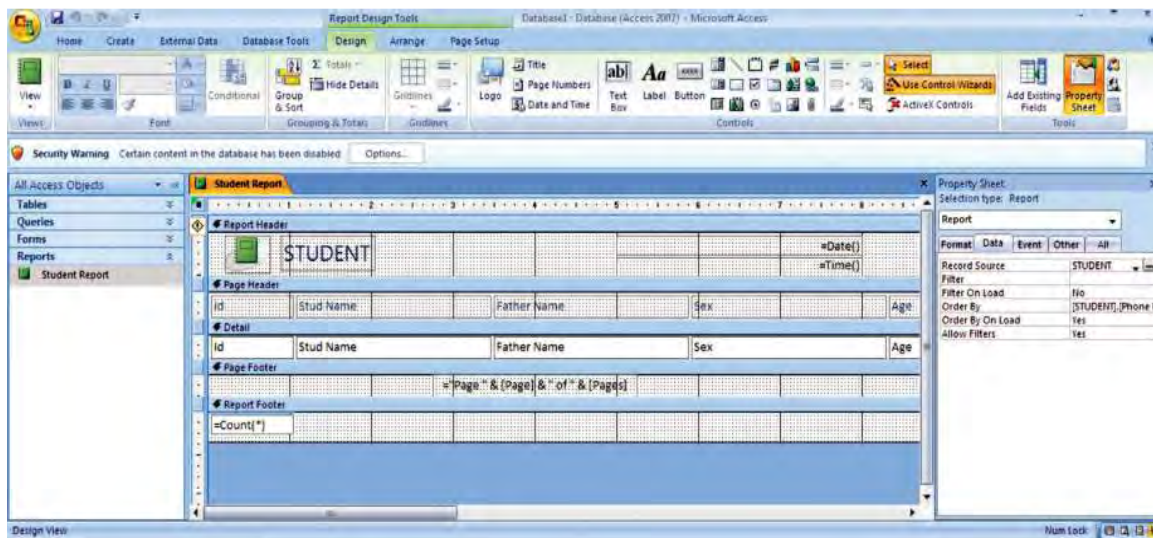



Fig. 2.26: Preparing to create a subreport

2. On the *Data* tab, click the *Record Source* arrow, and select the table or query on which the subreport will be based.
3. On the *Design* contextual tab, in the *Controls* group, click the *Subform/Subreport* button , and then click a point on the main report. The *SubReport Wizard* appears (see Fig. 2.27).

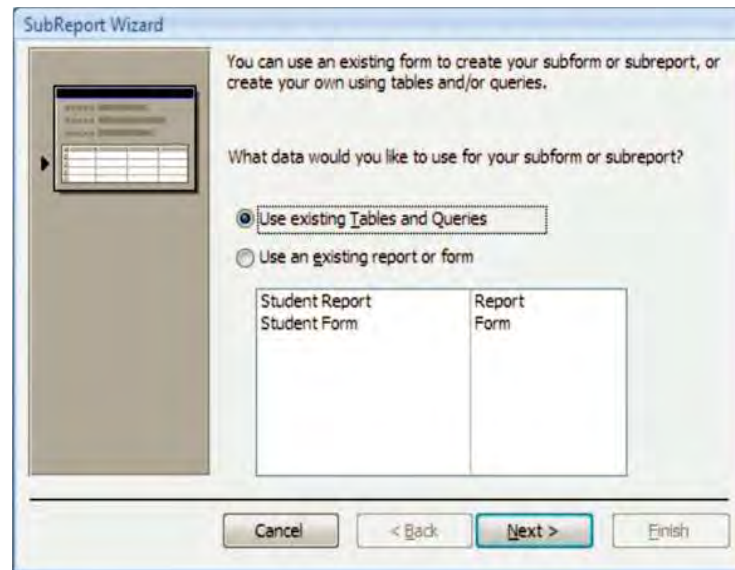


Fig. 2.27: SubReport Wizard

4. In the *SubReport* wizard, with the *Use existing Tables and Queries* option selected, click *Next*.
5. In the *Tables/Queries* list, click the source you want to use.
6. In the *Available Fields* list, double-click the fields you want to move them to the *Selected Fields* list, and then click *Next*.
7. Click *Next* and then click *Finish*. The subreport will be inserted in the report (see Fig. 2.28).

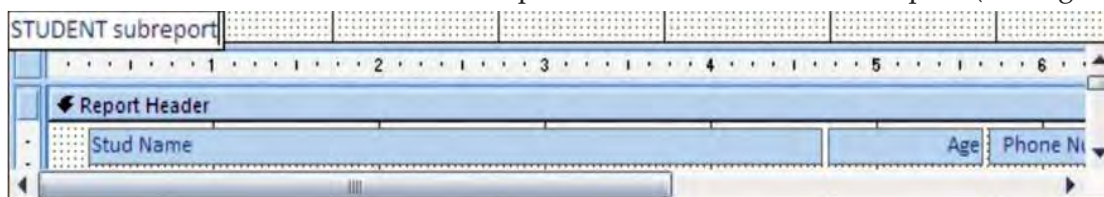


Fig. 2.28: A subreport

8. Double-click on the subreport in the *Navigation Pane* to see its contents (see Fig. 2.29).

Stud Name	Age	Phone Number
Abraham	13	222222
Beza	12	111111
Hana	13	555555
Shibru	14	444444
Maru	13	333333

Fig. 2.29: Contents of the subreport

9. Save the subreport.

Group Section

Grouping allows you to separate groups of records visually and to display introductory and summary data for each group.

Group Records in the Report Wizard

Grouping lets you organize and arrange records by group, such as Sex (male or female) or by Region etc. Groups can be nested so that you can easily identify the relationships among the groups and find the information you want quickly. You can also use grouping to calculate summary information, such as totals and percentages.

To create group records in a report, perform the following steps:

1. Start MS-Access 2007. Click the table name in the Navigation pane. Here, we select STUDENT.
2. On *Create* tab, in the *Reports* group, click *Report Wizard*. Access starts the *Report Wizard* (see Fig. 2.30).

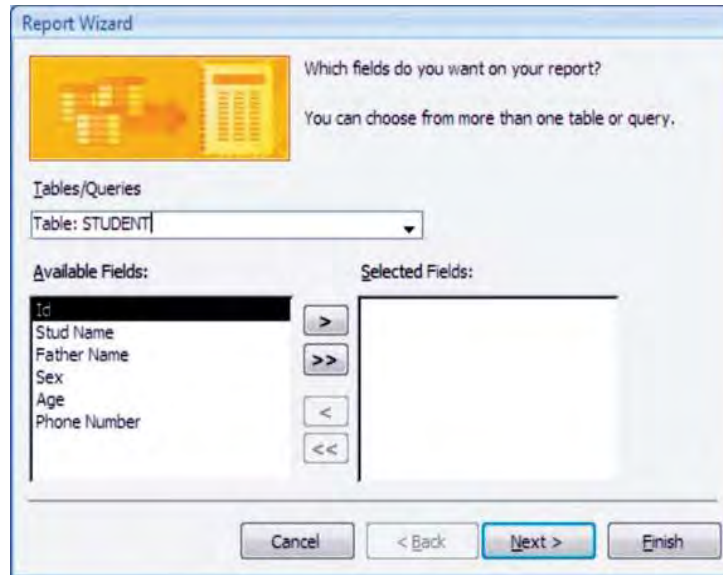


Fig. 2.30: Report Wizard

3. Select the desired fields.
4. Click *Next*.
5. On the page of the *Report Wizard* that asks *Do you want to add any grouping levels?*, click one of the field names in the list, and then click *Next* (see Fig. 2.31). To add grouping levels, double-click any of the field names in the list to add them to your report.

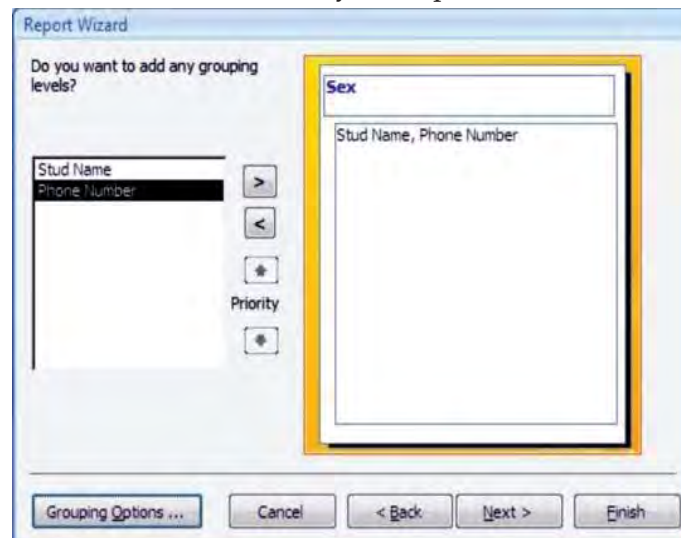


Fig. 2.31: Adding grouping

You can also remove a grouping level by double-clicking it in the page display on the right side of the dialog box. Use the arrow buttons to add and remove grouping levels, and adjust the priority of a grouping level by selecting it and clicking the up or down priority buttons. Access adds each grouping level and shows it nested within its parent grouping level.

6. Click *Grouping Options* to display the *Grouping Intervals* dialog box for selecting a grouping interval (if you want), then click *OK*.
7. Follow the directions on the remaining pages of the *Report Wizard*. On the last page, you can edit the title of the report. This title will be displayed on the first page of the report, and Access will also save the report, using the title as the document name. You can edit both the title and the document name later.
8. Click *Finish*. Access automatically saves the report and displays it in *Print Preview*, which shows you the report as it will look when printed. Figure 2.32 shows the grouped records in the report.

Sex	Stud Name	Phone Number
Fe	Beza	111111
	Hana	555555
Ma	Abraham	222222
	Maru	333333
	Shibru	444444

Fig. 2.32: Grouped records in a report



KEY CONCEPTS

- Word processing program such as MS-Word 2007 can support photos and drawings, mathematical calculations, text in table format, text in varying sizes, shapes, colors and even sound bites.
- Mail merge is used to create a set of documents, such as birthday invitation that is sent to many friends and relatives or a sheet of address labels.
- Presentation software such as MS-PowerPoint 2007 allows users to create slide shows that can be viewed on the computer or projected onto a large screen.
- Spreadsheet software such as MS-Excel 2007 can be used for both simple and complex calculations.
- Desktop publishing software such as MS-Publisher 2007 is designed specifically to handle various desktop publishing needs of individuals and small organization.
- Database software such as MS-Access 2007 is designed to keep track of information.



REVIEW QUESTIONS

Fill in the Blanks

1. is the software that is designed to satisfy a particular need of a particular environment.
2. You use when you want to create a set of documents, such as a birthday invitation that is sent to many friends and relatives or a sheet of address labels.

3. programs are used to create professional quality documents that combine text and other visual elements in non-linear arrangements.
4. In a the data is organized in the form of tables.

State Whether True or False

1. Word processing software was originally designed as a replacement for the typewriter.
2. Spreadsheet software such as MS-Excel 2007 cannot be used for both simple and complex calculations.
3. The Publisher program window displays all the tools you need to customize the publication.
4. In a database, a sub report is a report that is inserted in another report.

Multiple Choice Questions

1. are used to create sections within a MS-Word document.
 (a) Section breaks (b) Mail break (c) Slide show (d) Brochures
2. In MS-PowerPoint 2007, clicking Slide Show button in View area on Status bar will
 (a) Save Presentation (b) Print Presentation (c) Run Presentation (d) Check Spelling
3. In MS-Excel, you can create If condition using
 (a) AND (b) OR (c) Both (a) and (b) (d) None of these
4. How many database(s) can be open at a time in MS-Access 2007?
 (a) Any number (b) Three (c) Two (d) One

Match the Following

Column A

1. Document creation
2. Financial calculation
3. Database management
4. Present information
5. Desktop publishing

Column B

- | | |
|-----|--|
| (a) |  Microsoft Office PowerPoint 2007 |
| (b) |  Microsoft Office Publisher 2007 |
| (c) |  Microsoft Office Word 2007 |
| (d) |  Microsoft Office Excel 2007 |
| (e) |  Microsoft Office Access 2007 |

Answer the Following

1. What is word processing? Describe mail merge in Word 2007.
2. Give the steps to insert an image or clipart in a presentation in PowerPoint 2007.
3. What is spreadsheet? Describe IF condition with AND or OR in Excel 2007.
4. Name some publications that you can publish with Publisher 2007. Give the steps to create and save a publication based on a template.
5. Describe main/subreport in Access 2007.

Suggested Activities

1. Use the correct software tool and enhance the knowledge of IT at the same time as the chosen subject.
2. Use appropriate software tools *e.g.*, spreadsheet package to solve a mathematical problem.

Field Trip

Using the Internet or computer magazines, look up information on Microsoft Office 2010. List any features you find. List which of these features appeal to you and describe why they do.