BA (SEMESTER – I)

IMPORTANT QUESTIONS

UNIT-I

1) What Is Operating System ? Different Types Of Operating System?
2) What Is Computer ? Explain Its Characteristics?
3) Explain Different Types Of Computer?
4) Explain About I/O Devices Of Computer System?
5) Explain About Primary And Secondary Storage Of Computer System?
6) Write The DOS Commands In Detail ?

UNIT – II

1) Describe The Menus And Toolbar Available In MS-Word ?
2) Explain The Features Of Word Processing Application?
3) Explain The Procedure Followed For Mail Merge?
4) Write The Steps To Insert And Format A Table In Ms Word?
5) Describe How To Create And Use Macros In Ms Word?
6) How Can You Insert Header ,Footer And Page Numbers In A Document?
7) Explain Page Setup Options In Detail?

UNIT – III

1) Write The Procedural Steps Involved To Create Graphs And Charts In Ms-Excel?
2) Explain Different Functions Available In Ms-Excel?
3) Explain The Steps To Create , Save And Print A Worksheet?
4) Explain Sorting And Filtering Of Data In Excel?
5) What Is Data Validation And How Is It Useful?
6) Explain The Different Types Of Cell References With Examples?
7) What Is A Macro ? Explain How To Record Macro And Run A Macro?

UNIT – IV

1) Describe The Steps To Creating, Formatting And Presenting A Power Point Presentation?
2) Explain In Detail The Features And Uses Of Power Point?
3) Explain The Different Types Of Slide Transitions And Animations With Examples?
4) What Are The Steps To Insert Pictures, Charts And Tables Into A Slide?
5) Explain The Importance Of Slide Master And Its Uses?
6) What Is A Template ? Explain How To Use Templates In Power Point?

Chapter - 5

Microsoft Word-2010

5.1. Introduction

Word processor is software that enables the user to create a document, store it electronically on a computer, modify or format it by giving commands and characters from the keyboard, and print it on a printer. Word processing is most commonly used in all computer applications. A computer, a special program called a word processor and a printer are required to perform word processing. Microsoft Word is the most widely used Word Processing software.MS Word is used to create professional quality documents. Examples for other word processing applications are WordPerfect, Writer, AbiWord and KWord. Office Web Apps or Google Docs are web-based word processors.

Advantages of Word Processing:

The greatest advantages of a word processor include its time saving ability, clarity, enhancement of document appearance. Some of the other advantages are

- It is easy to correct typing mistakes.
- We can make changes without retyping the entire document
- It is easy to delete text from document.
- It is easy to insert a word, sentence, or paragraph in the middle of a document.
- We can easily shift a portion of document from one place to another within a document, or between different documents.
- We can send the document to a printer to get a hard copy. Many hard copies of the document can be produced.

Applications of Word Processing:

To process the data electronically, Word processors are widely used in the business world, home, and education.

1. Businesses usually have their own format of data and style for any documentation. In businesses, Word processors are used for
   - Business communication
   - Legal documentation
   - Memos
   - Reference documents
2. Many homes use word processing software on their computers for
   - Letter writing
   - Resume preparation
   - House hold budgeting
   - Story writing
3. In educational sector, Word processors are used for preparing
   - Assignments
   - Paper presentations
   - Reports
   - Study materials.

5.2. Features of word processing

Word processing typically includes the presence of text manipulating functions that help beyond abasic ability to enter and change text. They are

a) File management

Many word processors provide file management capabilities that allow us to create, delete, store and search a file.

b) Text Manipulation

Text manipulation usually refers to the ability to change words, sentences and paragraphs in a document. The manipulation may include the changing of the characters(letters and symbols), adding line breaks, direction of the text and changing the case(CAPITAL letter or small letter) of the characters.

c) Spell check

This feature allows user to check the spellings of words in a document. It highlights the misspelled words and corrects them.

d) Document Formatting

Formatting improves the readability and visibility of documents. Many formatting options are available in word processors which allow formatting of text within

body, titles, subtitles, etc. of a document. The most common formatting which are applied are Bold, Italic, Underline, font styles, font size and colored font.

e) Headers and Footers

This feature enables user to type information for header and footer and eliminates typing the same information in every page of the document. Header is the information that is displayed on top of every page of the document. Footer is the information that is displayed at bottom of every page of the document.

f) Graphics

Pictures, images or graphics are a very easy way of making a document more appealing and interesting for the users. Graphics can be added to Word by inserting Pictures from Clip Art, Shapes and SmartArt. When images are inserted in a document it is important to consider the graphic formatting options such as cropping, wrapping, styles, effects and position etc.

g) Page numbering

Word processors assign page number automatically to the every page of the document.

h) Macros

A Macro is a record and play back mechanism that represents a series of commands or activities performed in a document. Usually, a single key is assigned to a macro. All the commands or activities in macro will be executed when the key assigned to that macro is pressed.

i) Tabs

Tabsallow starting text on a page in the exact position it should appear in, by allowing the cursor to go to the next stop or set position. This is achieved by setting up tabs and using the tab key (to the left of the Q key) on the keyboard, to jump from one position to the next, instead of having to use the space bar again and again and again.

j) Tables

A table is a combination of cells arranged in rows and columns. Tables are useful to display the data in an organized and easy to read format. Tables can be sorted, formatted, merged, aligned, shaded, colored, etc

k) Mail Merge

Mail merge is used to produce bulk mailing letters using a letter template and address database. Instead of creating multiple copies of the same letter to send out in the post to the different addresses, one letter and one address database is created. The letter and data base are merged together which combines the names and addresses automatically to each of the letters and envelopes from the database.

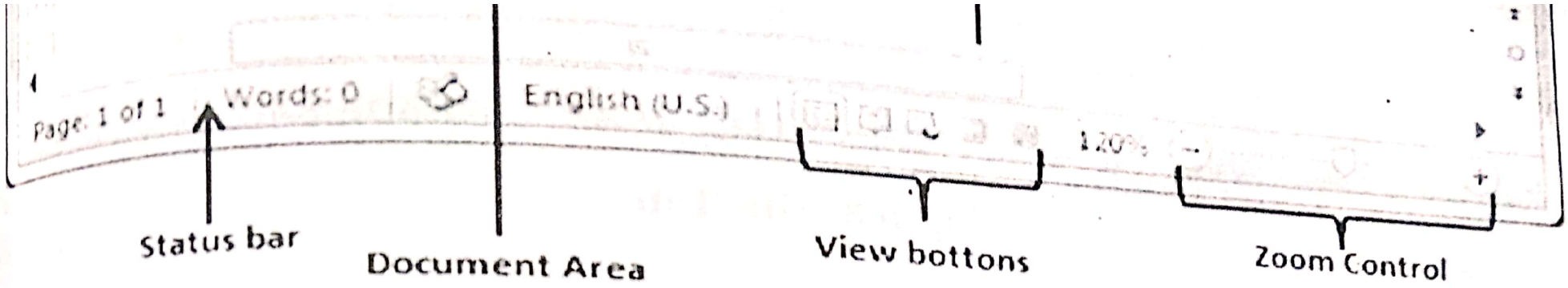


Fig 5.1 Menu and Toolbars of Microsoft-Word 2010

5.4. Components of Microsoft-Word 2010 Window (Menus & Toolbar).

Ribbon:

The ribbon is designed to help us to quickly access the commands that we need to complete a task.

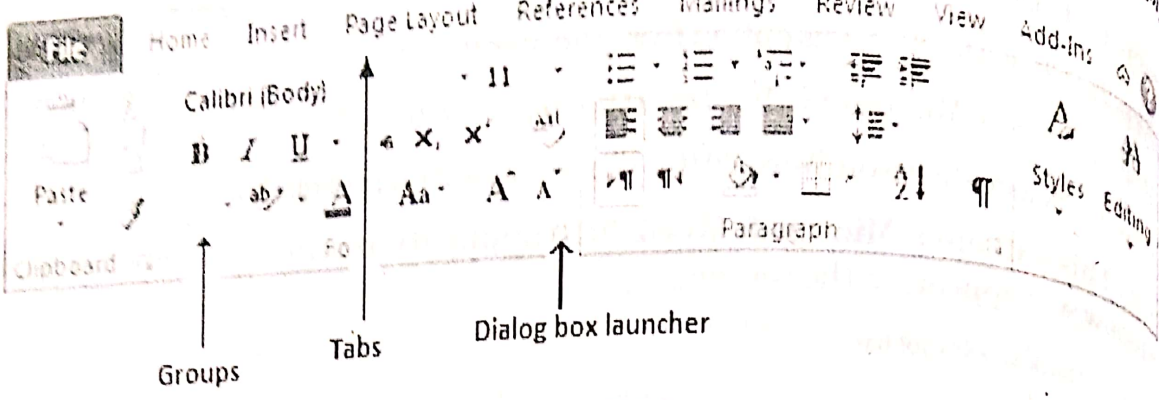


Fig 5.2 Ribbon

Ribbon contains different components:

Tabs: They are visible at the top of the Ribbon and contain groups of related commands. Home, Insert, Page Layout are examples of ribbon tabs. These tabs are visible all the time. Other tabs known as contextual tabs appear only when we select certain types of objects. Ex: Images, Tables etc. These tabs are indicated by colored headings and contain commands that are specific to the selected object.

Groups: They organize related commands. Each group name appears below the group on the Ribbon. For example group of commands related to fonts or group of commands related to alignment etc.

Dialog box launcher: It appears in lower right corner of groups on Ribbon. On click it opens a related dialog box which offers additional options than the commands available on Ribbon.

File Tab:

The File tab replaces the Office button in earlier version Word 2007. You can use it to check backstage view, which is used to create new document, open or save documents, print a document and other file operations.

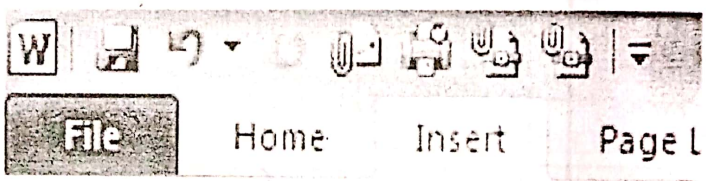


Fig 5.3 File Tab

Quick Access Toolbar:

Quick Access Toolbar is just above the File tab and it displays the Word most frequently used commands. We can add or remove commands from this toolbar based on our requirement.

Title bar:

This lies in the middle and at the top or the window. Title bar shows the program and document title.

Rulers:

Word has two rulers - a horizontal ruler and a vertical ruler. The horizontal ruler appears just beneath the Ribbon and is used to set margins and tab stops. The vertical ruler appears on the left edge of the Word window and is used to gauge the vertical position of elements on the page.

Help:

The Help Icon can be used to get word related help anytime you like. This provides nice tutorial on various subjects related to word.

Zoom Control:

Zoom control lets us zoom in for a closer look at our text. The zoom control consists of a slider that you can slide left or right to zoom in or out. -and + buttons you can click to increase or decrease the zoom factor.

View Buttons:

The group of five buttons located to the left of the Zoom control, near the bottom of the screen, lets us switch among Word's various document views.

- Print Layout view: This displays pages exactly as they will appear when printed.
- Full Screen Reading view: This gives a full screen look of the document.
- Web Layout view: This shows how a document appears when viewed by a Web browser, such as Internet Explorer
- Outline view: This lets us work with outlines established using Word's standard heading styles.
- Draft view: This formats text as it appears on the printed page with a few exceptions. For example, headers and footers aren't shown. Most people prefer this mode.

Document Area:

The area where we type is called document area. The blinking vertical bar is called the insertion point or cursor and it represents the location where text will appear when we type.

Status Bar:

This displays document information as well as the insertion point location. From left to right, this bar contains the total number of pages and words in the document, language etc. We can configure the status bar by right-clicking anywhere on it and by selecting or deselecting options from the provided list.

Document Properties:

When we click Info option available in the first column, it displays various properties in the third column of the backstage view. These properties include document size, number of pages in the document, total number of words in document author etc.

We can also edit various properties. Just try to click on the property value and if property is editable then it will display a text box where you can add text like title, tags, comments, Author.

Exit Backstage View:

It is simple to exit from Backstage View. Either click on File tab or press button on the keyboard to go back in word working mode.

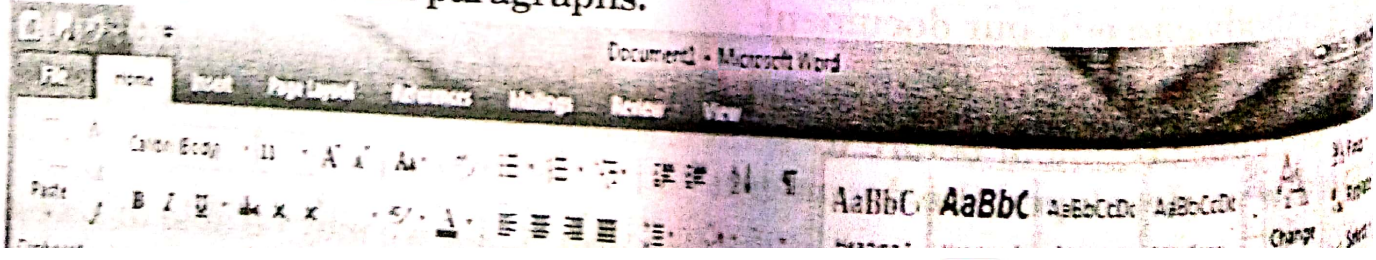
5.6 Tabs in Microsoft Word 2010

Tab Name	Command Groups
Home	Clipboard, Font, Paragraph, Styles, and Editing
Insert	Pages, Tables, Illustrations, Links, Header and Footer, Text, and Symbols
Page Layout	Themes, Page Setup, Page Background, Paragraph, and Arrange
References	Table of Contents, Footnotes, Citation and Bibliography, Captions, Index, and Table of Contents
Mailings	Create, Start Mail Merge, Write and Insert Fields, Preview Results, and Finish
Review	Proofing, Language, Comments, Tracking, Changes, Compare, and Project
View	Document Views, Show, Zoom, Window, and Macros

Table 5.2 Tabs in Microsoft-Word 2010

5.6.1 Home Tab

Home tab can be used to apply styles to our document, including the formatting of fonts and paragraphs.



Find & Rep...

A word or phrase can ... command. Select Find under the Editing ... left ... appear called Navigation where you can enter the word or phrase in the field and it will automatically search the document and display all results below the "Search" field.

A word or phrase can be replaced with another using the Replace command. Select Replace under the Editing group, enter the word or phrase that you want replaced in the "Find what" box and enter the word or phrase that should replace the existing word or phrase in the "Replace with" box. We can replace all occurrences of the word or phrase by clicking the Replace All button or replace the word or phrase one at a time by clicking the Replace button.

5.6.2. Insert Tab

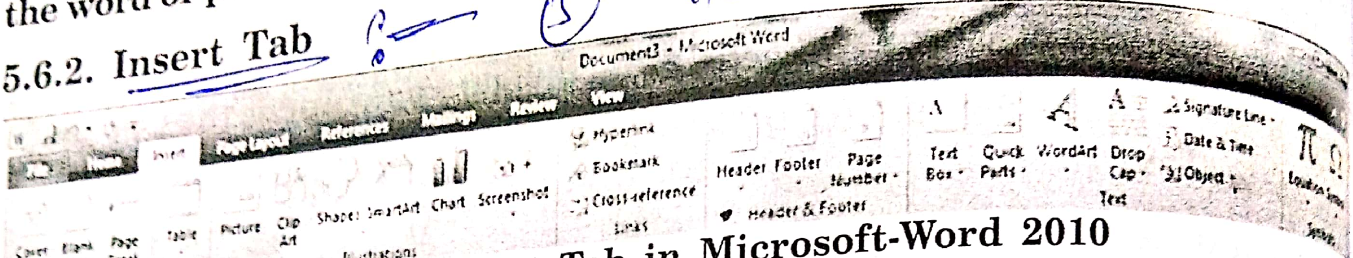


Fig 5.6 Insert Tab in Microsoft-Word 2010

Insert tab is used to insert various types of objects, including pages, tables, illustrations, links, headers & footers, text, and symbols.

Headers and Footers

To have a same header or footer on each page of a document, click on Header or Footer from the Header and Footer group and then select the header or footer style that you wish. Once we add a header or footer, we will see a Header & Footer Tools Design tab on the ribbon. The Header & Footer Tools Design tab contains the options related to working with the header and footer sections of a document.

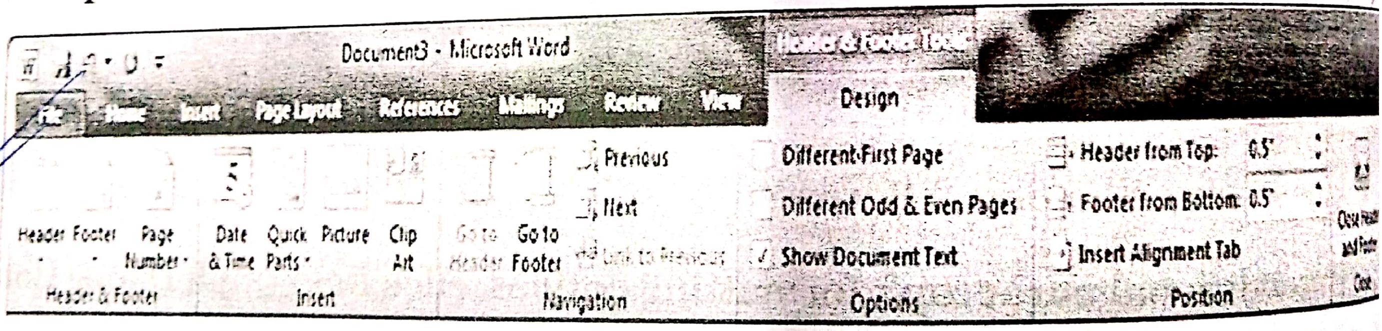


Fig 5.7 Headers and Footers Tools

The Insert group provides the capability to insert the date & time, pictures and clip art. The Options group allows us to specify if we want a different header or footer on the first page and a different header and footer between odd and even pages. The Position group allows you to specify the distance the header is from the top of the page and the distance the footer is from the bottom of the page. When you have finished working with the header and footer, click the Close Header and Footer icon under the Close group.

Page Numbers

Click Page Number from the Header and Footer group, select the position of the page numbers (top of page, bottom of page, page margins, or current position), and then select the style of the page numbers. To set formatting options for page numbers, click Page Number and then Format Page Numbers.

Symbols & Equations

Symbols that aren't found on a normal keyboard can be added to Microsoft Word documents by selecting Symbol from the Symbols group. A list of commonly used symbols will be displayed. Click on one of the symbols in the list or click More Symbols to pick from a larger list.

Equations can be added to a Microsoft Word document by selecting Equation from the Symbols group and then selecting from the list of pre-defined equations or clicking Insert New Equation and entering our own equation.

Tables

To create a table, click the Table icon from the Tables group and then select the number of cells we want.

...than 13 cells wide by 7 cells high, click

...lumns

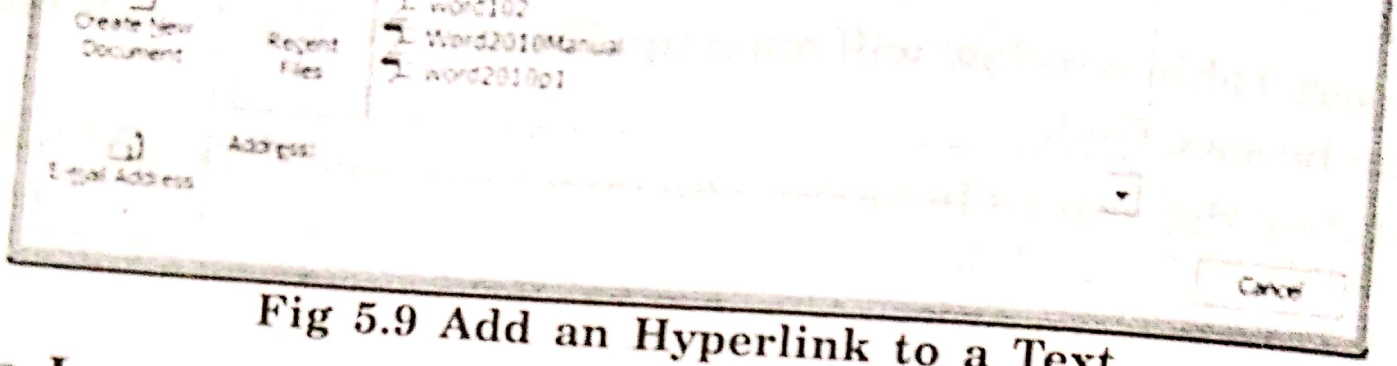


Fig 5.9 Add an Hyperlink to a Text

5.6.3. Page Layout Tab

Page Layout Tab is used to set layout options for a Word document.

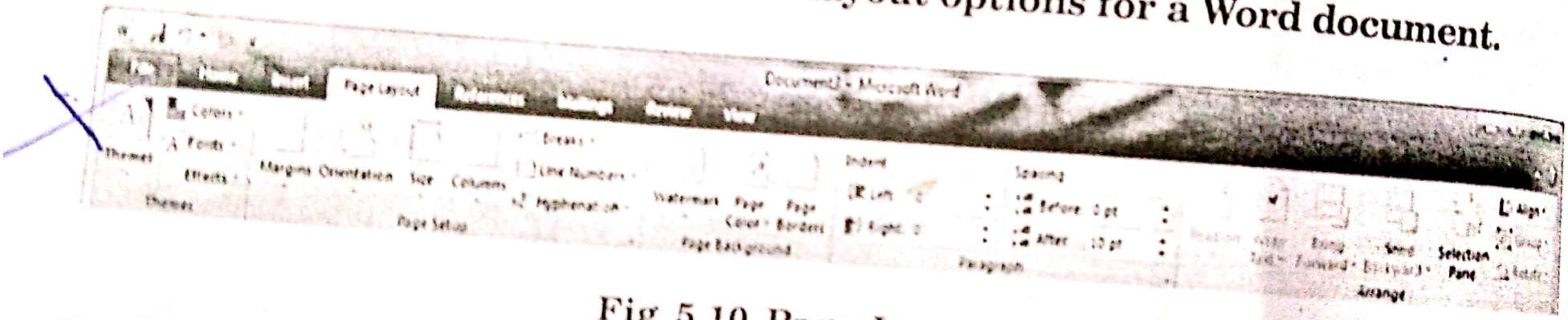


Fig 5.10 Page Layout Tab

Page Setup:

The Page Setup group contains the options to specify the layout of a page, such as margins, orientation, and page size. To set the margin for your document, click on Margins and then select from the list of pre-defined margins or click Custom Margins to enter your own margins.

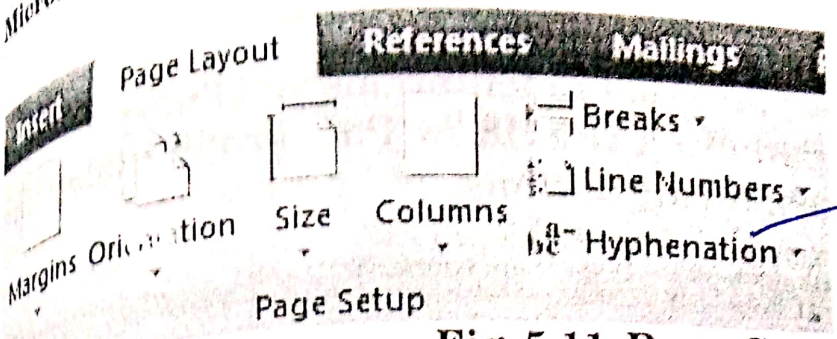


Fig 5.11 Page Setup options

To change the page orientation of the document, click on Orientation and then select Portrait or Landscape. To change the paper size, click on Size and then select from the list of pre-defined paper sizes or click More Paper Sizes to enter a customized size.

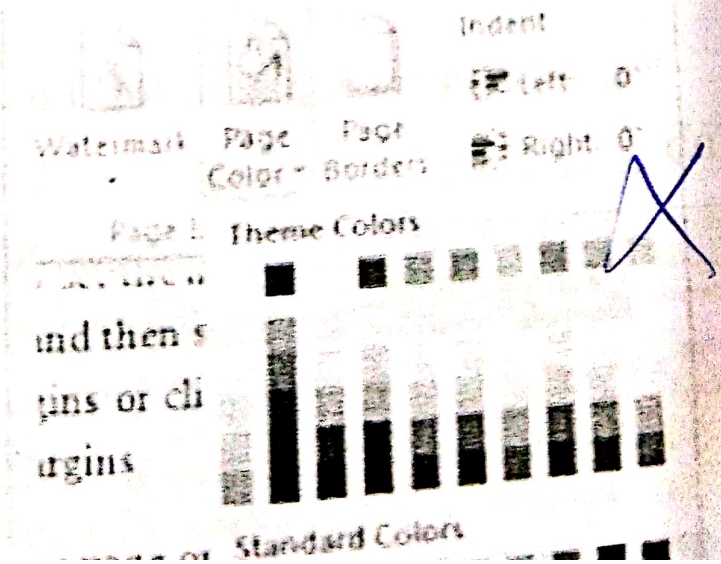
To create columns within your document, click on Columns and then select from the list of pre-defined column types or click More Columns to enter a customized column style.

Page Background:

To include a watermark on the page, such as 'Confidential' or 'Draft', select Watermark from the Page Background group and then select one of the pre-defined watermarks or Custom Watermark to specify the text you would like to see appear as a watermark on the page.

To set a page color, click Page Color and select a color from the list of Theme Colors or click More Colors to pick a color not available from the list.

To add a border to the page, click Page Borders to bring up the Borders and Shading window. From here, you can specify how you want your border to appear, including style, color, width, and pictures.



Paragraph

The Paragraph group will allow you to set indentations and line spacing for your document.Additionally, you can click the Show Paragraph Dialog Box launcher for additional paragraph formatting options.

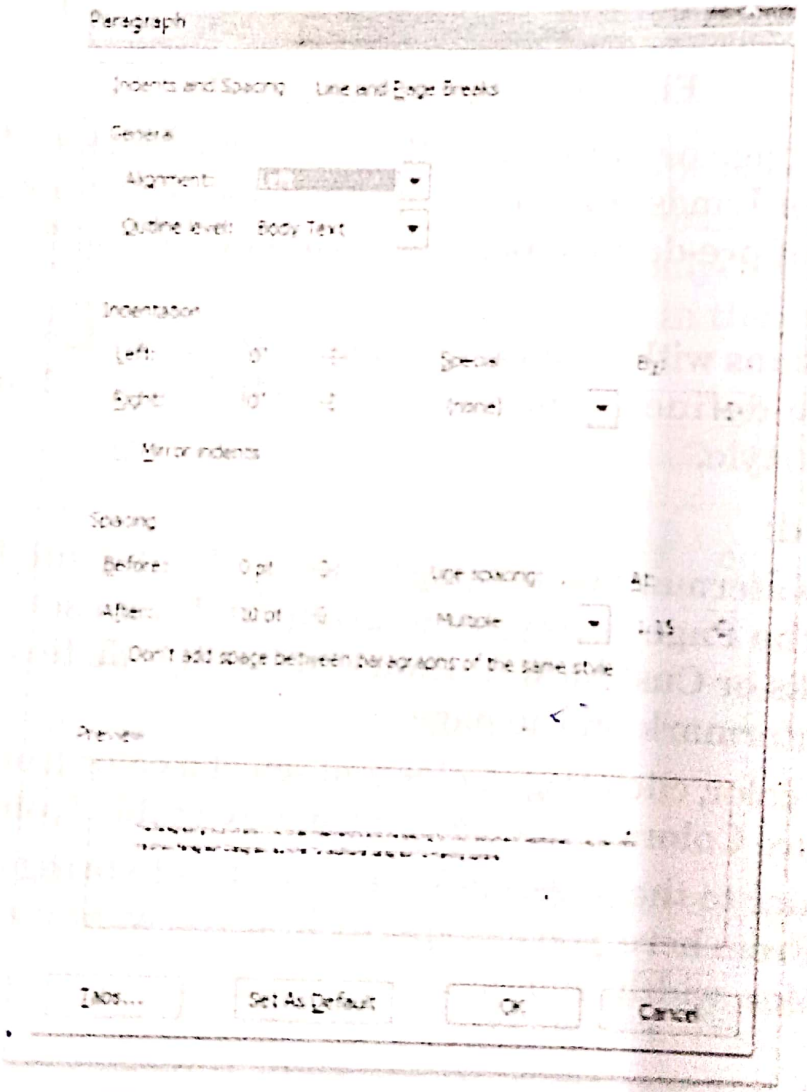
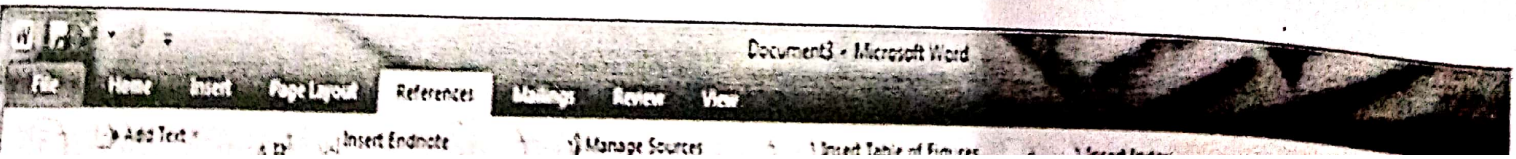


Fig 5.13 Paragraph dialog box

5.6.4. References Tab



5.8. Mail merge

Mail merge is a tool which allows you to create form letters, mailing labels, and envelopes by linking a main (common) document to a set of data or data source. The main document is linked to the data source by common fields of data, called merge fields. We can create our own merge fields, specific to your data source, or you can use a predefined set provided by Word.

When we are performing a Mail Merge, we need a Word document (you can start with an existing one or create a new one) and a recipient list, which is typically an Excel workbook.

(i) Letter (Word document)

(ii) Recipient list (Excel workbook)

To use Mail Merge:

1. Open an existing Word document, or create a new one.
2. Click the Mailings tab.
3. Click the Start Mail Merge command.
4. Select Step by Step Mail Merge Wizard.

The Mail Merge task pane appears and will guide you through the six main steps to complete a merge.

The following is an example of how to create a form letter and merge the letter with a recipient list.

Step 1:

- Choose the type of document you want to create. In this example, select Letters.

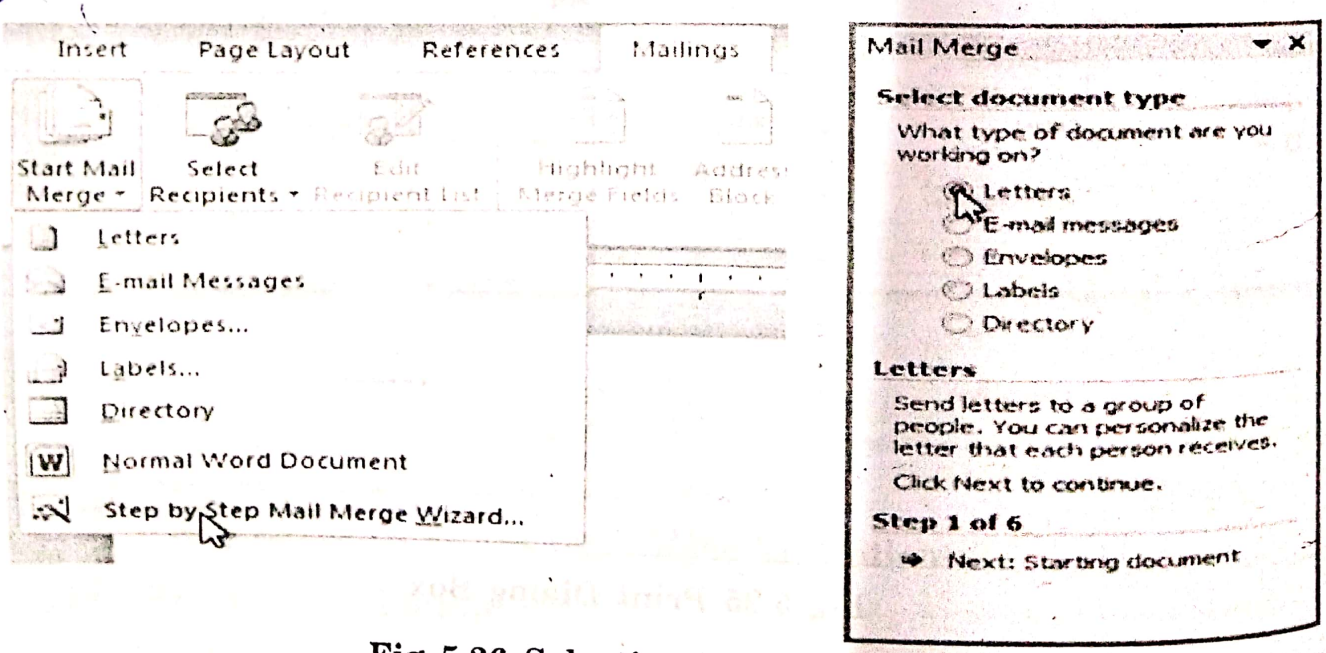


Fig 5.26 Selecting Document Type

- Click Next. Starting document to move to Step 2.

Step 2:

- Select Use the current document.

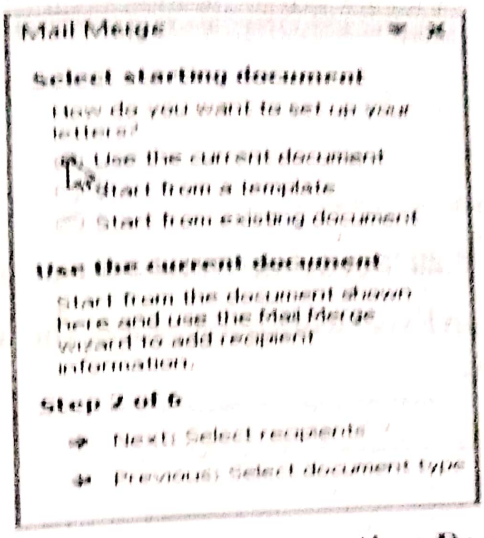


Fig 5.27 Selecting the starting Document

- Click Next: Select recipients to move to Step 3.

Step 3:

Now we need an address list so Word can automatically place each address into the document. The list can be in an existing file, such as an Excel workbook, or you can type a new address list from within the Mail Merge Wizard.

- From the Mail Merge task pane, select Use an existing list, and then click Browse.

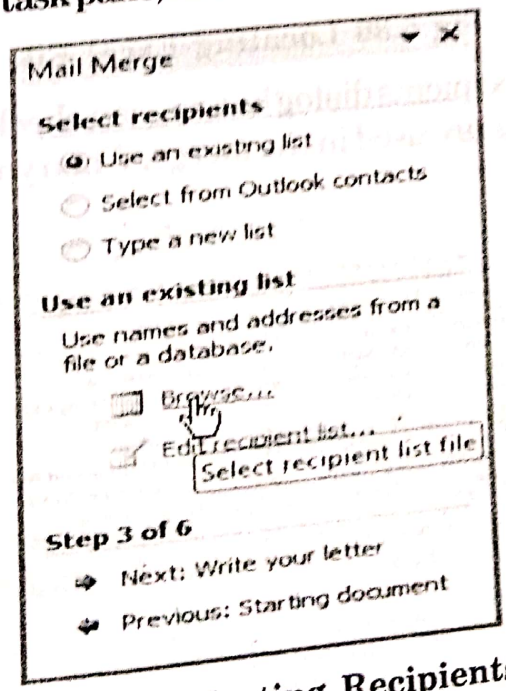


Fig 5.28 Selecting Recipients

- Locate your file in the dialog box and then click Open.

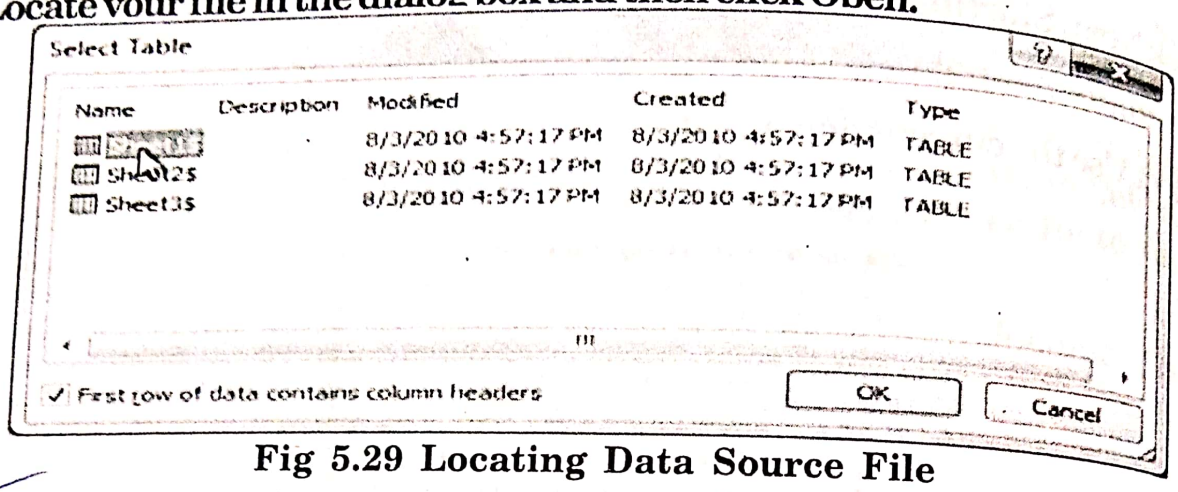


Fig 5.29 Locating Data Source File

- If the address list is in an Excel workbook, select the worksheet that contains the list, and then click OK.

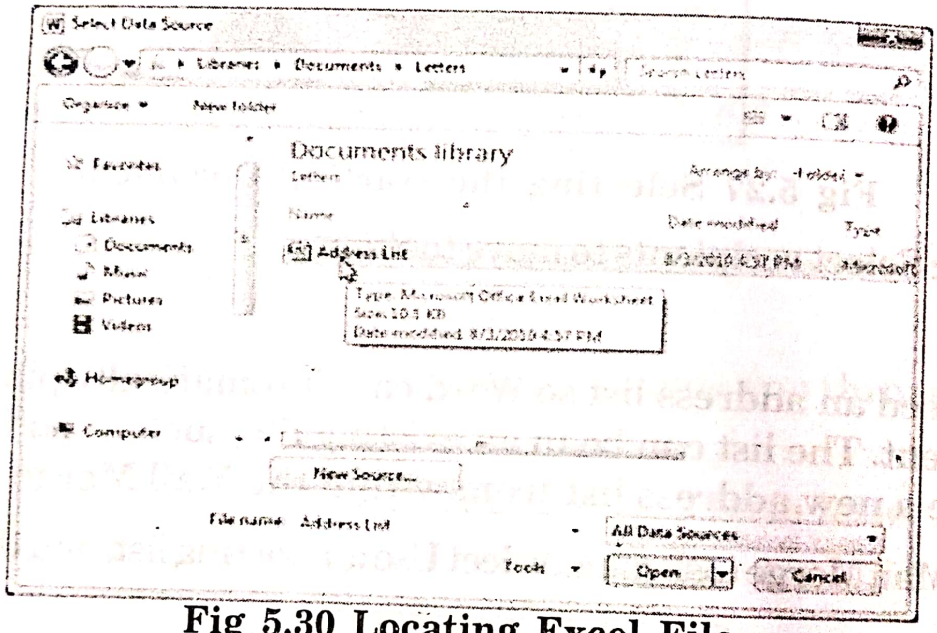
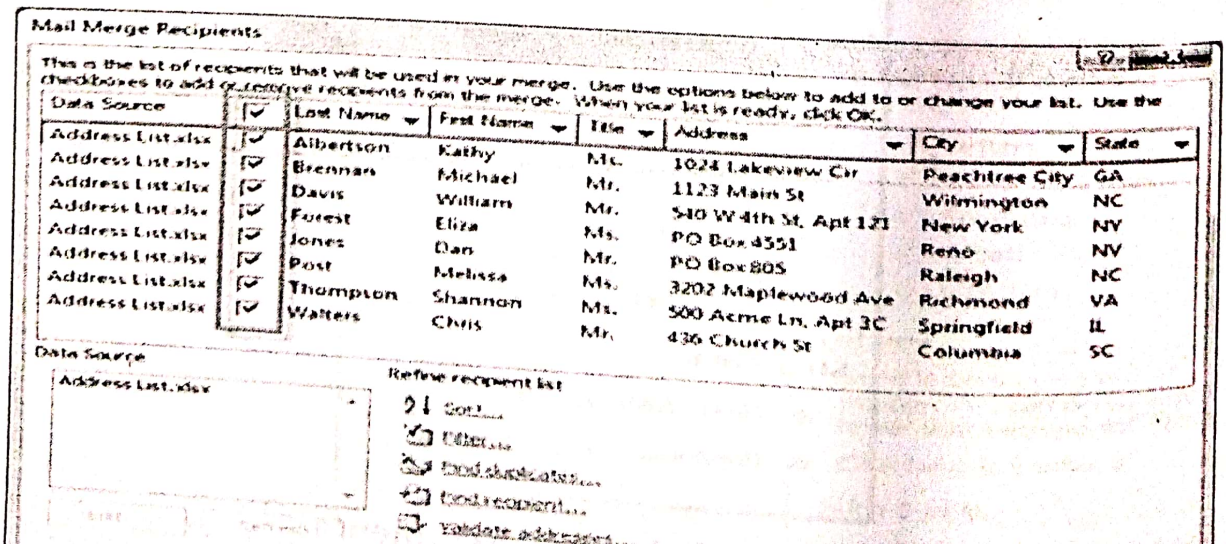


Fig 5.30 Locating Excel File

- In the Mail Merge Recipients dialog box, we can check or uncheck each recipient to control which ones are used in the merge. When you're done, click OK to close the dialog box.



- From the Mail Merge task pane, click Next: Write your letter to move to Step 4.

If we don't have an existing address list, we can click the Type a new list button and click Create. Then we can then type your address list.

Step 4:

Now we're ready to write your letter. When it's printed, each copy of the letter will basically be the same, except the recipient data like the name and address will be different on each one. we'll need to add placeholders for the recipient data so Mail Merge knows exactly where to add the data. If you're using Mail Merge with an existing letter, make sure the file is open.

To insert recipient data:

- Place the insertion point in the document where you want the information to appear.
- Select Address block, Greeting line, Electronic postage, or more items from the task pane.

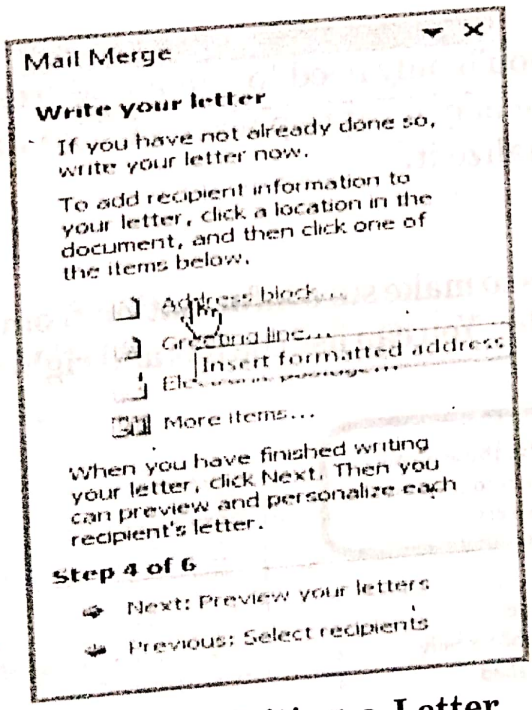


Fig 5.31 Writing a Letter

- Depending on your selection, a dialog box may appear with various options. Select the desired options, and then click OK.

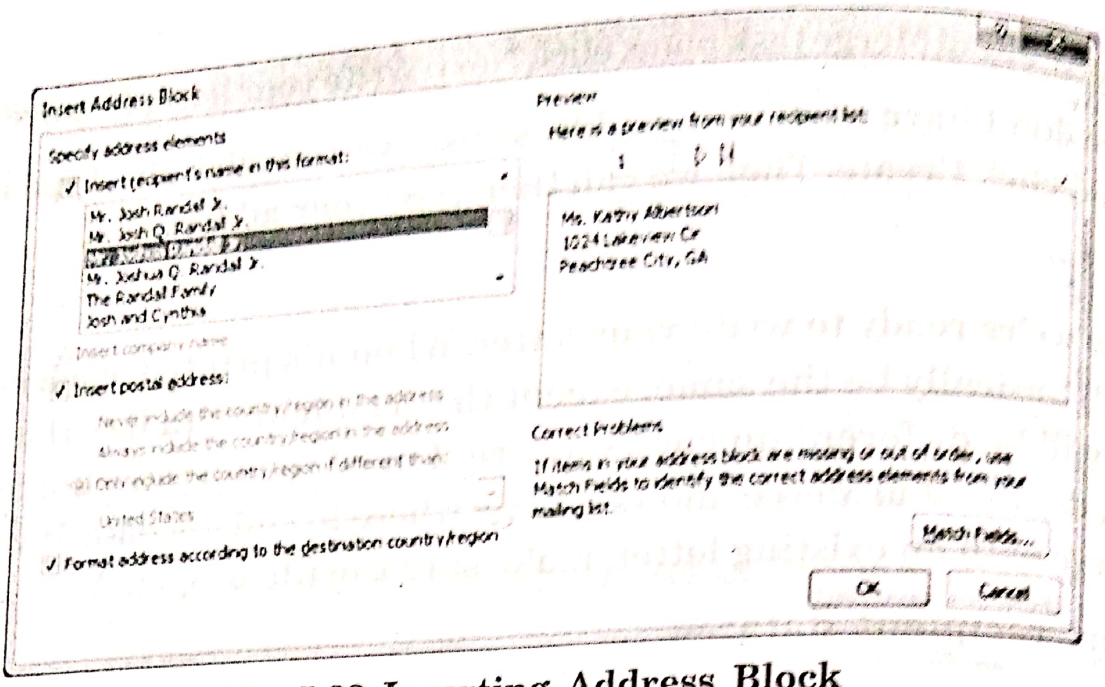


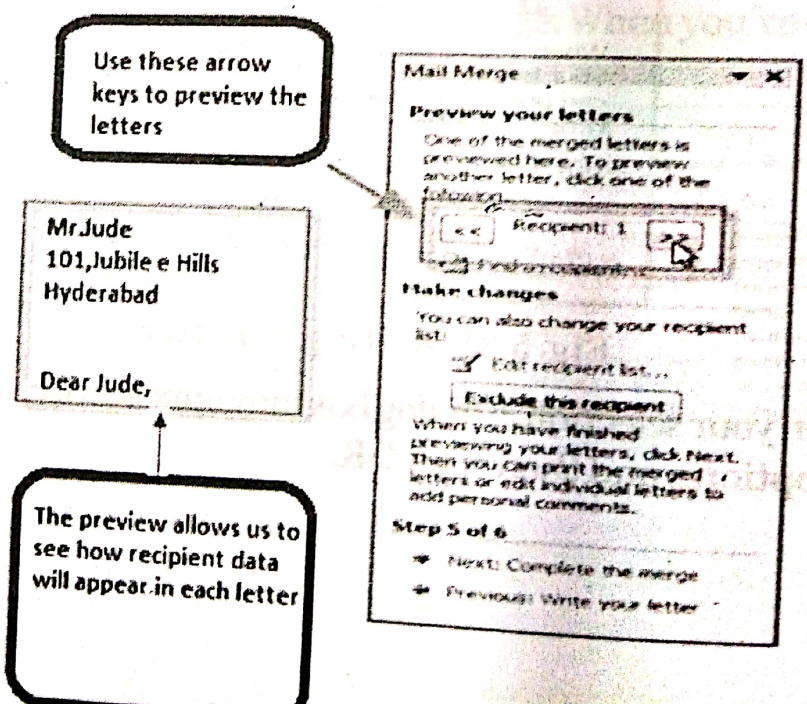
Fig 5.32 Inserting Address Block

- A placeholder appears in our document (for example: «AddressBlock»).
- Repeat these steps each time we need to enter information from our data record.
- From the Mail Merge task pane, click Next: Preview our letters to move to Step 5.

For some letters, you'll only need to add an Address block and Greeting line. Sometimes, however, we may want to place recipient data within the body of the letter to further personalize it.

Step 5:

- Preview the letters to make sure information from the recipient list appears correctly in the letter. You can use the left and right scroll arrows to view each document.



- Click Next: Complete the merge to move to Step 6.

Step 6:

- Click Print to print the letters.

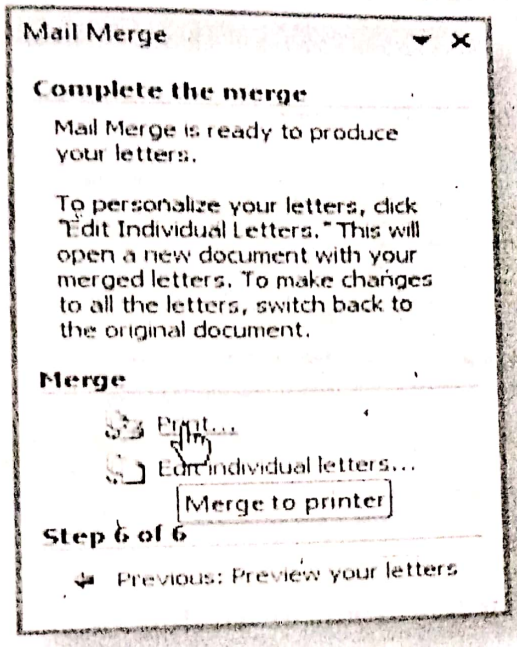


Fig 5.34 Printing the Merged Letter

- The Merge to Printer dialog box opens. Click All, then click OK.

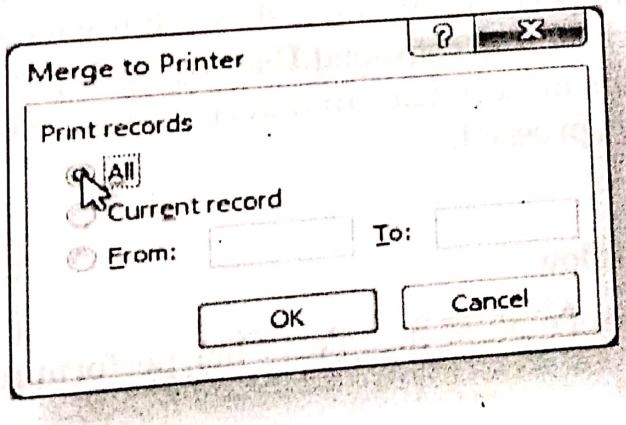


Fig 5.35 Merge to Printer Dialog Box

- The Print dialog box will appear. Adjust the print settings if needed, then click OK.

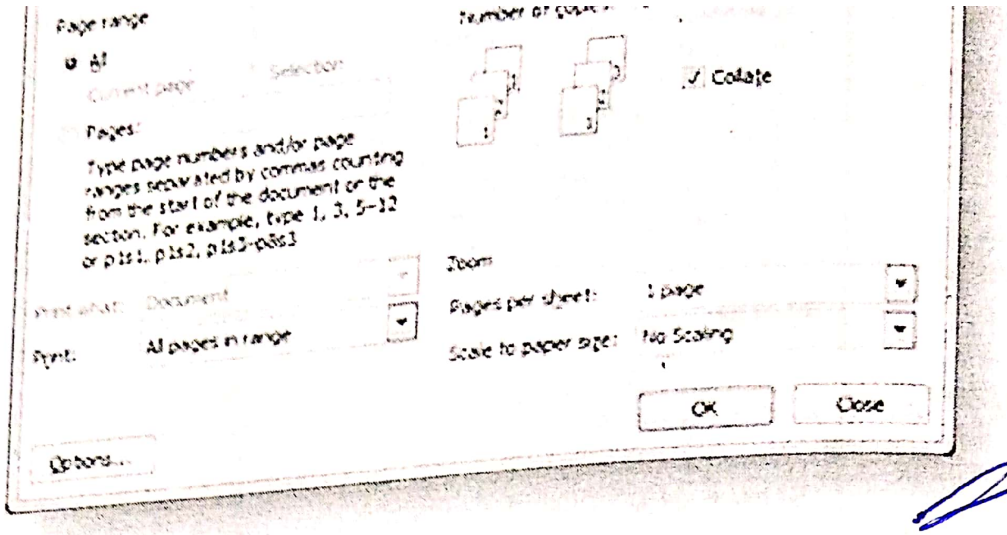


Fig 5.36 Printer Dialog Box

5.9. Macro

Macro is a record and play back mechanism. Through Macros, we don't need to perform same action, i.e., change formatting, style, font family, size, and color again and again in a document. It actually records each and every click and keystroke we press while performing the task, so that we can play them back to perform same action when it is required.Usually, a single key is assigned to a macro. All the commands or activities in macro will be executed when the key assigned to that macro is pressed.

Macros are used:

- To speed up the workflow
- To reduce the chance of making mistakes when performing the steps
- To simplify the tasks.

Open a document to record a macro. For example, we can have a document containing a paragraph. We will record a macro to automatically format the paragraph.To record a Macro, navigate to View tab, and from Macros options, click Record Macro. It will bring up Record Macro dialog, allowing you to enter a Macro name. Under Assign macro to options, click Keyboard button to assign a hotkey.

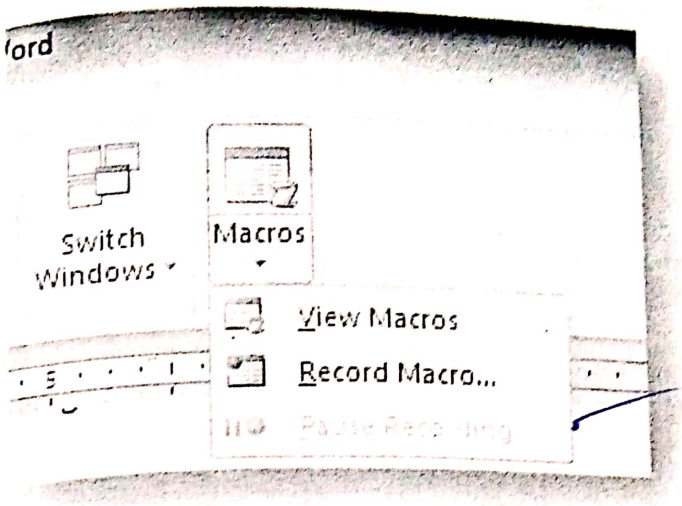


Fig 5.37 Macro option under View Tab

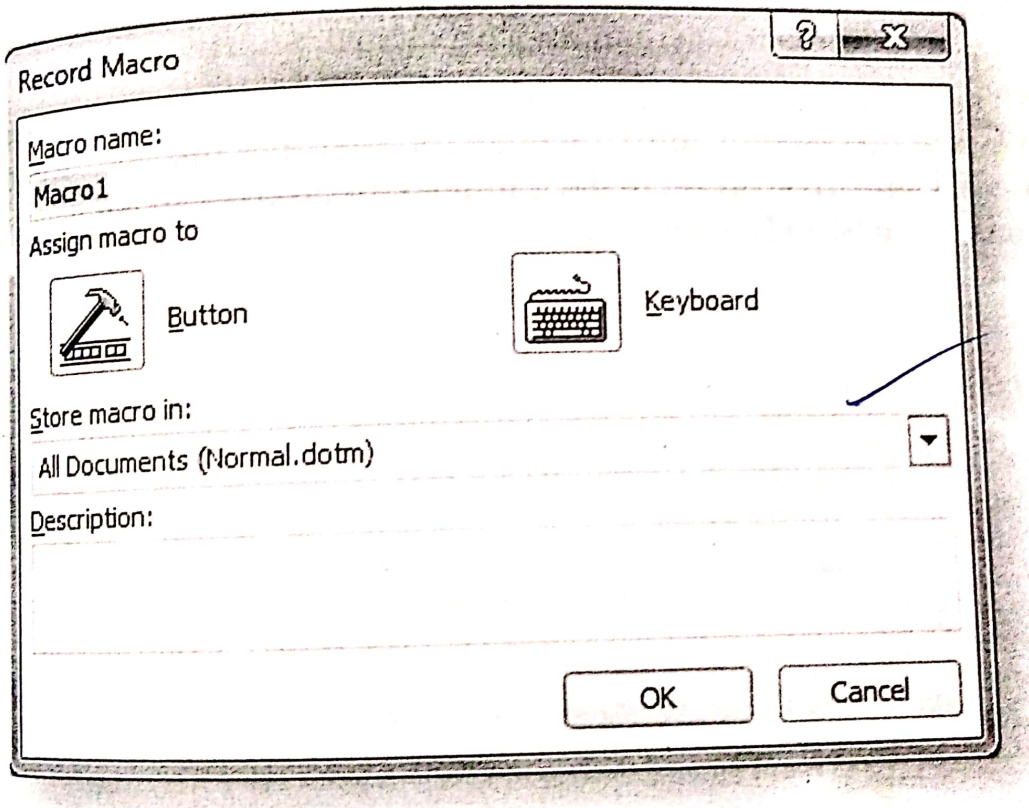


Fig 5.38 Recording a Macro

Now keep the cursor in Press new shortcut key box, and assign a hotkey by ressing keys in combination with ctrl and shift. Click Assign to assign hotkey to acro, and then click OK.

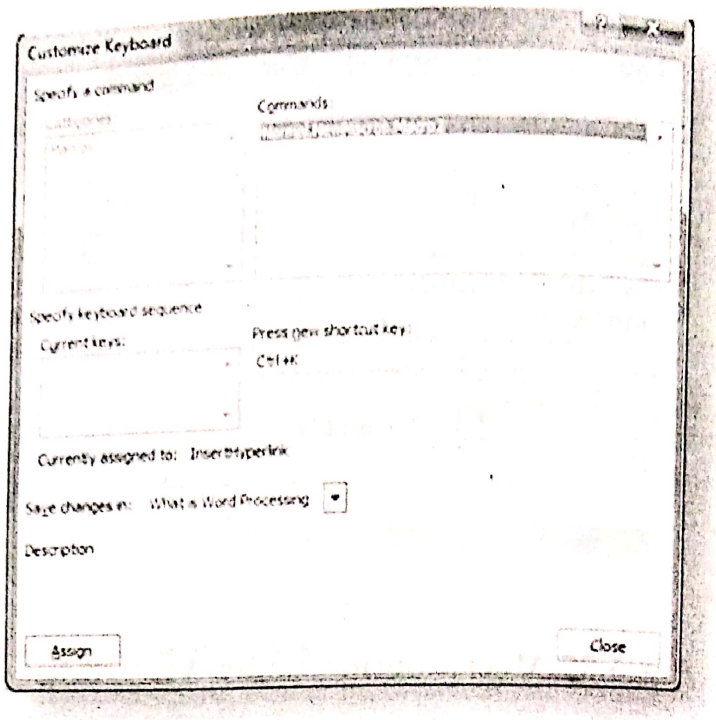


Fig 5.39 Customizing Keyboard Shortcuts

We will see recorder-like image with pointer, indicating that macro is being recorded. We will do some formatting over the text like insert drop box, change paragraph color etc. To stop recording macro, head over to View tab and from Macro options, click Stop Recording.

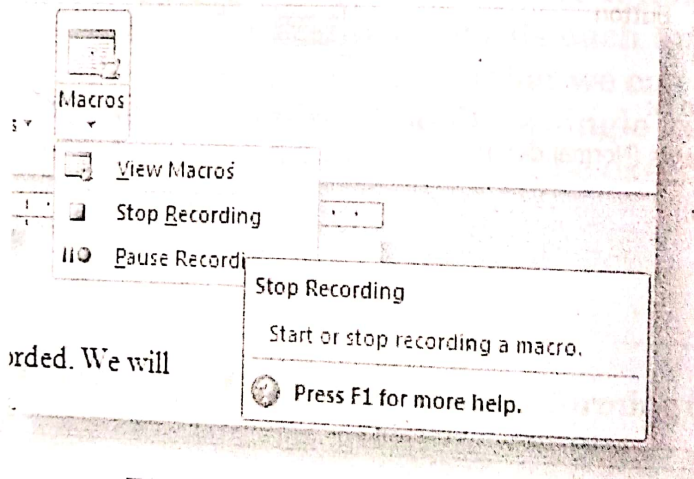


Fig 5.40 Stop/Pause Macro

Now we will execute macro over new document to align with the formatting style we have applied earlier. Run the macro by pressing the specified hotkey. In our case, it is Ctrl+K. It will immediately apply recorded formatting style to the new paragraph.

For saving a macro-enabled document, on File menu, click Save as. From Save as dialog, under Save as type options, click Word Macro-Enabled Template (*dotm). Enter an appropriate name of document and click Save.

Chapter - 6

Microsoft Excel-2010

1 Introduction: ① What is Spreadsheet? features

Spreadsheet is a software application that contains multiple cells that jointly ake up a grid consisting of rows and columns, each cell containing either lphanumeric text or numeric values. Spreadsheet cell may include a formula that escribes how the contents of that cell are to be calculated from the contents of ny other cell or combination of cells.

Spreadsheet software enables user to enter data into a table format, anipulate, store, print them and create reports and graphs using them. In athematics, spreadsheets are particularly useful when a number of repetitive alculations need to be performed.

In a spread sheet, horizontal rows are labeled with numbers and vertical olumns are labeled with alphabets. The intersection of a row and a column is alled a cell.The cell at the intersection of column A and row 1 is referred to as A1.The highlighted rectangle on the screen is called the cell pointer and the cell containing the cell pointer is called the active cell.

Some of the most popular spread sheet programs are

- Lotus 1-2-3
- MS-Excel
- Google Docs
- OpenOffice - Calc

Advantages ofSpreadsheet:

Spreadsheet processes data at great speed and stores large amount of data. The advantages of spread sheet are

- changes to data is very easy

- Spreadsheets make calculations easier by using the functions
- Filtering the data is easy
- Spreadsheets can interact with databases to import data

Applications of Spreadsheet:

1. Finance

Spreadsheets are useful in preparing financial data, such as checking account information, budgets, transactions, billing, invoices, receipts, forecasts, and any payment system.

2. Forms

Form templates can be created to handle inventory, evaluations, performance reviews, quizzes, time sheets, patient information, and surveys.

3. Education

Spreadsheets can be used to track students, calculate grades, and identify important data such as high and low scores, missing tests, and students who are struggling.

4. Lists

Managing a list in a spreadsheet is very easy. Examples of spreadsheet lists include telephone, to-do, and grocery lists.

5. Sports

Spreadsheets can keep track of our favorite player statistics or statistics of the whole team. With the collected data, we can also find averages, high scores, and other statistical data

6. Management Decision Support

Spreadsheets are commonly used in projecting the business conditions. These reports are helpful for top level management to take decisions.

6.2. Features Of Microsoft-Excel

MS-Excel has many features to manipulate and analyze the data. Some of the features are

a) Conditional Formatting: Conditional formatting in Excel changes the format of a cell depending on the cell's value in the workbook. Conditional formatting helps users to quickly focus on important aspects of a spreadsheet.

b) Sorting and Filtering: Sorting and Filtering in Excel help us to order or reorder the data and display the data just we need. Sorting and filtering your data will save you time and make spreadsheet more effective.

c) Functions: Functions is the important feature of Excel which help us to perform arithmetic, static, logical and time and date manipulations on data. Simple calculations can be entered into the formula bar in Excel just as they would be written on paper.

d) Pivot Tables: Pivot Tables summarize large amounts of Excel data from a database that is formatted where the first row contains headings and the other rows contain categories or values.

e) Charts and Graphs: Charts and Graphs are used to represent the data in a graphical format. Wide variety of Charts and Graphs available in Excel makes reports and summaries combine two styles of charts, such as Excel's column chart and line chart. This format can be helpful for displaying two different types of information or a range of values that varies greatly.

6.3. Microsoft Excel-2010

Microsoft Excel is a commercial spreadsheet application developed and distributed by Microsoft for Microsoft Windows operating system. Microsoft Excel is a spreadsheet tool capable of performing calculations, analyzing data and integrating information from different programs.By default, documents saved in Excel 2010 are saved with the .xlsx extension whereas the file extension of the prior Excel versions is .xls.

Getting started with Excel

To start with MS-Excel 2010, install Micro Soft Office 2010 in our computer and follow the steps given below.

1. Click Start button.

We can also edit various properties. Just try to click on the property value and if property is editable then it will display a text box where you can add your text like title, tags, comments, Author.

Exit Backstage View

It is simple to exit from Backstage View. Either click on File tab or press Esc button on the keyboard to go back in excel working mode.

6.7. Creating a worksheet:

Sheet area is the area where we type our text. The flashing vertical bar is called the insertion point and it represents the location where text will appear when we type. When we click on a box then box becomes highlighted. When we

double click the box, flashing vertical bar will come and we can start entering data.

A single spread sheet that contains rows and columns of data is called a worksheet. When we start Microsoft Excel, three new, blank sheets always open. If we want to create another new worksheet, here are the steps.

Step 1: Right Click the Sheet Name and select Insert option.

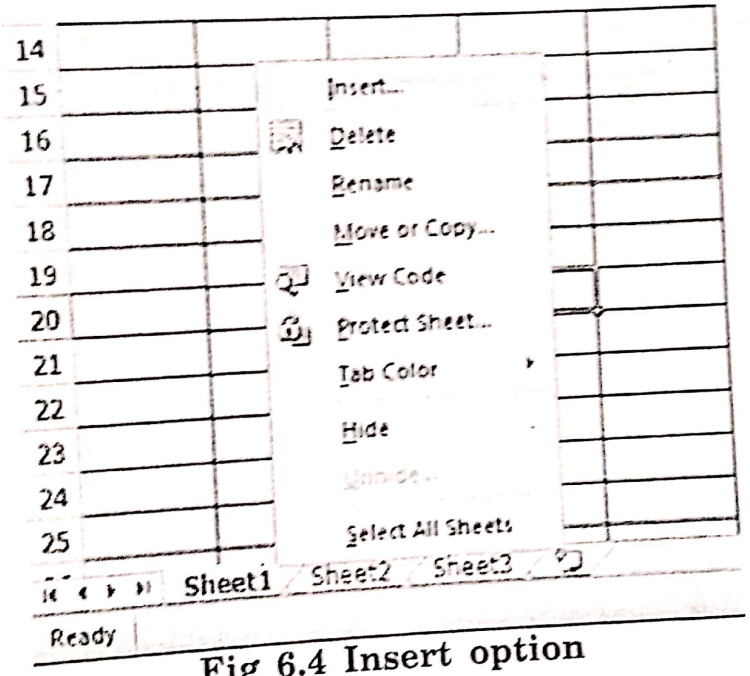
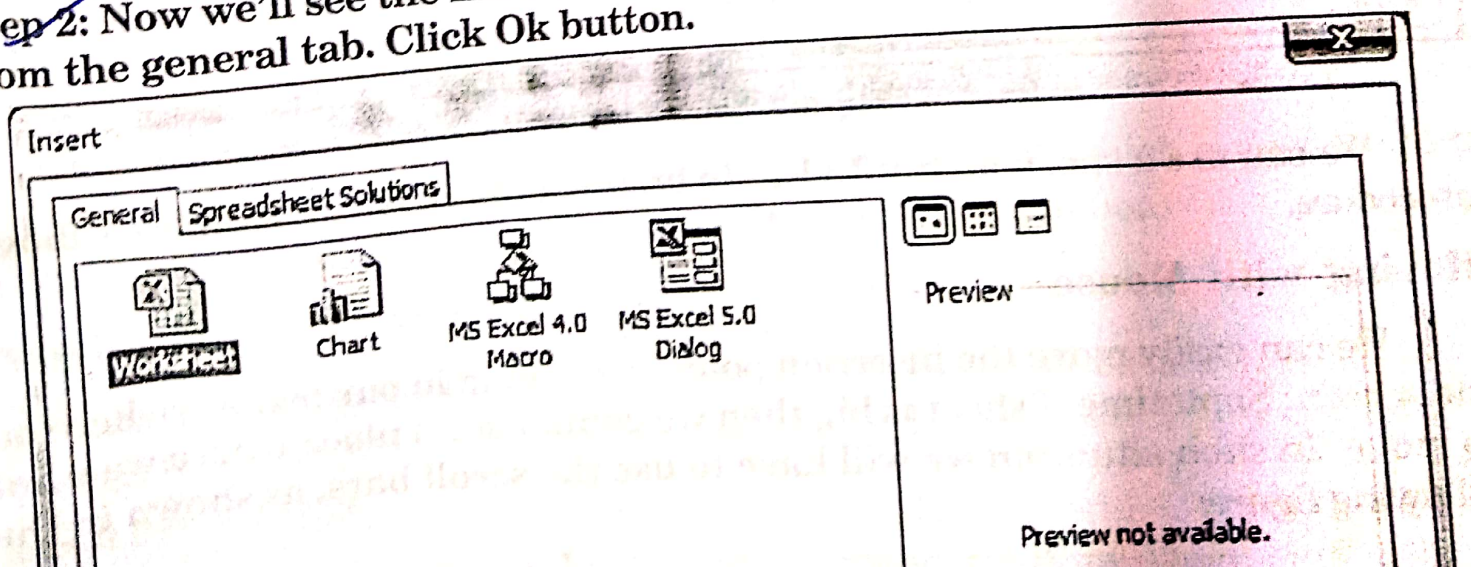


Fig 6.4 Insert option

Step 2: Now we'll see the Insert dialog with select Worksheet option as selected from the general tab. Click Ok button.



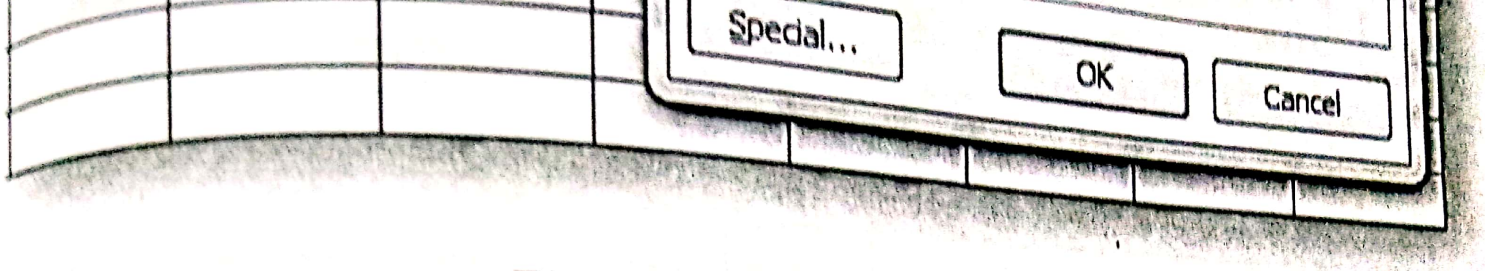
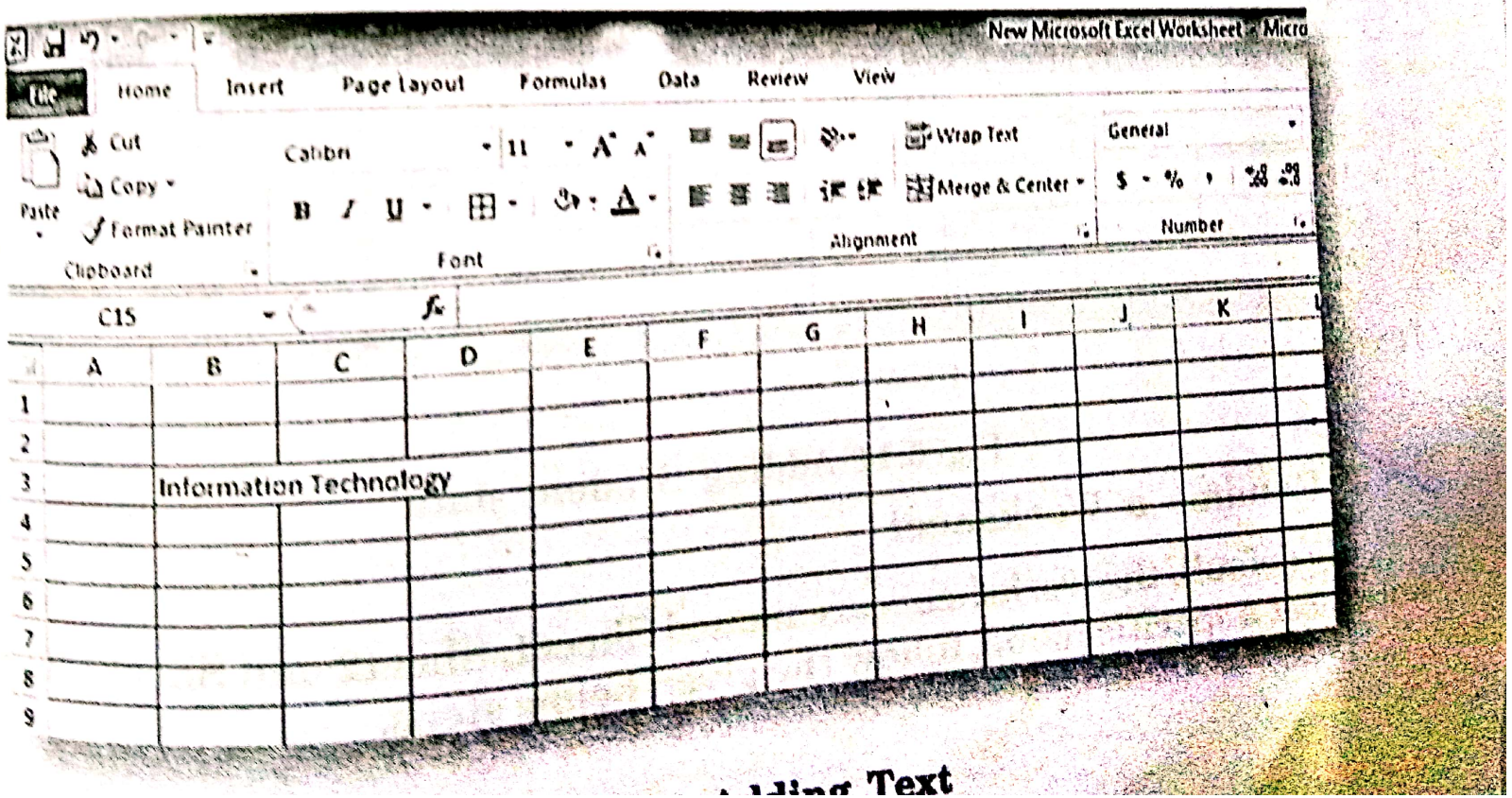


Fig 6.9 Go To Dialog Box

6.8.1 Entering data in worksheet

To enter data in to a work sheet, keep the mouse cursor at the text insertion point and start typing.Here it is typed only two words "Information Technology" as shown below. The text appears to the left of the insertion point as we type.



Adding Text

While entering data, there are three important points which would help us to move around the sheet:

1. Press Tab to go to next column.
2. Press Enter to go to next row.
3. Press Alt + Enter to enter a new line in the same column

Excel provides a number of ways to move around a sheet using the mouse and the keyboard. First let us create some sample text before we proceed. Open a new excel sheet and type any data. We've shown a sample data below.

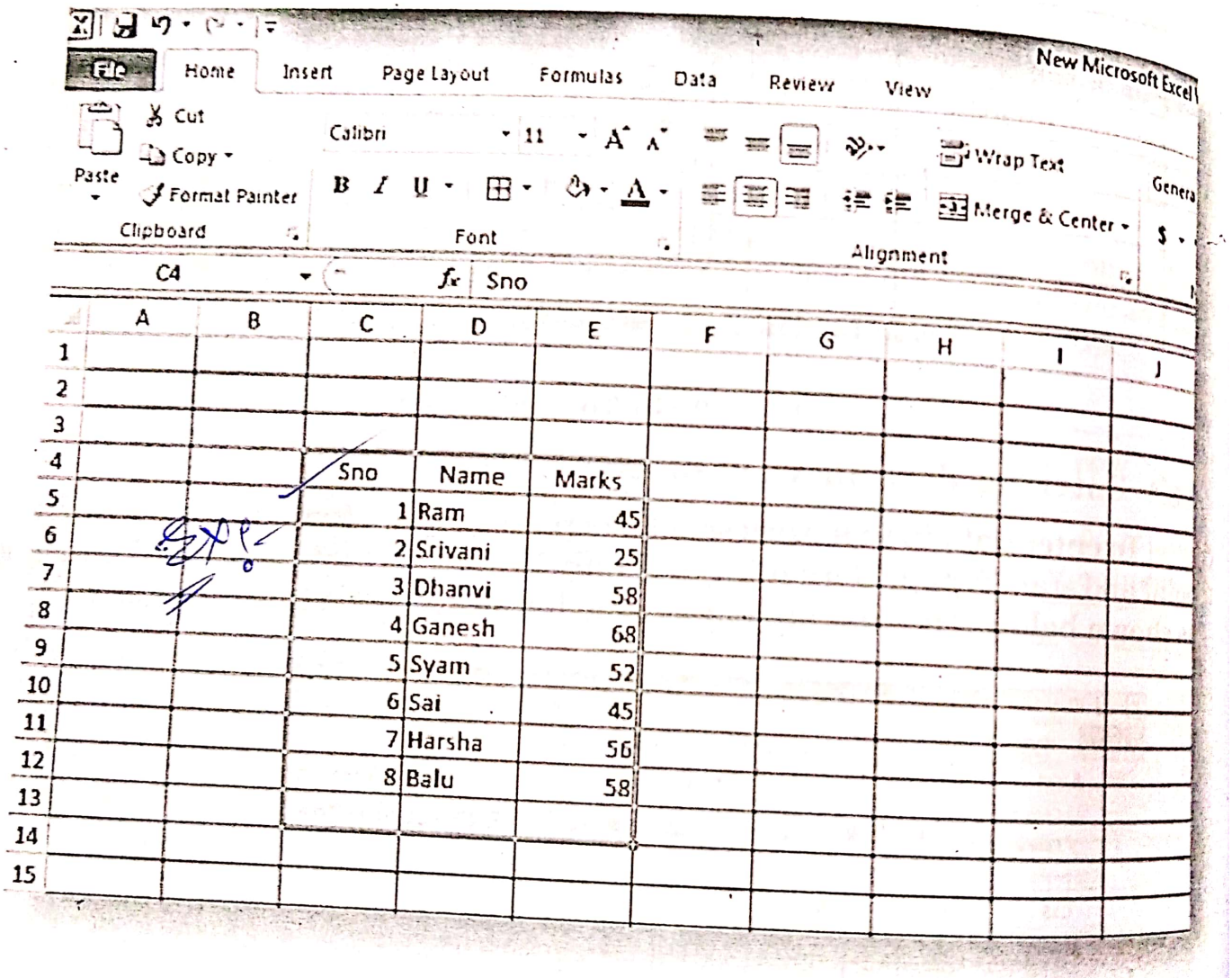


Fig 6.11 Adding Student data

6.8.2. Rename a Worksheet

By default, the worksheets are named Sheet1, Sheet2 and Sheet3. To give a worksheet a specific name, follow the given below steps.

4. Right click on the sheet tab of Sheet1.
3. Choose Rename.

6.8.3. Move a Worksheet

To move a worksheet, click on the sheet tab of the worksheet you want to move and drag it into the new position. For example, click on the sheet tab of Sheet3 and drag it before Sheet2. Now Sheet3 will be displayed before Sheet2.

6.8.4. Delete a Worksheet

To delete a worksheet, right click on a sheet tab and choose Delete.

6.8.5. Copy a Worksheet

Creating a copy of an existing work sheet is easy. Follow the given below steps.

1. Right click on the sheet.
2. Choose Move or Copy...

   The 'Move or Copy' dialog box appears.
3. Select (move to end) and check Create a copy.
4. Click OK.

6.8.6 Saving New Sheet

Once the data is typed in new excel sheet, it is better to save the sheet/ workbook to avoid losing work we have done on the sheet. Following are the steps to save an edited excel sheet:

Step 1: Click the File tab and select Save As option.

To ... characters in the Replace with box (or leave this box blank to replace the characters with nothing), and then click Find or Find All.

If needed, you can cancel a search in progress by pressing ESC.

To replace the highlighted occurrence or all occurrences of the found characters, click Replace or Replace All.

The AutoSum button is to quickly sum a row or a column of values in an Excel worksheet.

Filters can be applied in different ways to improve the performance of your worksheet. You can filter text, dates, and numbers. You can even use more than one filter to further narrow your results.

Clear All: All contents formatting and comments are cleared from the selected cell.

Number: This group has the options related to number formatting. In Excel, many number formats are available and each designed for a specific purpose.

The Number Group:

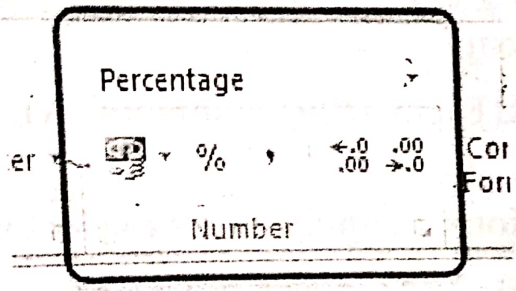


Fig 6.21 Number Group

The number group options

- Number format
- Currency
- Percentage
- Insert comma in number
- Increase decimal places
- Decrease decimal places

Applying number formats

- Click on the cells you wish to format
- Click on the Number format icon you require

Removing number formats

- Click on the cells you wish to clear the number formats from
- Click on the Number Format drop down
- Select the first option, General No specific format

The Styles Group

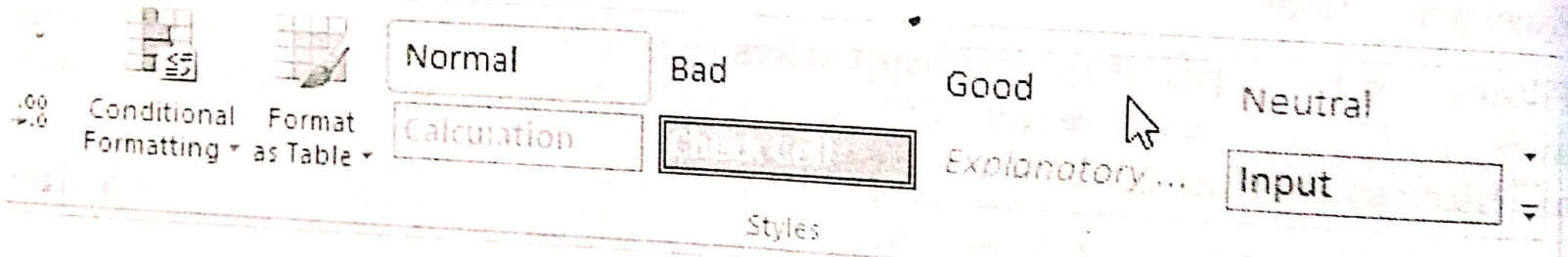


Fig 6.22 Styles Group

Conditional formatting:

- Select the cells you would like to format.
- Select the Home tab.
- Locate the Styles group.
- Click the C...

stock photography to illustrate a specific concept.

Shapes is an option to insert ready-made shapes, such as rectangles and circles, arrows, lines, flow chart symbols, and callouts.

Smart Art is used to insert a Smart Art graphic to visually communicate information. Smart Art graphics range from graphical lists and process diagrams to more complex graphics, such as Venn diagrams and organization charts.

Charts:Excel provides the means to display the information graphically. This can be done using Charts.

The various types of charts are:

- Column charts are used to compare values across categories. If chart data is selected, or the cursor is in or adjacent to the data, pressing F11 automatically creates a column chart.
- Line charts are used to display trends over time.
- Pie charts display the contribution of each value to a total. Use a pie chart when values can be added together or when you have only one data series and all values are positive.
- Bar charts are the best chart type for comparing multiple values.
- Area charts emphasize differences between several sets of data over a period of time.
- Scatter chart, also known as an X Y chart. This type of chart compares pairs of values. Use a Scatter chart when the values being charted are not in X-axis order or when they represent separate measurements.

- Other Charts includes stock, surface, doughnut, bubble, or radar chart.

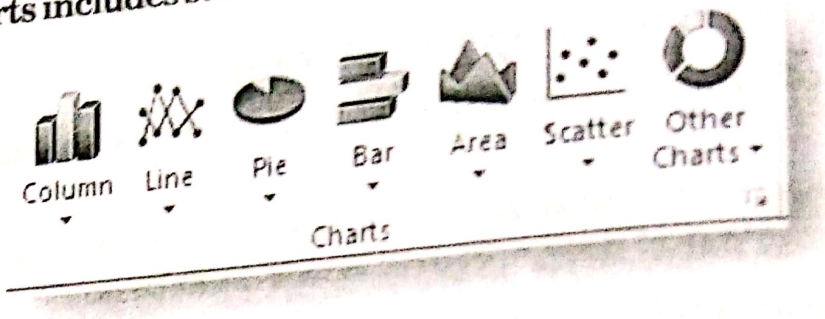


Fig 6.23 Types of Charts

Creating Charts:

Each chart represents data in its own style. We can customize the charts to make them more personalize, attractive and easy to analyze. Creating a chart is very easy. To create a chart follow the given below steps:

Step1 : Enter the data on which we want to make a chart. Some sample data is given in the following example.

Step 2: Select the range of data i.e. C4:E10 in the below example.

Step 3: On the Insert tab, in the Charts group, choose Bar, and select Clustered Bar.

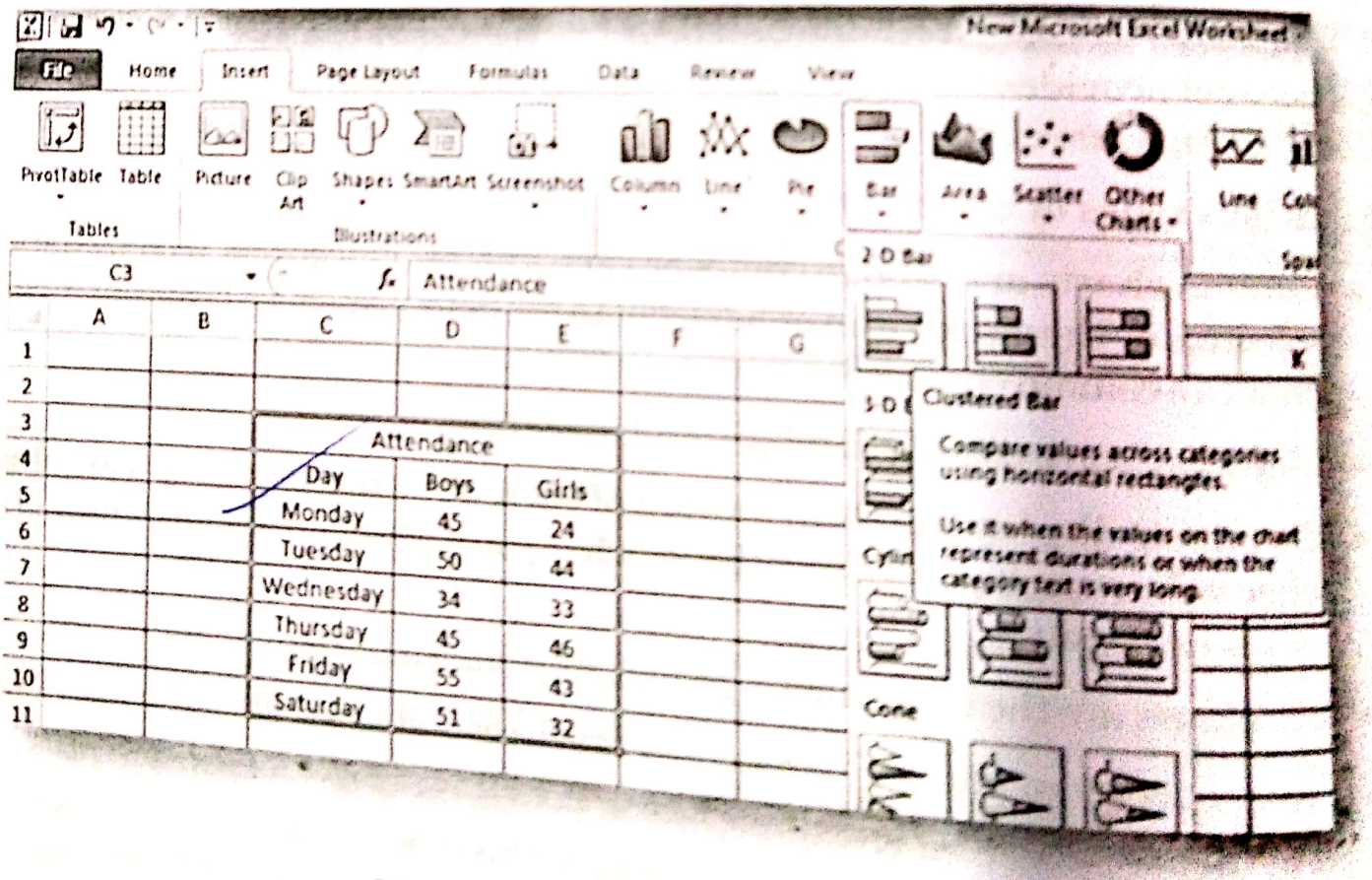


Fig 6.24 Selecting Bar Chart

Result:

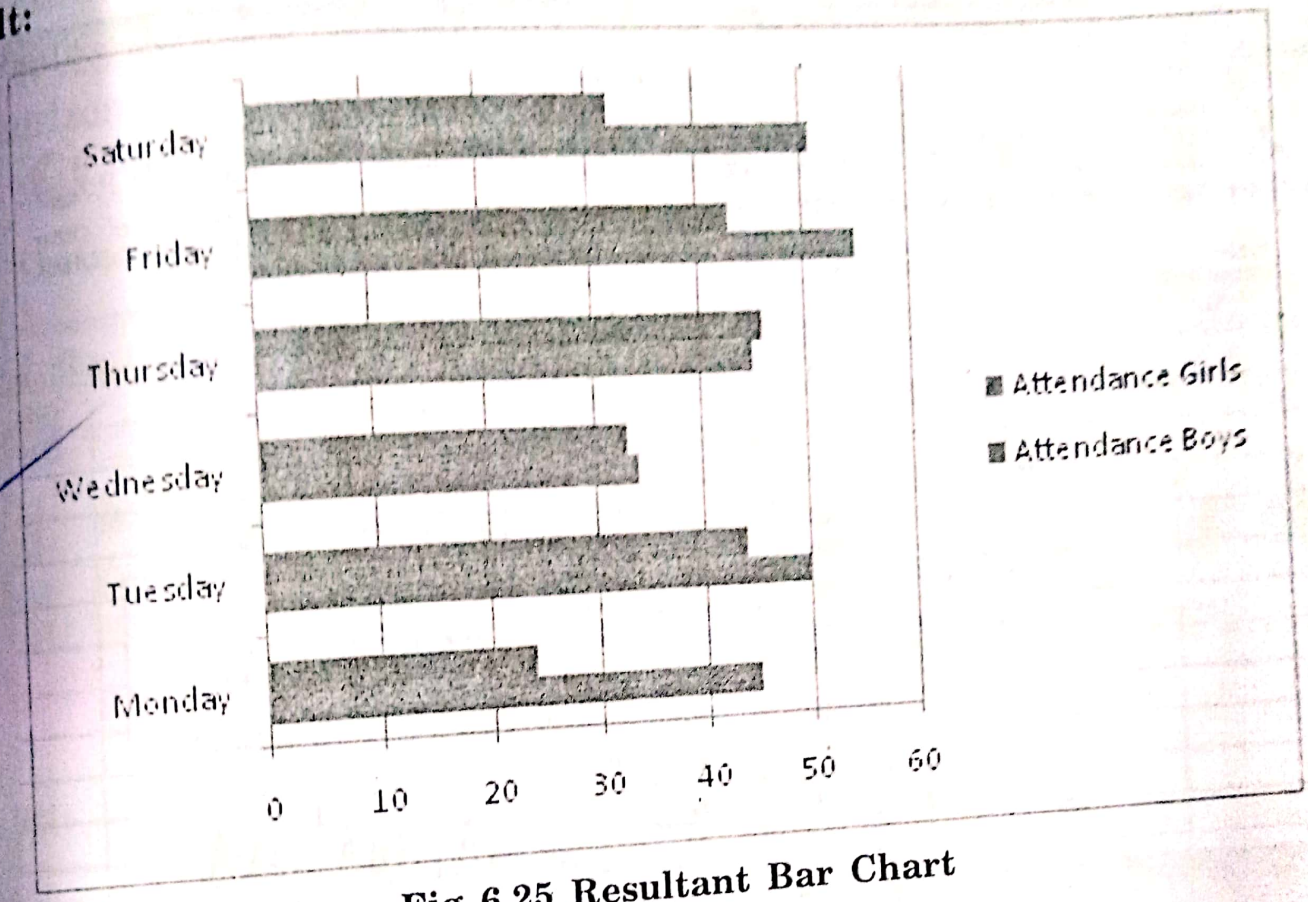


Fig 6.25 Resultant Bar Chart

Change Chart Type

We can easily change to a different type of chart at any time.

Step 1: Select the range of data on worksheet.

Step 2: On the Insert tab, in the Charts group, choose Column, and select Clustered Column.

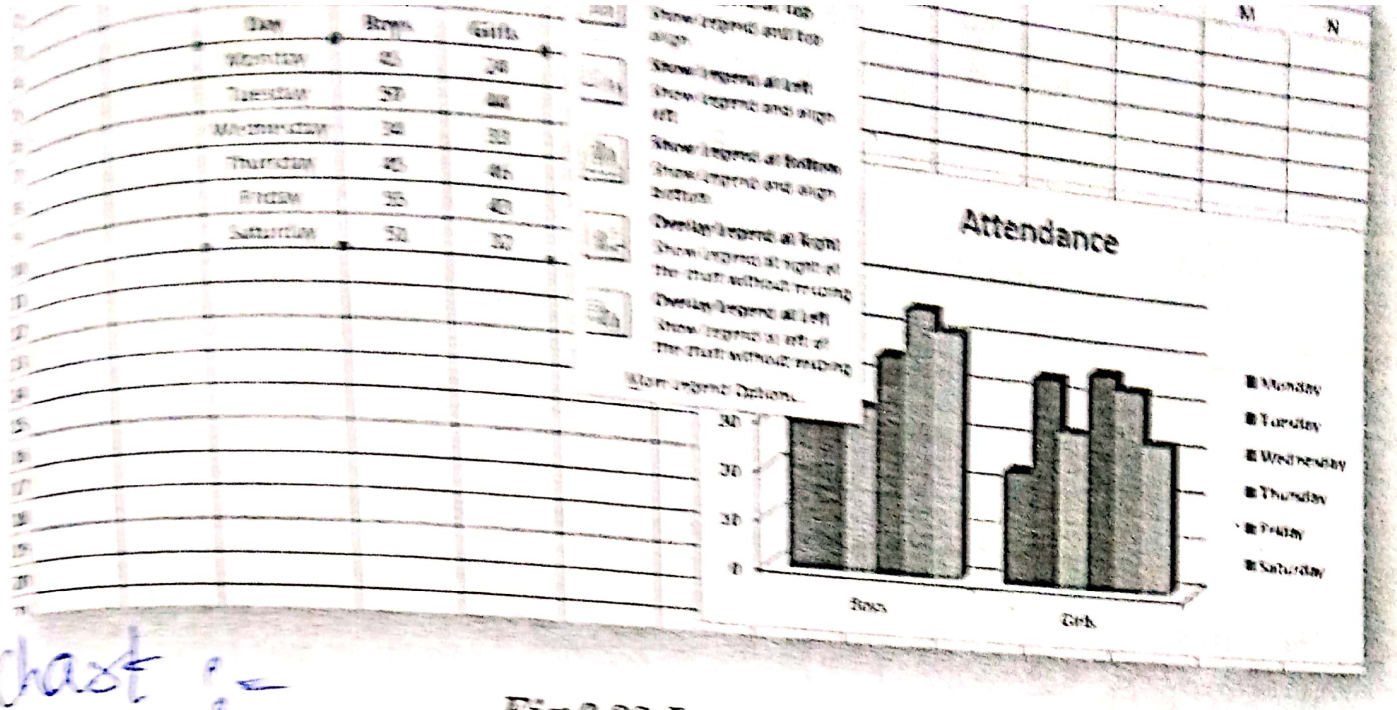


Fig 6.32 Legend Options

Data Labels

We can use data labels to focus readers' attention on a single data series or data point.

1. Select the chart. The Chart Tools contextual tab activates.
2. Click theblue bar to select the Monday students' data.
3. On the Layout tab, click Data Labels, Show.

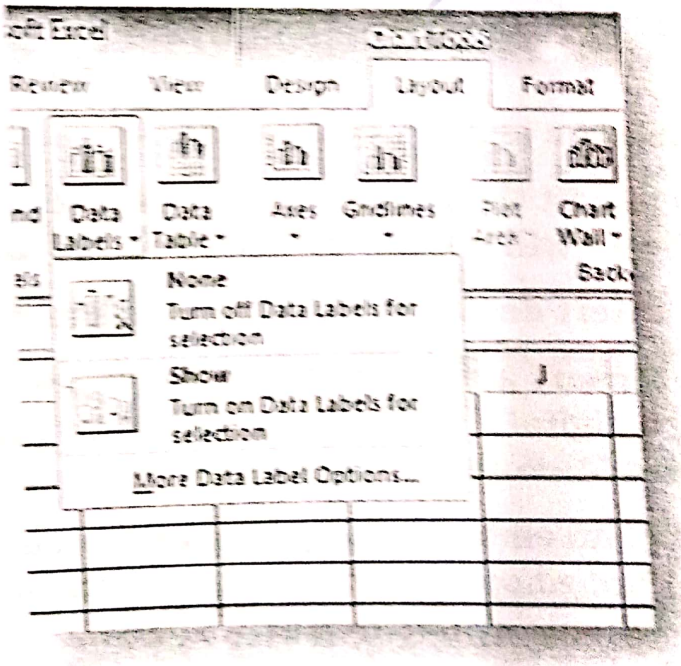


Fig 6.33 Data Labels selection

Group - Group objects together so that they can be treated like a single object.

Rotate - Rotate or flip the selected object.

6.9.4. Formulas Tab

Insert Function - Edit the formula in the current cell by choosing functions and editing the arguments. The keyboard shortcut to insert a function is Shift + F3.

Formulas and Functions

A formula is an expression which calculates the value of a cell. Functions are predefined formulas and are already available in Excel.A formula consists of special code which is entered into a cell. It performs some calculations and returns a result, which is displayed in the cell.Without formulas worksheet will be a just simple tabular representation of data.

Formulas use a variety of operators and worksheet functions to work with values and text. The values and text used in formulas can be located in other cells, which makes changing data easy and gives worksheets their dynamic nature. For example, we can quickly change the data in a worksheet and formulas works.

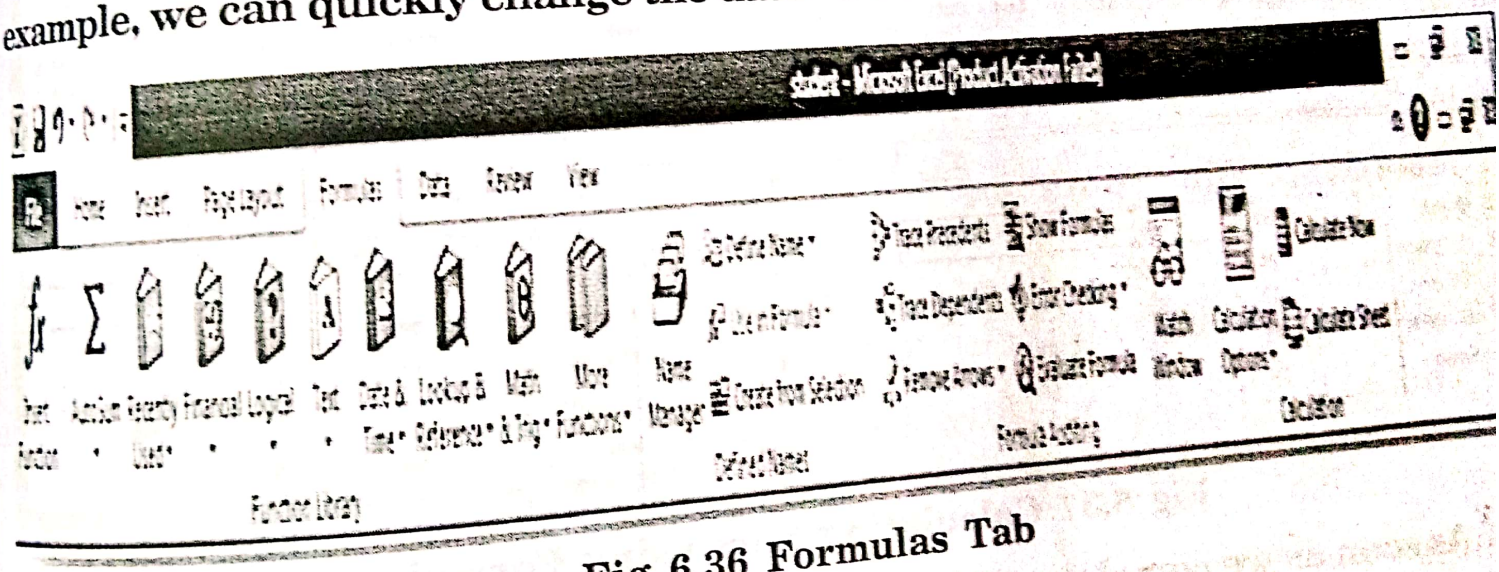


Fig 6.36 Formulas Tab

Elements of Formulas

A formula can consist of any of these elements:

1. Mathematical operators, such as +(addition) and - (subtraction)

   Example:=A1+A2 Adds the values in cells A1 and A2.

2. Values or text

Example:= 45*5 Multiplies 45 with 5. This formula uses only values, and it always returns the same result as 225.

3. Cell references (including named cells and ranges)

Example:=A1=B2 Compares cell A1 with cell B2. If the cells are identical, the formula returns TRUE; otherwise, it returns FALSE.

4. Worksheet functions (such as SUM or AVERAGE)

Example:=SUM (A1:A10) Adds the values in the range A1:A10

Creating Formula

For creating formula we need to type in Formula Bar.Formula begins with '=' sign. When building formulas manually, we can either type in the cell addresses or we can point to them in the worksheet. Using the Pointing method to supply the cell addresses for formulas is often easier and more powerful method of formula building. When we are using built-in functions, you click the cell or drag through the cell range that we want used when defining the function's arguments in the Function Arguments dialog box.See the followingexample.

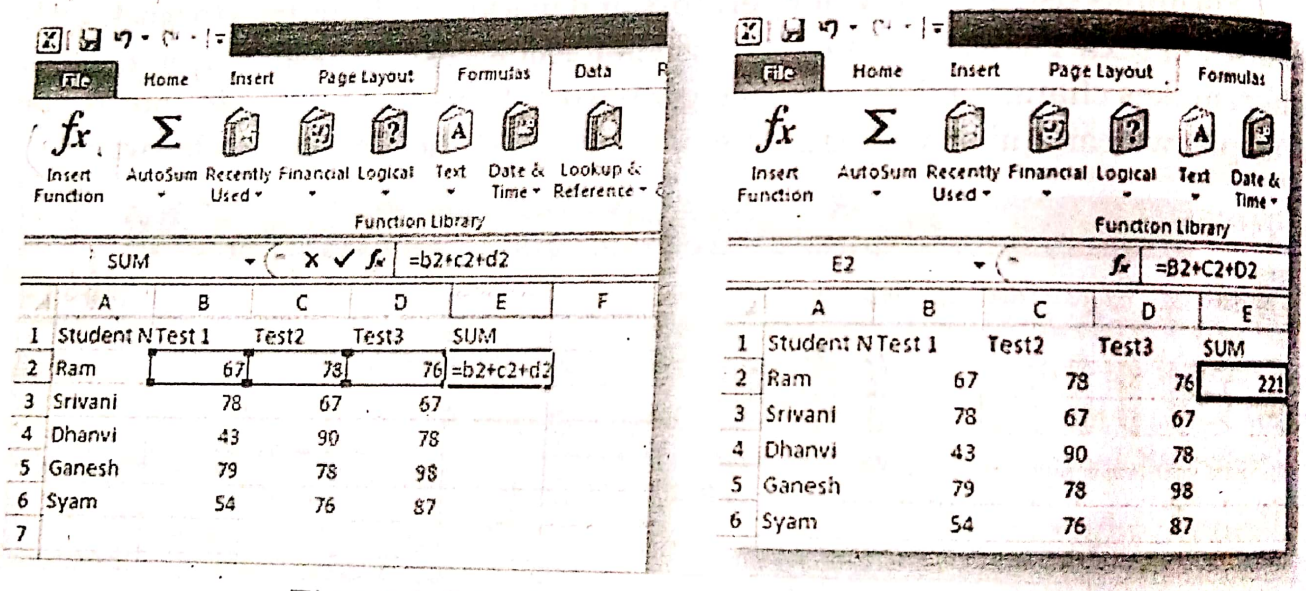


Fig 6.37 Calculating Sum using Formula

As soon as we complete a formula entry, Excel calculates the result, which is then displayed inside the cell within the worksheet (the contents of the formula, however, continue to be visible on the Formula bar anytime the cell is active). If we make an error in the formula that prevents Excel from being able to calculate the formula at all, Excel displays an Alert dialog box suggesting how to fix the problem.

Cell references in Formulas

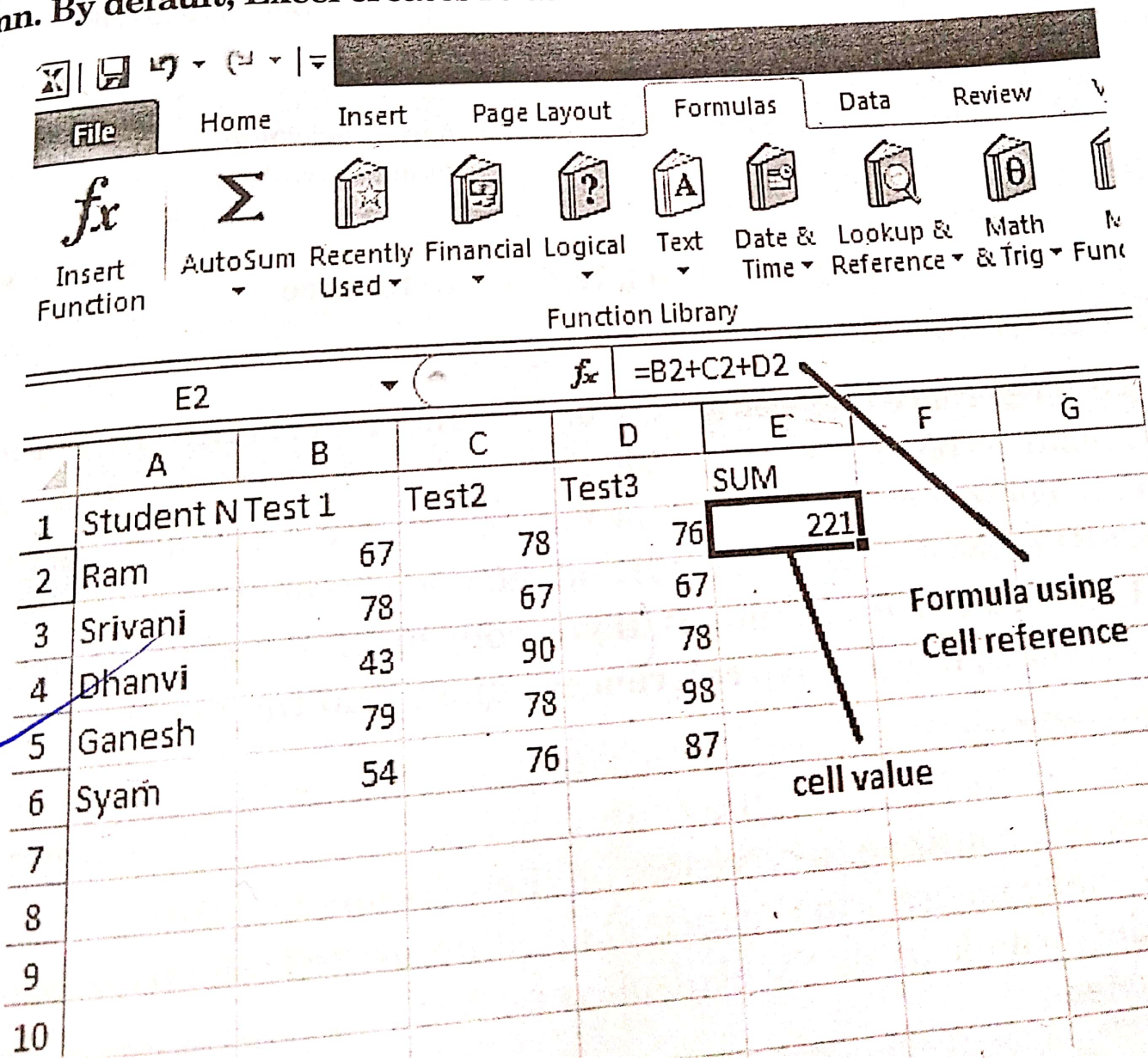
Most formulas we create include references to cells or ranges. These references enable our formulas to work dynamically with the data contained in those cells or ranges. For example, if our formula refers to cell D2 and we change the value contained in D2, the formula result reflects new value automatically.If we didn't use references in our formulas, we would need to edit the formulas themselves in order to change the values used in the formulas.

When we use a cell (or range) reference in a formula, there are three types of references:

1. Relative references
2. Absolute references
3. Mixed references

Relative Cell References

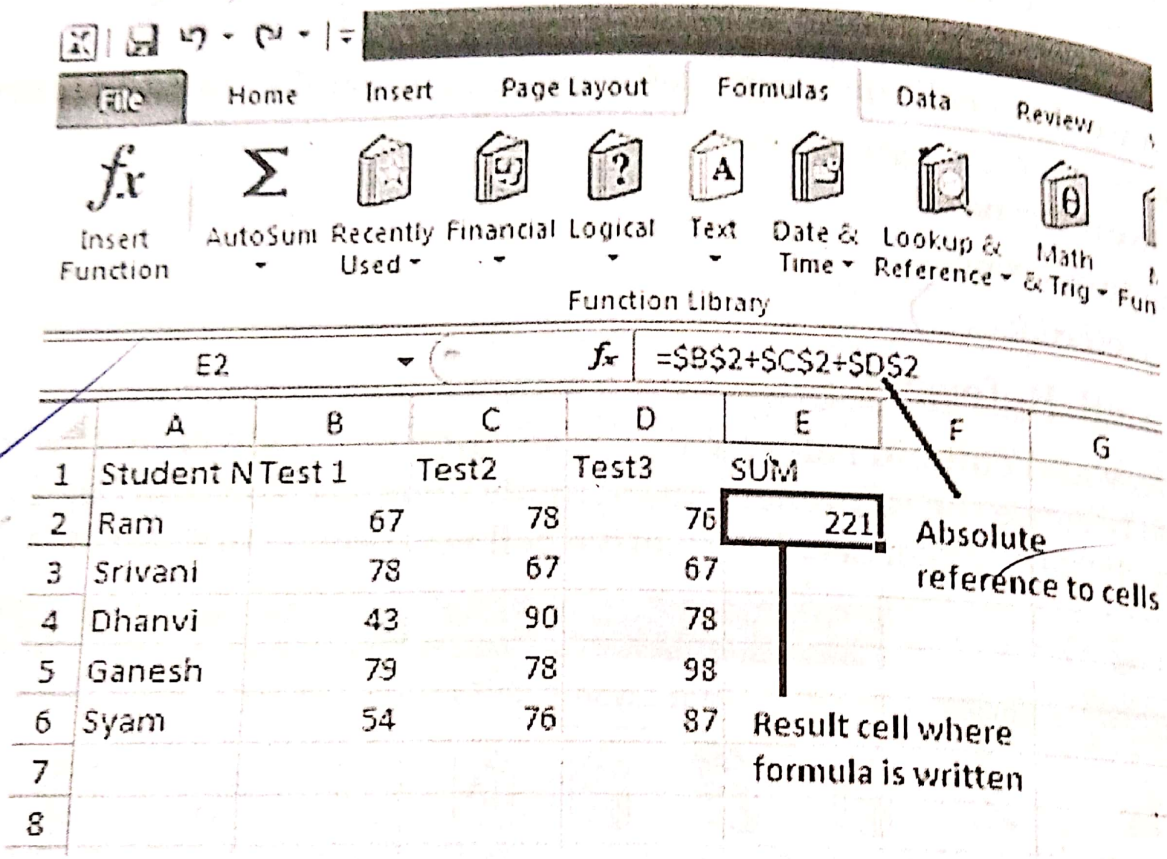
The row and column references can change when we copy the formula to another cell because the references are actually matches from the current row and column. By default, Excel creates relative cell references in formulas.



	A	B	C	D	E	F	G
1	Student N	Test 1	Test2	Test3	SUM		
2	Ram	67	78	76	221		
3	Srivani	78	67	67			
4	Dhanvi	43	90	78			
5	Ganesh	79	78	98			
6	Syam	54	76	87			
7							
8							
9							
10							

Absolute Cell References

The row and column references do not change when we copy the formula because the reference is to an actual cell address. An absolute reference uses two dollar signs in its address: one for the column letter and one for the row number (for example, E2).

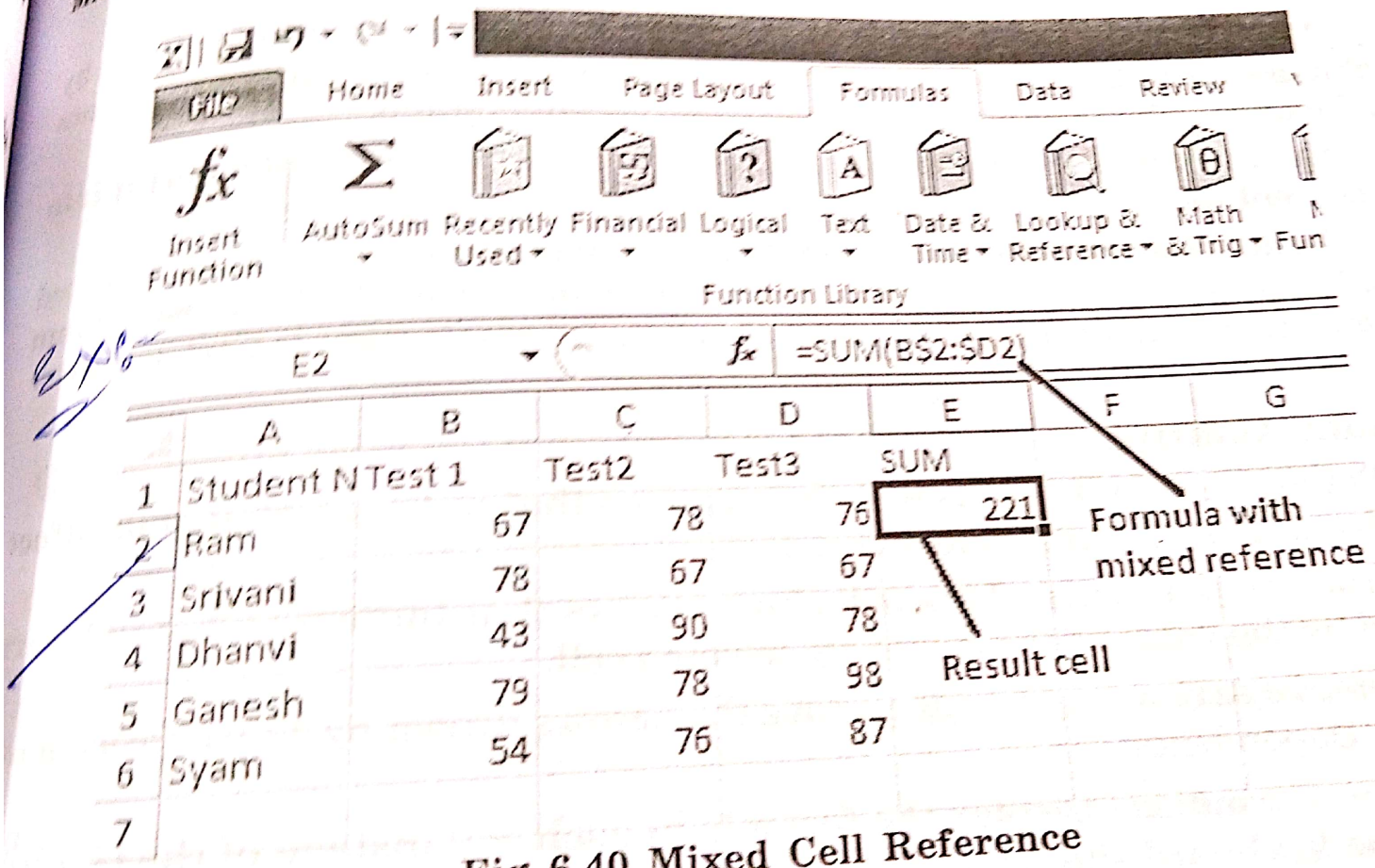


	A	B	C	D	E	F	G
1	Student N	Test 1	Test2	Test3	SUM		
2	Ram	67	78	76	221		
3	Srivani	78	67	67			
4	Dhanvi	43	90	78			
5	Ganesh	79	78	98			
6	Syam	54	76	87			
7							
8							

Fig 6.39 Absolute Cell Reference

Mixed Cell References

A mixed cell reference is either an absolute column and relative row or abso row and relative column. When we add the $ before the column letter we cr an absolute column or before the row number we create an absolute row. example, $B1 is absolute for column B and relative for row 1, and B$1 is abs for row 1 and relative for column B. If you copy or fill the formula across or down columns, the relative references adjust, and the absolute ones adjust.



	A	B	C	D	E	F	G
1	Student N	Test 1	Test2	Test3	SUM		
2	Ram	67	78	76	221		
3	Srivani	78	67	67			
4	Dhanvi	43	90	78			
5	Ganesh	79	78	98			
6	Syam	54	76	87			
7							

Fig 6.40 Mixed Cell Reference

nction Library:

oSum - Display the sum of the selected cells directly after the selected cells.

keyboard shortcut for auto sum is Alt + =.

elect from a list of recently used functions.

Fig 6.41 Data Tab

Get external data:

Instead of entering data in a worksheet every time, we can import data from other files like from MS-Access, from a web page, from a text file etc. using the options in this group.

Connections:

This section of commands is useful in handling links to external data sources.

Filtering the data:

Filters can be applied in different ways to improve the performance of our worksheet. We can filter text, dates, and numbers. We can even use more than one filter to further narrow our results. Filtering is a quick and easy way to find and work with a subset of data in worksheet. Filters enable us to quickly find all the entries for a particular item, e.g. a student name or marks in a large worksheet. Filters allow us to select just the data we need, and to hide any data that is not relevant to our search. We can also create your own filters, such as figures within a specific range or above a particular amount.

Preparing to filter

Ensure the data in your worksheet is neat and tidy and you will find filtering easy. Use the following guidelines to prepare your data:

Use headings	The top row of each column should have a heading.
Don't mix the data	The data in a column should all be the same type. Don't mix text and numbers.
Don't interrupt	Don't have blank rows or columns. Individual blank cells are OK
Keep separate	The data to be filtered should be in its own worksheet. If not, separate it from other data with a blank row or column

Table 6.3 Guidelines to prepare a Filter

Filtering with Auto Filter

The AutoFilter feature in Excel provides a quick way ofcreating a filter.

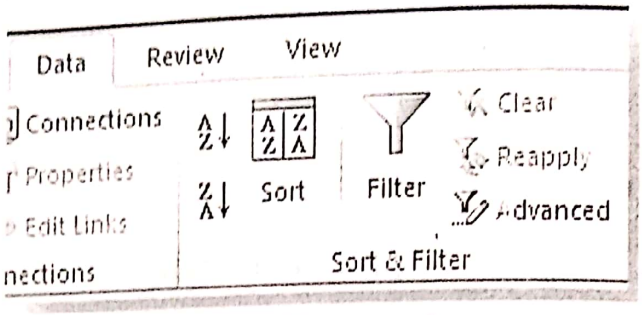


Fig 6.42 Filter options

Filtering Text

To use AutoFilter, click in a cell containing a text data item. Then, on the Data tab, select Filter

To begin filtering, click on the down arrow next to the column heading. Excel displays a list of options as well as all the items inthe column.

To see the data for just one item either remove the ticks from the items you do not wish tosee or choose Text Filters, Equals and type the text item for which we want to see the data in the box that appears.

All the other rows on theworksheet will be hidden

We can continue to refine our data by filtering on other columns.The row numbers will appear in blue and thedrop down arrow will change to a filter symbol when we have applied a filter.We will see thenumber of records found in the status bar at the bottom of the screen.

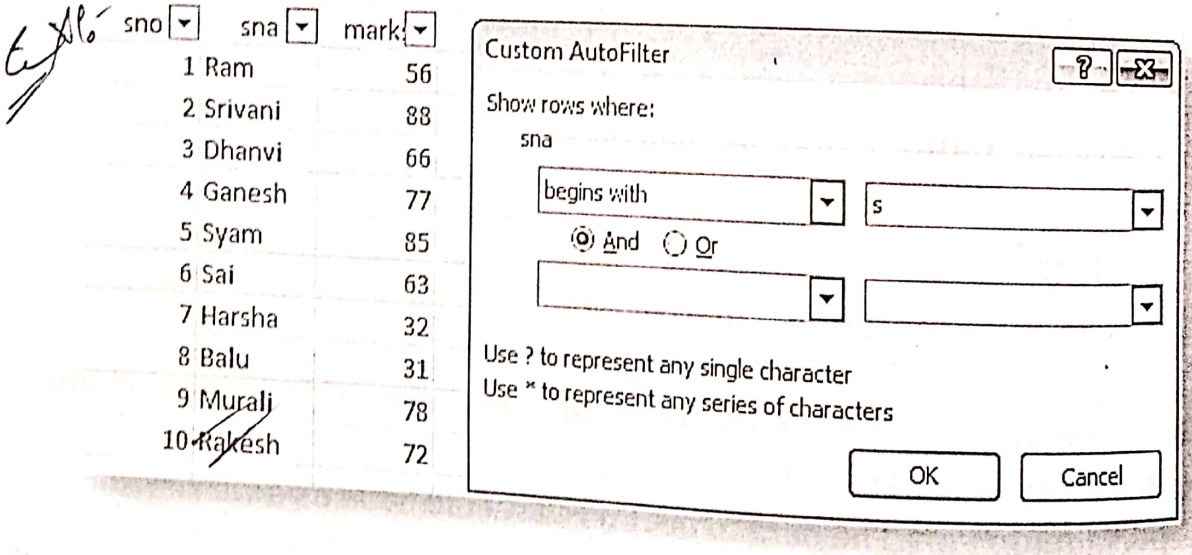


Fig 6.43 Auto FilterDialog Box

In the above example, we are trying to display only names start with "S".

Filtering Numbers:

Filtering numbers is more customized in Excel. We can filter the numbers on given criteria. Searching for the Top 10 is also available when filtering a columnof numbers. This option does more than its name suggests.With it we can actually find the top or bottom 1 to 500 items.You can also filter by percentage of total rows in a column.

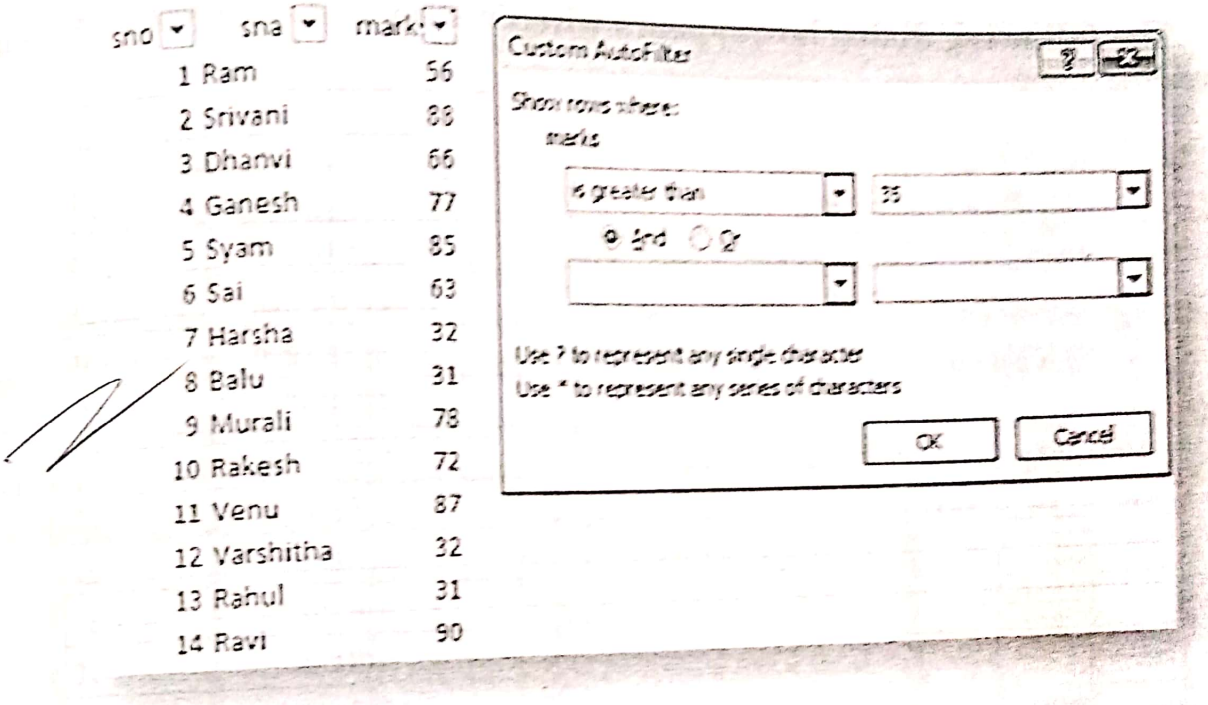


Fig 6.44 Filtering Numbers

In the above example, we are trying to display marks greater than 35. To perform this, from the Number Filters menu click on Greater Than..

A Custom AutoFilter box appears; enter the criteria to filter the data. Here we are trying to display the marks greater than 35. We can also use multiple conditions by using logical operators Andand Or.

Sorting

Sorting is a common task that allows us to change or customize the order of our spreadsheet data. Sorting data is an integral part of data analysis. We can sort data by text (A to Z or Z to A), numbers (smallest to largest or largest to smallest), and dates and times (oldest to newest and newest to oldest) in one or more columns.

Sort text

Select a column of alphanumeric data in a range of cells, or make sure that the active cell is in a table column containing alphanumeric data.

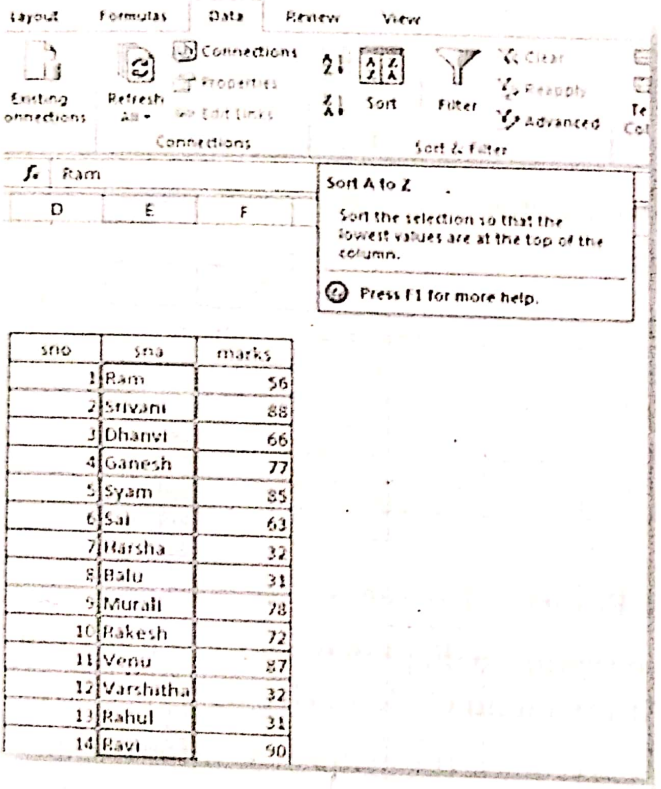
On the Data tab, in the Sort & Filter group, do one of the following:

To sort in ascending alphanumeric order, click A to Z command in Excel that sorts A to Z or smallest number to largest Sort A to Z.

To sort in descending alphanumeric order, click Z to A command in Excel that sorts Z to A or largest number to smallest Sort Z to A.

Here we are trying to sort the names in ascending order.

The following dialog box appears when we try to arrange the data in ascending order.



sno	sna	marks
1	Ram	56
2	Srivani	88
3	Dhanvi	66
4	Ganesh	77
5	Syam	85
6	Sai	63
7	Harsha	32
8	Balu	31
9	Murali	78
10	Rakesh	72
11	Venu	87
12	Varshitha	32
13	Rahul	31
14	Ravi	90

sno	sna	marks
1	Balu	56
2	Dhanvi	88
3	Ganesh	66
4	Harsha	77
5	Murali	85
6	Rahul	63
7	Rakesh	32
8	Ram	31
9	Ravi	78
10	Sai	72
11	Srivani	87
12	Syam	32
13	Varshitha	31
14	Venu	90

Fig 6.45 Sorting Names

Sorting multiple columns:

Excel allows us to identify which columns to sort by and when, giving us more control over the organization of our data. To sort multiple columns in Excel, highlight the data that you wish to sort. Then select the Data tab from the toolbar at the top of the screen and click on the Sort button in the Sort & Filter group.

sno	sna	marks
1	Balu	56
2	Dhanvi	88
3	Ganesh	66
4	Harsha	77
5	Murali	85
6	Rahul	63
7	Rakesh	32
8	Ram	31
9	Ravi	78
10	Sai	72
11	Srivani	87
12	Syam	32
13	Varshitha	31
14	Venu	90

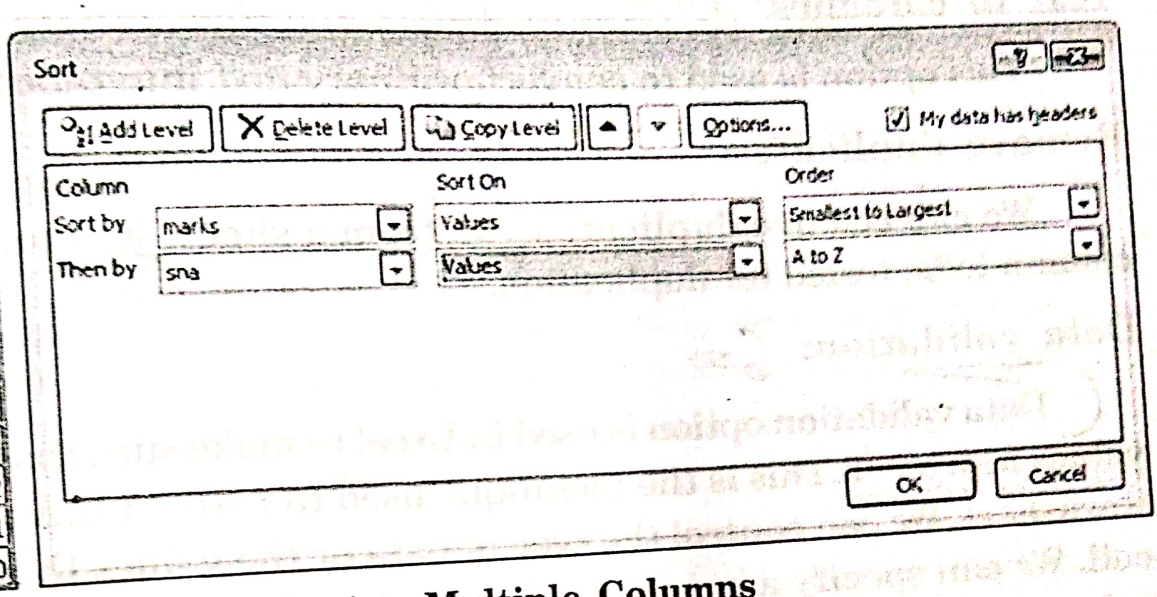


Fig 6.46 Sorting Multiple Columns

When the Sort window appears, select the first column to be sorted. In this example, we want to sort by the marks column in smallest to largest.

Then click on the "Add Level" button. Enter the second column that you wish to sort by. Here we want to sort next by the name column in ascending order. Then click on the OK button.

sno	sna	marks
8	Ram	31
13	Varshitha	31
7	Rakesh	32
12	Syam	32
1	Balu	56
6	Rahul	63
3	Ganesh	66
10	Sai	72
4	Harsha	77
9	Ravi	78
5	Murali	85
11	Srivani	87
2	Dhanvi	88
14	Venu	90

Result of Multiple Columns Sorting

Text to columns:

This option is used to convert ordinary text into tabular columns.

Remove duplicates:

We can remove duplicate rows from a sheet. We can also specify which column to be tested for duplication.

Data validation:

Data validation option is used in Excel to make sure that users enter certain values into a cell.This is the technique used to restrict unwanted values in to a worksheet. We can control the type of data or the values that users enter in to a cell. We can specify a range of values to be allowed and we can make a list of values to be selected from a drop down list.

A student admission form is given as the example here. The value for age field must be between 3 and 5. Let us see how it is done.

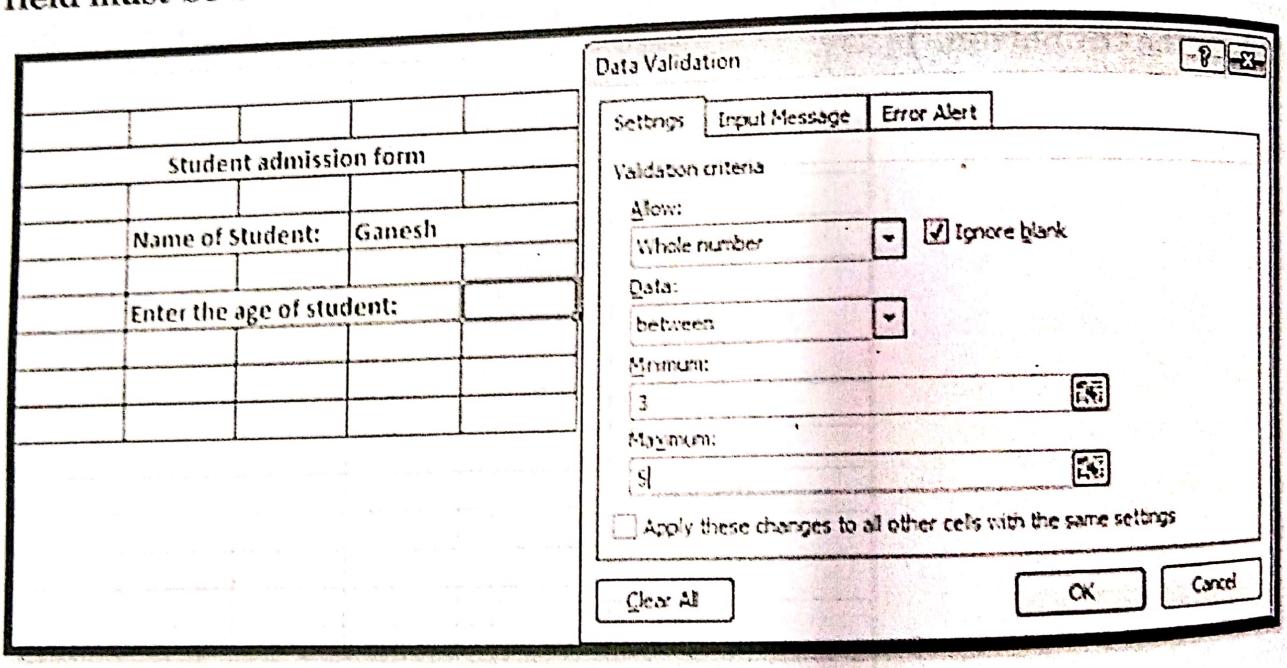


Fig 6.48 Data Validation Settings

Place the cursor where the data validation rules to be applied. Click Data Validation option on Data tab. Data Validation window will be opened. There are the options to enter which type of data to be allowed, the relational operator to be used and the range of data to be entered.

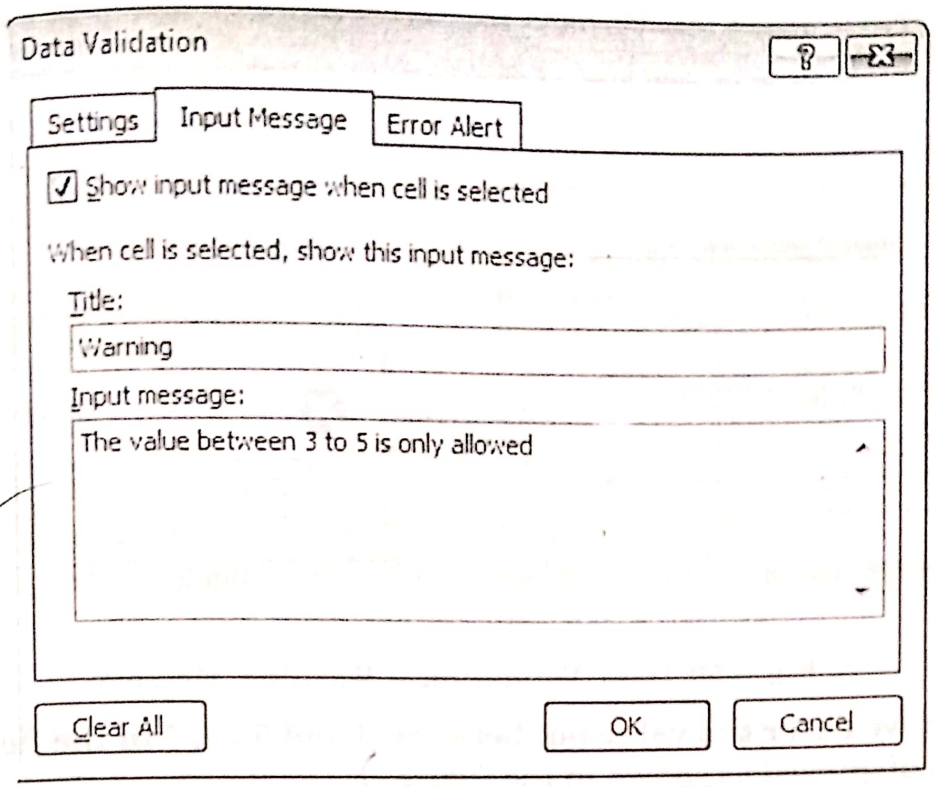


Fig 6.49 Data Validation – Input Message

In the Input Message tab we can type the message to be displayed when the particular cell is selected where the data validation rule is applied

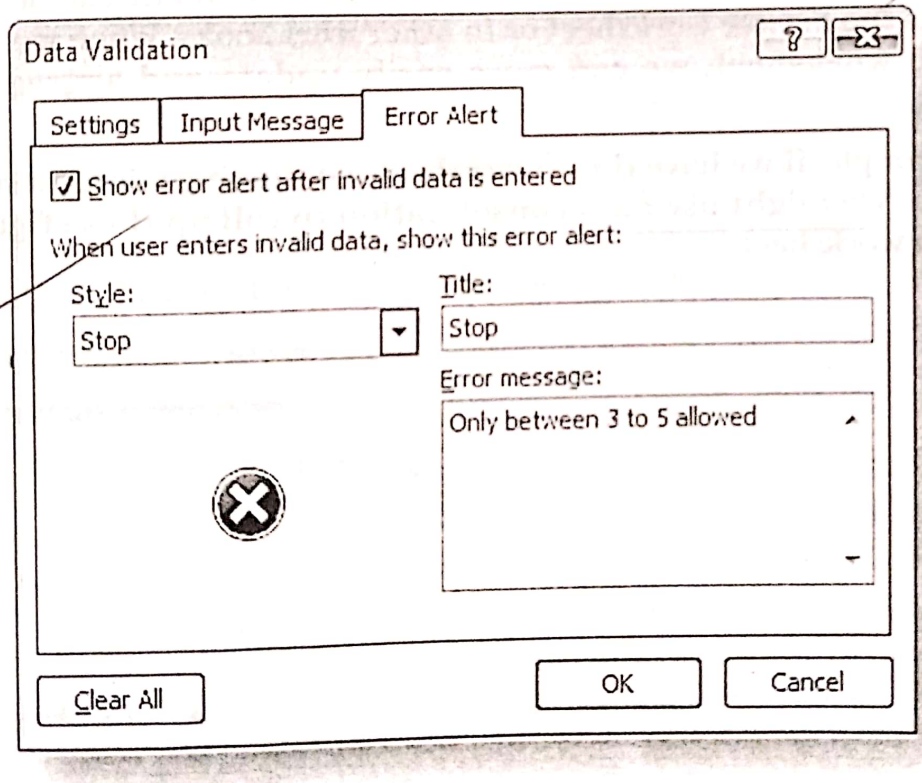


Fig 6.49 Data Validation – Error Alert

In the Error Alert tab, we can enter error message when user enters invalid data.

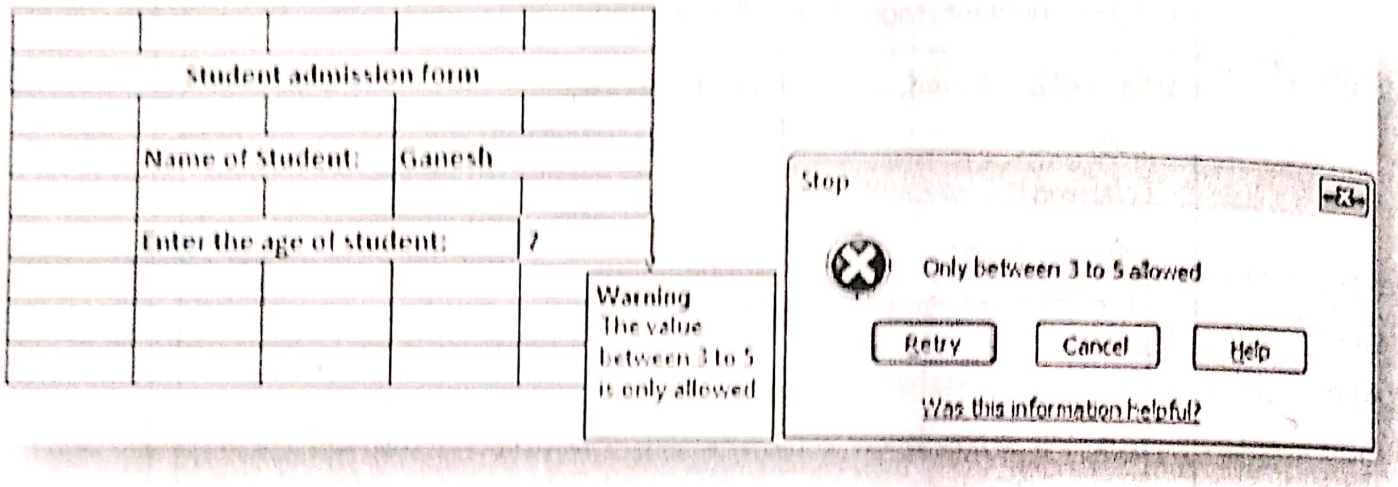


Fig 6.50 Data Validation – Warning Message

When we enter the value not between 3 and 5 i.e. 7 in the field, an error message is displayed as shown in the figure.

Consolidate:

This tool is used to summarize and report results from data on separate sheets into a single worksheet. The worksheets we consolidate can be in the same workbook as the master worksheet or in other workbooks. When we consolidate data in one worksheet, we can more easily update and aggregate it on a regularbasis.

For example, if we have three worksheets containing marks of students for each month, we might use data consolidation to roll up these figures into a consolidated worksheet.