

Code No. 350

Senior Secondary Course

Employability Skills

Book - 2



NATIONAL INSTITUTE OF OPEN SCHOOLING

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A Word With You

Dear Learner,

Welcome to the course on Employability Skills!

You have just taken your first step towards realizing your goals. Often the most difficult part is to make a beginning. However, once you begin, you would want to keep improving and become the best that you can be. On this journey of personal growth, you will discover that there is much knowledge and wisdom to be gained – insights about yourself, about others, about life and about things around you. Let us begin this journey of learning with joy.

The new course has been designed to equip you with values, attitude and behavior for sustainable employability. Nineteen lessons in four modules will take you through the path of building aspirations, practicing communication skills, negotiating the world of web and leaning the intricacies of entrepreneurship. All the lessons are related to life experiences. The lessons will equip you with the skills of responding to challenging situations in logical, sensitive and positive ways without harming self and society and optimizing opportunities.

These life skills enriched materials aim at empowering you to enhance not only your academic but also personal and social competencies. Along with subject knowledge, you would have the ability to discriminate between right and wrong and take the correct decision regarding your life and career.

During the course of study, you will find a number of activities, including intext questions, in the lessons. Do make a sincere effort to attempt them. While activities have been carefully designed to provide you an opportunity to learn and practice, the intext questions and Tutor Marked Assignments (TMA) help you assess the extent of your learning. Attempting these will aid in developing life skills without any extra effort.

You would also have to make a portfolio that will be evaluated in practical examinations. The activities of portfolio are built from first lesson onwards. To know what is expected of you, read the curriculum and sample question paper given at the end of your study materials.

I hope you will find these life skills enriched study materials rewarding and helpful in your personal and professional life.

Chairman, NIOS

How to use the Study Material

Congratulation! You have accepted the challenge to be a self-learner. NIOS is with you at every step and has developed the material “Employability Skills” with the help of a team of experts, keeping you in mind. A format supporting independent learning has been followed. If you follow the instructions given, then you will be able to get the best out of this material. The relevant icons used in the material will guide you. These icons have been explained below for your convenience.

Title: will give a clear indication of the contents within. Do read it.

Introduction: This will introduce you to the lesson linking it to the previous one.



Objectives: These are statements that explain what you are expected to learn from the lesson. The objectives will also help you to check what you have learnt after you have gone through the lesson. Do read them.



Notes: Each page carries empty space in the side margins, for you to write important points or make notes.



Intext Questions: Very short answer self check questions are asked after every section, the answers to which are given at the end of the lesson. These will help you to check your progress. Do solve them. Successful completion will allow you to decide whether to proceed further or go back and learn again.



What You Have Learnt: This is the summary of the main points of the lesson. It will help in recapitulation and revision. You are welcome to add your own points to it also.



Terminal Exercise: These are long and short questions that provide an opportunity to practice for a clear understanding of the whole topic.



Do You Know: This box provides additional information. The text in boxes is important and must be given attention. It is not meant for evaluation, but only to improve your general knowledge.



Answers : These will help you to know how correctly you have answered the questions.

Activities: *Certain activities have been suggested for better understanding of the concept.*

www

Web site: These websites provide extended learning. Necessary information has been included in the content and you may refer to these for more information.

Course Overview



Module I: The Employee Everyone would like to Employ

1. Let us find ourselves!
2. Connecting the Dots
3. The Leader in Me

Module II: Expression and Communication

4. From Confusion to Clarity
5. Developing the Self
6. Be Well Do Well
7. Leading, Not Bossing
8. Effective Communication: A Life Long Asset



Module III: Going Digital

9. Working Smart: Introduction to Computers
10. Spreadsheets
11. Presentations
12. You in the World of Web
13. E business
14. Cyber Security



Module IV: Be Your Own Boss

15. Who is an Entrepreneur?
16. Co-existing within the Business Ecosystem
17. Know your Business Processes
18. Know the External Business Environment
19. Be an Ethical Entrepreneur
20. Know your Tax System – Goods and Services Tax



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MODULE III: GOING DIGITAL

09. Working Smart: Introduction to Computers
10. Spreadsheets
11. Presentations
12. You in the World of Web
13. E business
14. Cyber Security



9

WORKING SMART: INTRODUCTION TO COMPUTERS

We are surrounded by technology. The world is shrinking due to technological advancements. To match with the pace of growth, one needs to remain updated. It becomes important to be familiar with the tools and components of technology that are being used these days. In this lesson, we will discuss about the basics of computer and learn to work smart. Sit back, relax and let us begin the journey to become smart.

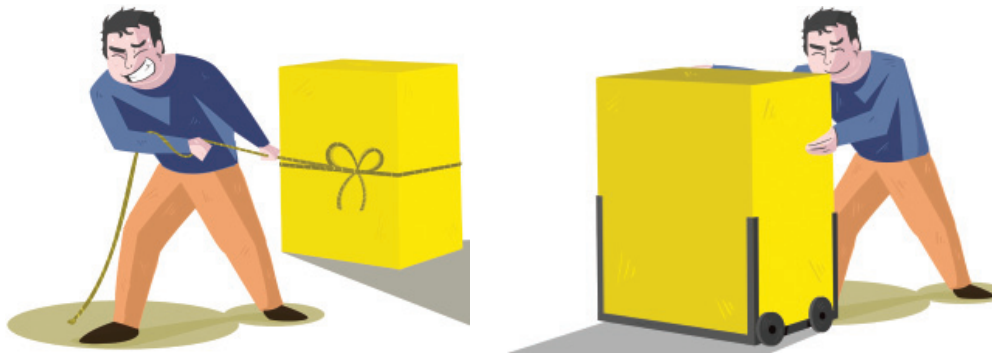


Fig. 9.1: Smart Work vs. Hard Work



OBJECTIVES

After studying this lesson, you will be able to

- explain the difference between hardware and software;
- categorize software; and
- work on a word processing software.

Going Digital



Notes

9.1 GETTING TO KNOW YOUR COMPUTER

As we know, a computer is a combination of hardware and software. Both are equally important to operate the computer. Let us know more about them.

1. **Hardware** – Hardware refers to the physical parts of the computer. Every component (internal and external) that can be touched is called Hardware. You must have heard words such as mouse, speakers, motherboard, hard drive and so on. All these are examples of hardware. They are further divided into three categories:
 - (i) Input devices that are used to give information to the computer
 - (ii) Processing device that work on the information given by the user
 - (iii) Output devices that give the result back to the user

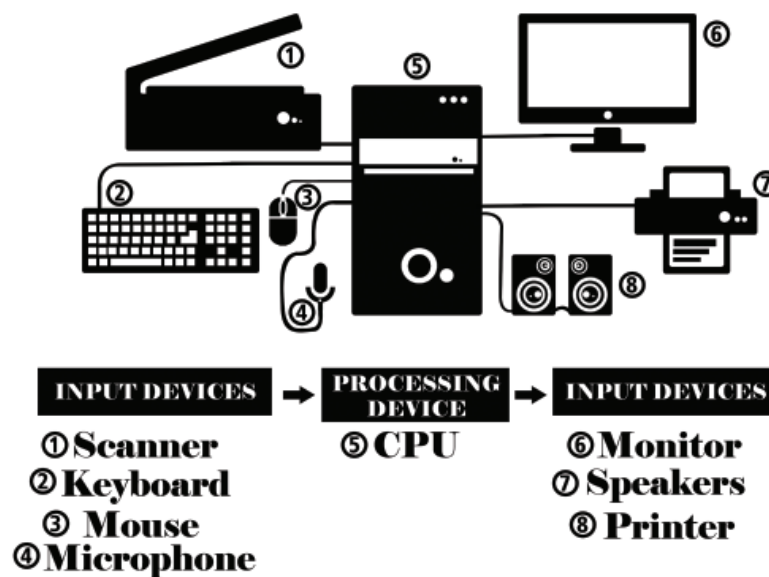


Fig. 9.2: Computer Hardware-Input /Output Devices

2. **Software** – Software is commonly defined as a set of instructions or programs instructing a computer to do specific tasks. Unlike hardware, software cannot be touched but is visible and we can work only become of them. For example, games, MS Word, Oracle ERP, SAP, Adobe Photoshop, Corel Draw and others. They are further classified into two categories as follows:
 - (i) System software
 - (ii) Application software

We will discuss about these as we progress.

Activity 9.1. You must already be familiar with computer and its parts. Solve the crossword puzzle using the hints given below. All the best!

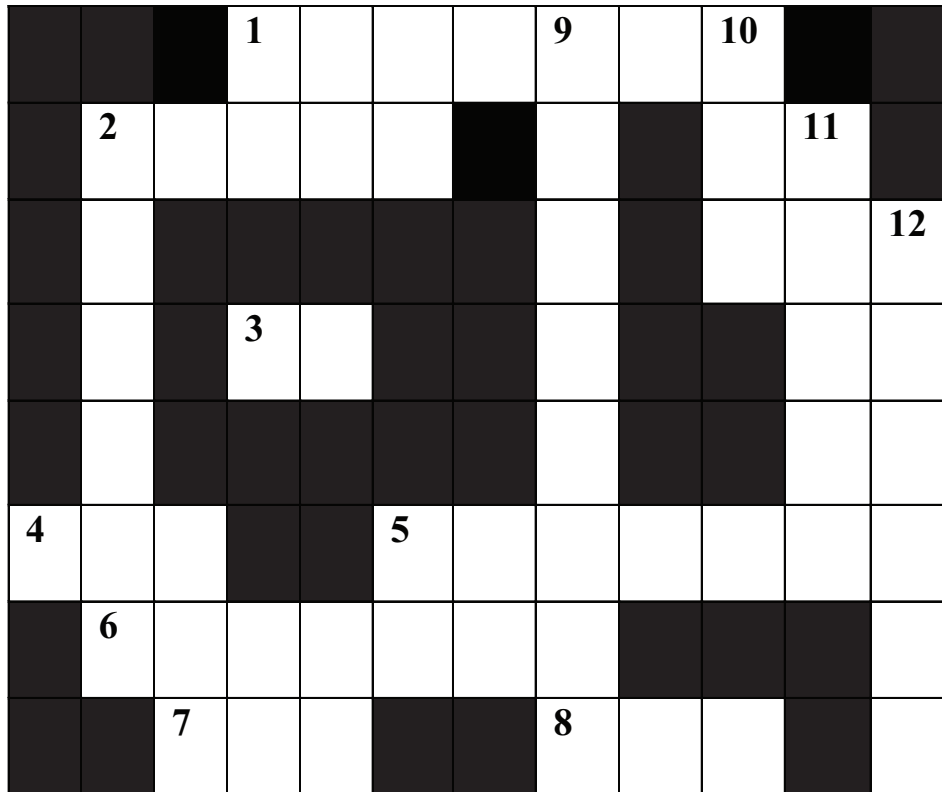


Fig. 9.3: Crossword Puzzle



Notes

ACROSS	DOWN
<ol style="list-style-type: none"> 1. The output device used to listen to the sounds. 2. A type of fast and noiseless printer. 3. A secondary storage device, capable of storing up to 700 MB. 4. A permanent primary storage unit. 5. The input device used to generate the soft copy from a hard copy. 6. The output device used to get a print. 7. The processing unit of computer system 8. A secondary storage device, capable of storing up to 4.7 GB. 	<ol style="list-style-type: none"> 2. A portable micro-computer. 9. The input device used to type the characters and numbers. 10. A primary storage unit, to store the application we are currently working up on. 11. The input device used to point things on the screen. 12. A storage unit capable of storing up to 25 GB.

Going Digital



Notes



INTEXT QUESTIONS 9.1

1. Choose the correct option:
 - (i) Which of the following is an output device?

A. Microphone	B. Monitor
C. UPS	D. CPU
 - (ii) Identify the input device in the following.

A. Speaker	B. Hard Disk
C. Scanner	D. Motherboard
2. Mark the following statements true or false. Correct the false statements.
 - (i) Input devices are used to give the result to the user.

 - (ii) Hardware refers to the physical parts of computer.

 - (iii) Software is visible and can be touched physically.

3. Rajat has bought a new computer. He believes that the keyboard is directly connected with the monitor, because the characters he types on it, gets displayed on the monitor fast. Do you think he is correct? Write the correct statement if you think his belief is wrong.

9.2 TYPES OF SOFTWARE

As we have discussed in the previous section, software is a set of programs. But what is a program? Let us understand it through an example in Figure 9.4.

A father is telling his daughter to enquire about certain things before enrolling in a course. In the same way, if a person instructs a computer to do a specific task, it is called programming. Hence, a program is a set of instructions given to a computer. A set of programs makes software. As mentioned in the previous section, software is of two types, System Software and Application Software. Let us know more about them.



Fig. 9.4: Understanding Programming



Notes

9.2.1 System Software

The term 'System Software' refers to the set of programs, which are responsible for the functioning of a computer. Even if we purchase all the parts of the computer, assemble them and connect it with a source of power, it won't work. Do you know why? It is the system software that "makes it work"! Operating system, device drivers, utilities software and other software programs, come under the category of system software. Let us know more about them.

Did you know?

Mobiles and tablets also work on specialized operating systems such as Android by Google, iOS by Apple etc.

1. **Operating System:** It is the principal software, which is responsible to manage or operate all other software and hardware. It is usually the first software to be installed in a system. For example, Microsoft's Windows, Apple's Macintosh and others. Every computer runs on an operating system.

It is further categorized on the basis of functionality:

- **Single-User Operating System:** A single user is able to work on it at a given A time. For example, DOS, Windows 95 and others.

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- **Multi-User Operating System:** Multiple users are able to work on it at a given time. For example, Linux, Unix and others.

The users can choose any operating system as per their requirement. Let us move further with other system software.

<p>Operating System</p>	<p>Device Drivers</p>	<p>Utilities Software</p>

Fig. 9.5: Types of System Software

2. **Device Drivers:** They are installed in the computer to make hardware work. They enable hardware to communicate with each other and with the operating system. The drivers instruct the hardware to do their jobs. For example, to install a printer, a CD containing required drivers needs to be run to make it functional.
3. **Utilities Software:** This category of software is used to support the functioning of computer in various aspects. The Utilities Software is meant to help the users in various tasks, such as keeping the backup of the data, protecting the system from virus, increasing the speed of the computer and others. Examples of such software are Anti-virus software, Disk Defragmenter, Disk Cleaners and others.

9.2.2 Application Software

The application software is designed to fulfil a specific task or a function. They are called as end-user programs, since they directly help the user in an activity. Spreadsheet software like Microsoft Excel, Open Office Calc, Word Processing Software such as Libre Office Writer, Microsoft Word, various games, browsers and others are examples of application software. In the next section, we will discuss about the application software called Microsoft Word.



Fig. 9.6: Application Software



Notes

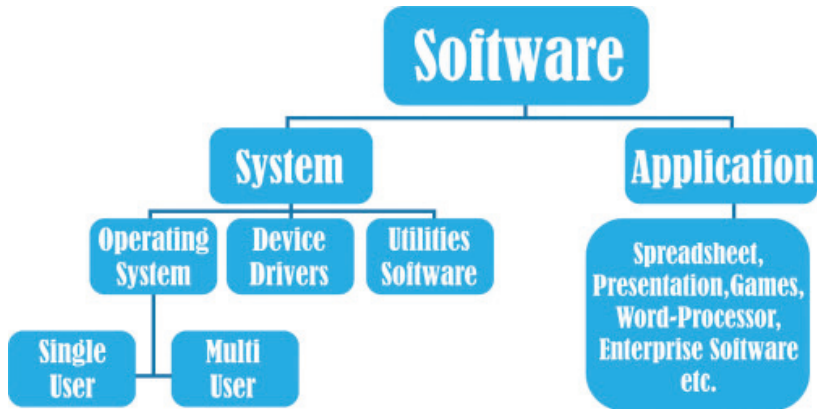


Fig. 9.7: Hierarchical Presentation of Software

Activity 9.2





Rohit is a bit confused; he doesn't know which CD to put in which box. Please help him sort his CDs as per the labels given on the boxes.

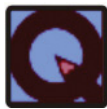
 <p>Box No. :</p>	 <p>Box No. :</p>	 <p>Box No. :</p>	 <p>Box No. :</p>
 <p>Box No. :</p>	 <p>Box No. :</p>	 <p>Box No. :</p>	 <p>Box No. :</p>
 <p>Box No. :</p>	 <p>Box No. :</p>	 <p>Box No. :</p>	 <p>Box No. :</p>

Going Digital



Notes

			
Box 1: Application Software	Box 2: Device Drivers	Box 3: Utilities Software	Box 4: Operating System



INTEXT QUESTIONS 9.2

1. Choose the correct option:
 - (i) Which of the following is not a software?
 - A. Operating System
 - B. Games
 - C. RAM
 - D. Device drivers
 - (ii) Which of the following categories is most suitable for Microsoft Windows?
 - A. Application Software
 - B. Device drivers
 - C. Operating System
 - D. Utilities Software
2. Match the following statements:

(i) Multi-User Operating System	a. Windows NT
(ii) Single-User Operating System	b. Software in the CD provided with a printer
(iii) Device Driver	c. OpenOffice Calc
(iv) Utilities Software	d. Unix
(v) Application Software	e. iOS
(vi) Mobile Operating System	f. Disk Defragmenter



Notes

3. Kanika has recently joined a company as a computer operator. Suggest her the appropriate software as per the following tasks given to her:
- (i) To create a presentation of a product
 - (ii) To write a letter
 - (iii) To edit an image
 - (iv) To maintain daily records of transactions
 - (v) To send an e-mail
 - (vi) To install a scanner

9.3 INTRODUCTION TO A WORD PROCESSING SOFTWARE

In the previous section, we discussed about the various types of software, we shall now discuss 'Word Processing Software' which is used for creating basic documents. The further discussion is based on use of Microsoft Word 2010. It is a powerful word processing software, widely issued for documentation purpose. Let us learn about the various components of MS-Word.

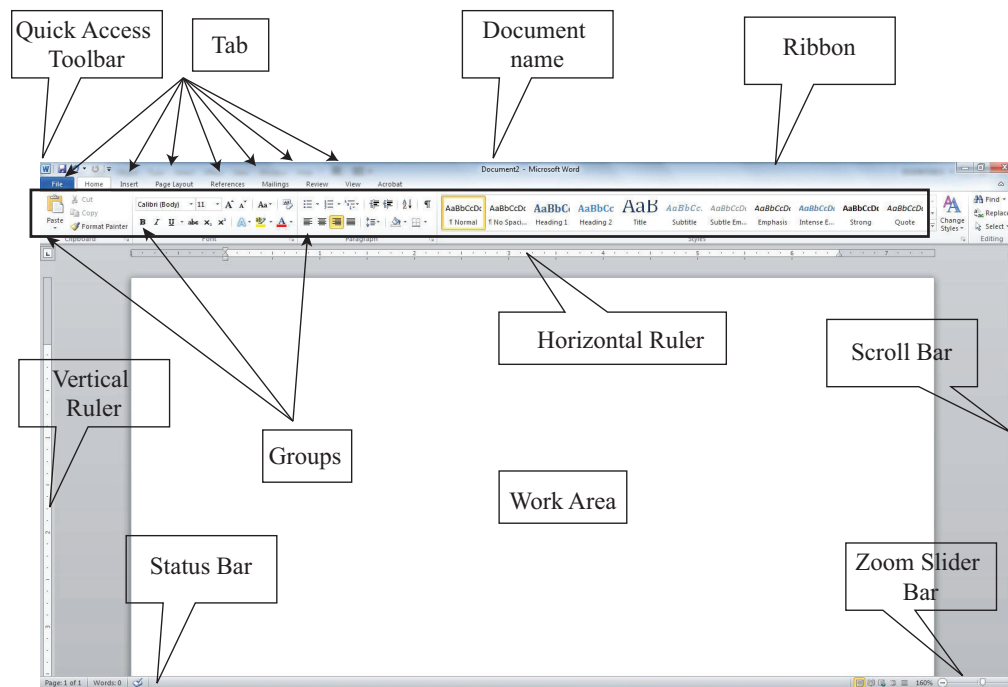


Fig. 9.8: Components of MS-Word

Going Digital



Notes

9.3.1 Working on MS-Word

In this section we will discuss about the various options related to the text, available in MS-Word. We can open MS-Word from



Let's understand how text can be formatted. After opening MS-Word, we can simply start typing to create a document. A blinking cursor is displayed on the top-left corner of the page, indicating the starting point of the text. To determine, how the text will look we can use the options given in the Home tab, which have been grouped under five sections. Most of the options work only if the text is selected. Let us start discussing about the Clipboard, Font and Paragraph group.

Did you know?

To open MS-Word with a keyboard shortcut, press Start button + R key. Type 'winword' in the Run window and press the Enter key

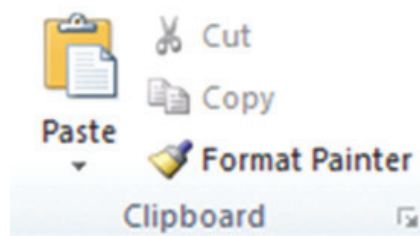


Fig. 9.9: Clipboard group in Home Tab

The Clipboard group consists of options such as cut, copy and paste. As the name suggests is used cut, copy and paste the text and format it. It is used if the position of the text is to be changed or the text needs to be copied to another location within the document. The Format Painter copies the formatting of the selected text and applies it on another piece of text.

Did you know?

When the cursor is brought over an option in the Ribbon, it displays the option's name, use and its shortcut.

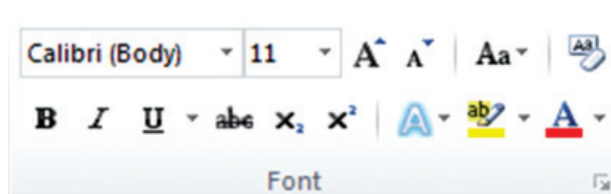


Fig. 9.10: Font group in Home tab

The Font group gives a selection of options to format the font to customize the text as per the requirement.

Table 9.1: Let's see how various options work in Font group

	The font style changes to this.
	Increases or Decreases the font size like this
	Changes the case from THIS to This or tHIS
	Bold , <i>Italic</i> , <u>Underline</u> , Strikethrough
	Subscript: H ₂ O Superscript: a ²
	Visual Effects, Highlighted Text, Changed Colour
	Clears the formatting from <u>THIS</u> to THIS



Notes

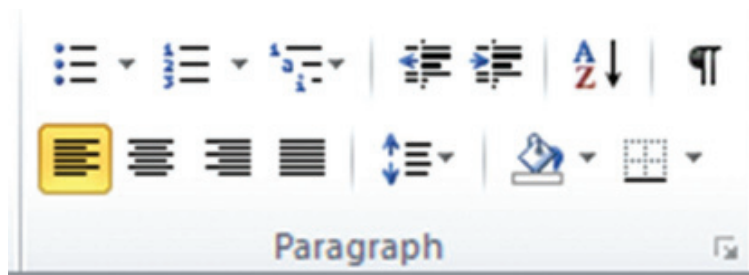


Fig. 9.11: Paragraph group in Home tab

The Paragraph group consists of the options related to formatting of a paragraph or a list. The text alignment options, indentation, text borders and other options are part of this group. To understand these options better, let's go through the Table 9.2.



Notes

Table 9.2: Examples of options in Paragraph group

	<p>These options are used to create lists as follows:</p> <table border="0"> <tr> <td>Bulleted:</td> <td>Numbered:</td> <td>Multilevel:</td> </tr> <tr> <td>A</td> <td>1. A</td> <td>1. A</td> </tr> <tr> <td>B</td> <td>2. B</td> <td>1.1 B</td> </tr> <tr> <td>C</td> <td>3. C</td> <td>1.2 C</td> </tr> <tr> <td>D</td> <td>4. D</td> <td>2. D</td> </tr> </table>	Bulleted:	Numbered:	Multilevel:	A	1. A	1. A	B	2. B	1.1 B	C	3. C	1.2 C	D	4. D	2. D
Bulleted:	Numbered:	Multilevel:														
A	1. A	1. A														
B	2. B	1.1 B														
C	3. C	1.2 C														
D	4. D	2. D														
	<p>They change the alignment/position of text:</p> <table border="0"> <tr> <td style="border: 1px solid black; padding: 5px;"> This is Left Alignment. This is Left Alignment. This is Left Alignment. This is Left Alignment. </td> <td style="border: 1px solid black; padding: 5px;"> This is Right Alignment. This is Right Alignment. This is Right Alignment. This is Right Alignment. </td> </tr> <tr> <td style="border: 1px solid black; padding: 5px;"> This is Justified Alignment. This is Justified Alignment. This is Justified Alignment. This is Justified Alignment. This is Justified Alignment. This is </td> <td style="border: 1px solid black; padding: 5px;"> This is Center Alignment. This is Center Alignment. This is Center Alignment. This is Center Alignment. This is Center Alignment. </td> </tr> </table>	This is Left Alignment. This is Left Alignment. This is Left Alignment. This is Left Alignment.	This is Right Alignment. This is Right Alignment. This is Right Alignment. This is Right Alignment.	This is Justified Alignment. This is Justified Alignment. This is Justified Alignment. This is Justified Alignment. This is Justified Alignment. This is	This is Center Alignment. This is Center Alignment. This is Center Alignment. This is Center Alignment. This is Center Alignment.											
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This is Justified Alignment. This is Justified Alignment. This is Justified Alignment. This is Justified Alignment. This is Justified Alignment. This is	This is Center Alignment. This is Center Alignment. This is Center Alignment. This is Center Alignment. This is Center Alignment.															
	<p>Line-spacing:</p> <table border="0"> <tr> <td style="border: 1px solid black; padding: 5px;"> Spaces between the lines. Spaces between the </td> <td style="border: 1px solid black; padding: 5px;"> Spaces between the lines. Spaces between the lines. </td> </tr> </table> <p style="background-color: #cccccc; padding: 2px;">Colours the background of text like this.</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;"> Gives borders around some text like this. </div>	Spaces between the lines. Spaces between the	Spaces between the lines. Spaces between the lines.													
Spaces between the lines. Spaces between the	Spaces between the lines. Spaces between the lines.															
	<p>Increase or Decrease the Indent(space from margin)</p> <table border="0"> <tr> <td style="border: 1px solid black; padding: 5px;"> Decrease Indent of a paragraph like this. Decrease Indent of a paragraph like this. </td> <td style="border: 1px solid black; padding: 5px;"> Increase Indent of a paragraph like this. Increase Indent of a paragraph like this. </td> </tr> </table>	Decrease Indent of a paragraph like this. Decrease Indent of a paragraph like this.	Increase Indent of a paragraph like this. Increase Indent of a paragraph like this.													
Decrease Indent of a paragraph like this. Decrease Indent of a paragraph like this.	Increase Indent of a paragraph like this. Increase Indent of a paragraph like this.															
	<p>Sorts the text alphabetically or numerically</p> <table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;"> 6 2 4 </td> <td style="font-size: 2em; vertical-align: middle;">→</td> <td style="border: 1px solid black; padding: 5px; text-align: center;"> 2 4 6 </td> </tr> </table>	6 2 4	→	2 4 6												
6 2 4	→	2 4 6														
	<p>When turned on, it shows paragraph marks and other hidden symbols, like this:</p> <p style="text-align: center;">A → B → C↵ D.....E.....F¶</p>															

Activity 9.3

You have learned about the importance of having a CV in chapter 8. It is a reflection of one's work, attitude and personality, therefore it is equally important for an employee as well as an employer. It tells the employer about the fitment and for employee it is a reflection of their work and achievements. In today's digital world it is important to have a digital copy of one's CV, let's try a create one for our self.

Observe the following formats of CV and cover letter and write yours in the word format (Using MS-Word). Your CV must have the following fields: name, date of birth, address, e-mail id, qualification, experience, references and others save a copy for your reference.

**Notes**

RESUME	
My Name My Street myemailid@mydomainXYZ.com 64 Dum Dum, My City 7X00074	E-mail: - Ph.: - 94330XXXXX(M) 255 1XXXX (Resi)
<hr style="border: 1px solid blue;"/>	
<u>Objective:</u>	
Being a committed team player, want to be a part of a renowned organization, to contribute towards the growth of the Organization, based on my expertise and to further my personal capabilities by learning from the new exposure within the structured framework of the organization.	
<u>Expertise Summary</u>	
<ul style="list-style-type: none"> • To be an asset to the organization I serve. • Expertise in HRD/Administration. • A quick learner with 'Can do' attitude 	
<u>Key Skills and Management:</u>	
Professional management skills	
<ul style="list-style-type: none"> - Meeting objectives - Identifying problems - Promoting solutions - Managing change - Motivating and developing staff 	
<ul style="list-style-type: none"> ▪ Well-developed and effective communication skills. ▪ Thrive in deadline-driven Environments. ▪ Excellent Team-Building Skills. 	
<u>Professional Qualification</u>	
<ul style="list-style-type: none"> • MBA from XYZUniversity specialization in Human resource [75%, May 2005 pass-out] • Presently pursuing SAP training from Technology Foundation XYZCentre. 	
PROJECTS:	
<ul style="list-style-type: none"> • Training Assessment Needs for clinical and non-clinical staff in Medical College, My City (A Project For My City Healthcare Ltd.) • Manpower Planning in MY City Medical College, My City (Individual Project under My City Healthcare Ltd.) • Motivational Factors (Extrinsic vs. intrinsic) on MIT Staff (Local Project to be submitted to college) • Trade Union Activities (HR Project-Third Semester)-XYZ Paints Ltd.My City. • Market Analysis of viability of CafèXYZ Coffee Day in My City. • Financial Analysis in XYZ Industry, My City 	
<u>Training Attended</u>	
<hr style="border: 1px solid black;"/>	

Going Digital



Notes

Venu Gopal
 12/1 NS Road, 10th Floor, Chennai-602412
 Contact: +91-987654321
 Email: venu@gmail.com

Respected HR Team,

I am submitting here with my resume for your perusal and favourable consideration to work in your organisation.

Review of my credentials indicates that I am a qualified B.E. (COMPUTER SCIENCE) from Adhi College of Engineering and Technology, Kanchipuram (Chennai) affiliated to ANNA UNIVERSITY; possess rich domain knowledge with comprehensive understanding of JAVA, JAWA, HTML, C++.

Exceptional communication and interpersonal skills, confidence, innovative approach and quick adaptability to changing processes and trends have been my biggest assets.

I am seeking a challenging job that would match my skills and experience with the objectives of the organisation. The above credentials along with my enclosed resume make me ideally suitable for a position in your organisation. I would appreciate an opportunity for a personal interview.

Thanking you in anticipation of a favourable reply.

Yours sincerely

Venu Gopal

9.3.2 Inserting Objects

In the previous section, we discussed about working with the text and now we will learn about inserting various objects in the document, such as pictures, tables, charts, shapes and others. In this section we will look at various options available in the Insert tab.

1. Inserting Tables

Tables are considered as the most systematic way to enter and store data. In MS-Word, a table can be inserted using the Insert tab → Tables group → Table option.

Did you know?

The drop-down arrow (↓) after every option's name indicates that there are further hidden options inside it.



Notes

Method 1: Using the Grid

Move the cursor over this grid to select the number of rows and columns. In this example, 3x3 refers to 3 rows and 3 columns, indicated with orange colour.

Method 2: Using Insert Table

Click on this option and enter the desired number of rows and columns to insert a table

Method 3: Using Draw Table

Click on this option. The cursor changes into a pencil icon. Drag it on the page and draw the table as required.

Method 4: Using Quick Tables

This option provides the built-in tables, which could directly be inserted in the document and modified later.

Fig. 9.12: Inserting Table

When a table is inserted, two other tabs appear under the Table Tools tab, Design tab and Layout tab. These tabs give options to modify the table. We can format the table, design it, insert/delete rows/columns, merge or split the cells, change the alignment of the text in the table, use formula and others. Thus all the options to modify a table can be found under these tabs.

2. Inserting Picture, Clip Art, Shapes and SmartArt

These objects are used to represent the data in a distinct manner. These options can be found in the 'Illustrations group' of the Insert tab. When any of the objects is inserted in the document, another tab called Format appears in the Ribbon, it is used for arranging and structuring the objects that have been inserted

Going Digital



Notes

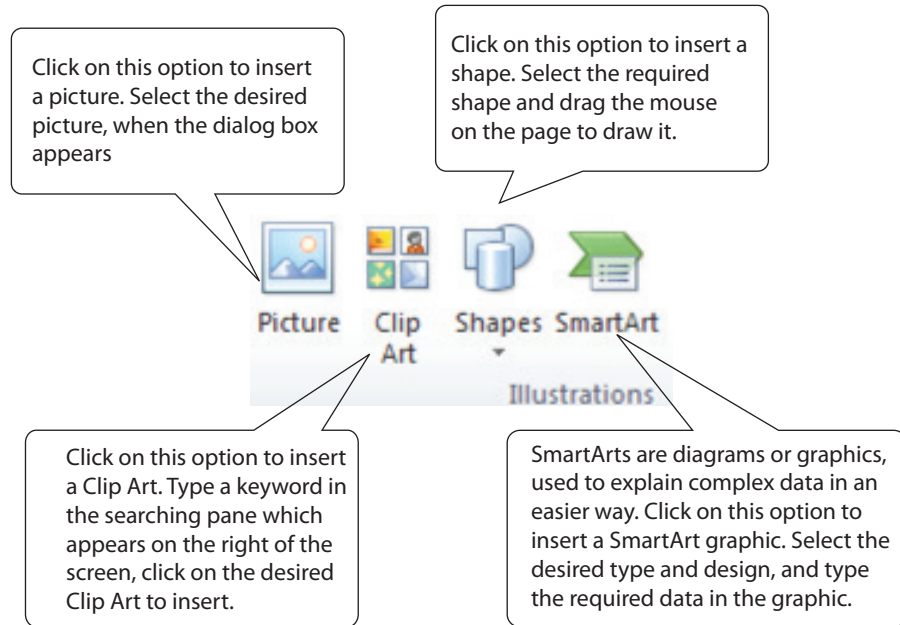


Fig. 9.13: Inserting Picture, Clip Art, Shapes and SmartArt graphics

3. Inserting Charts

A chart is a pictorial representation of data. It makes data easy to analyse, compare and understand. This option is also available in Illustrations group of Insert tab.

When we click it, a dialog box appears. We can select the desired chart type from it and lock it. Then we click 'OK'.

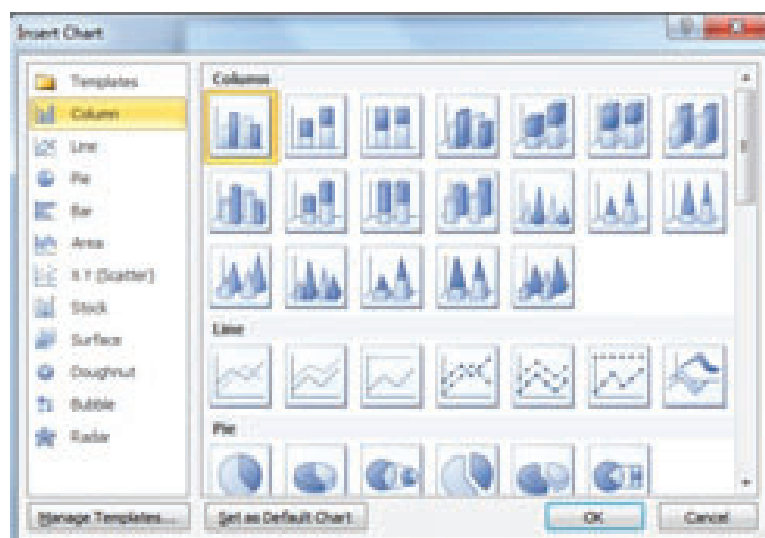


Fig. 9.14: Insert Chart dialog box



Notes

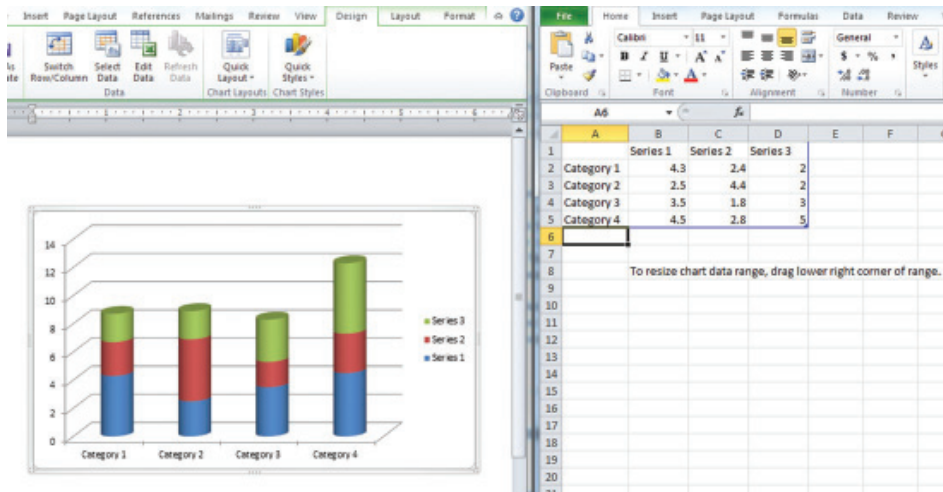


Fig. 9.15: Entering data for a chart

Another window of MS-Excel also opens automatically. This window is called Datasheet, and we enter the data of the chart in the Excel sheet and then close it after completion of data entry. The chart will be displayed in the MS-Word window.

The chart will get updated automatically, whenever data is updated in the worksheet. When a chart is inserted, three additional tabs appear under Chart Tools tab, that is Design, Layout and Format.

4. Inserting Hyperlink

Hyperlinks are used to link a piece of text in a document with a web address or a file in the computer. This makes it easy to access a file/web page, as its link would be available in the document that we will be currently working on. This option is found in the Links group in the Insert tab.

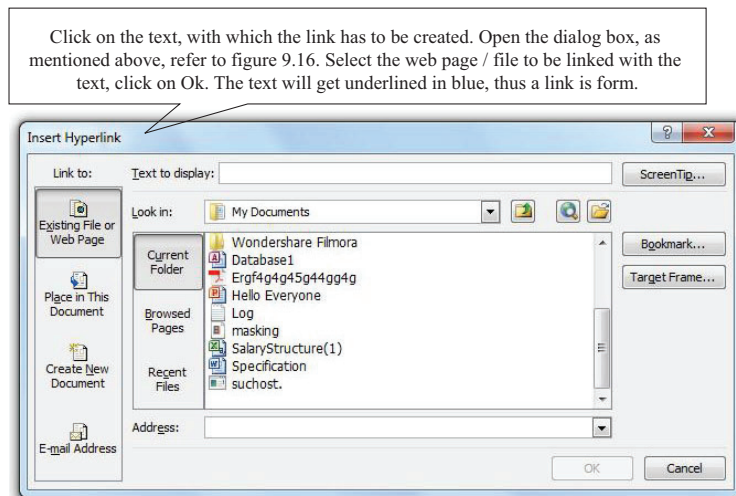


Fig. 9.16: Insert Hyperlink dialog box

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Notes

5. Inserting Header and Footer

You must have observed in books, that there is some text which is usually repeated at the top or bottom of the page. They are simply typed once using the command Headers and Footers. These are used to display some information on every page, such as page number, date/time, chapter number, chapter name and other information. The difference lies in the fact that header appears at the top and footer appears at the bottom. This option is found in Header & Footer group of the Insert tab. When Header/Footer is inserted, an extra 'Design' tab appears in the Ribbon under Header & Footer tools tab. It consists of the options to modify the Header & Footer.

Select the desired style of Header & Footer and type the required text. It will appear on every page. To modify the Header/Footer, double-click on the Header/Footer area, and make the desired changes.

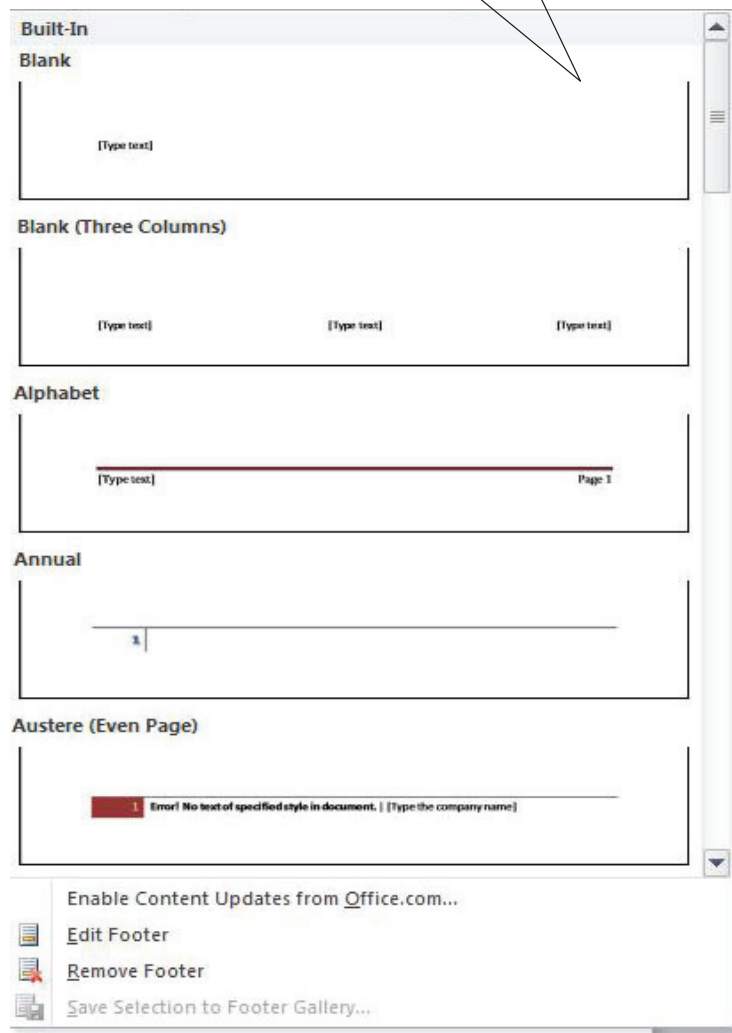


Fig. 9.17: Insert Hyperlink dialog box



Notes

6. Inserting Textbox

Textboxes are the mediums in MS-Word through which, we can portably write text at any place. The text written in a Textbox can be moved to anywhere in the document, without interfering with the appearances of the text inside it. The option to insert a Textbox is found in Insert → Text → Textbox. When a Textbox is inserted, an extra 'Format' tab appears, which consists of the options to format the Textbox, and its contents.

There are many other options available in the Insert tab, such as WordArt, Symbol, Drop Cap, Signature Line, Cover Page and others. We will suggest you to go through and practice all of them.

7. Inserting Table of Contents

Table of Contents include the details of the contents added in a document. It is usually inserted at the starting of the document since it works like an 'index' which summarizes the entire document in a page. This option is available in Table of Contents group in the References tab.

Select the desired style of Header & Footer and type the required text. It will appear on every page. To modify the Header/Footer, double-click on the Header/Footer area, and make the desired changes.

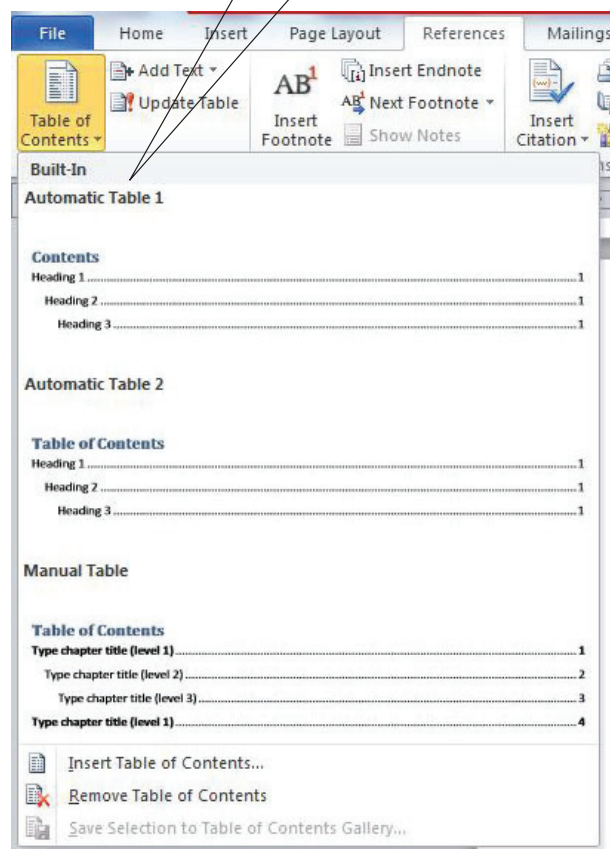


Fig. 9.18: Inserting Table of Contents

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Notes

Did you know?

Rand() function inserts some random text in a fresh blank document. To try it write ‘=rand (No. of paragraphs, No. of lines in each paragraph)’. For example, =rand(4,5) will insert 4 paragraphs, with 5 lines in each paragraph.

Activity 9.4

Healthy and disciplined routine is the key to success. One should have a disciplined routine and stick to it. Create a table in MS-Word, and fill the details of your present routine in it. Reflect on it to see how healthy is it and what can you do to improve it further. The table must have the following columns: Task, Approximate Time Duration (in hrs). Also, create a chart using the same data.

9.3.3 Page Layout

In the previous sections, we have discussed about inserting and working with text and various graphics, but their appearance is depend on the basic layout of the page. In this section, we will discuss about basic components which affect the appearance of the text and objects with respect to the pages.

1. Setting Margins, Orientation and Size

The above options are available in Page Setup in Page Layout tab.

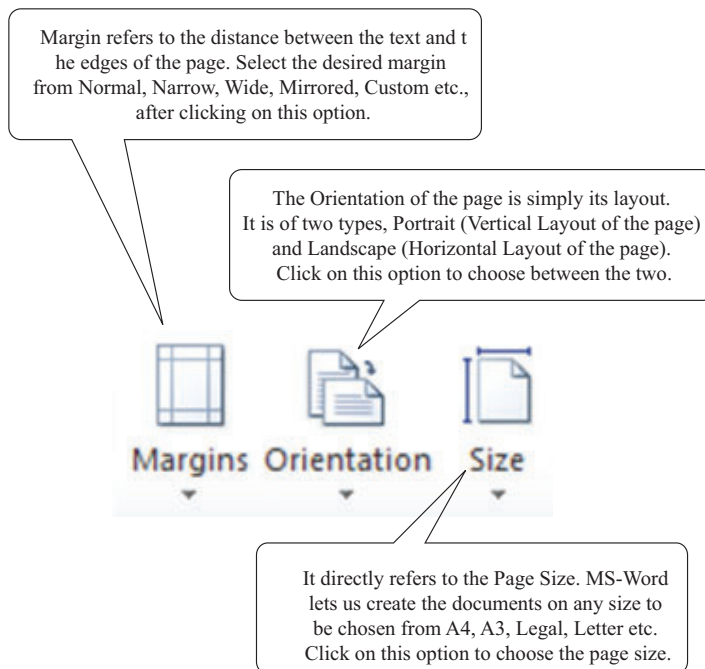


Fig. 9.19: Setting Margins, Orientation and Size

2. Applying Page Borders

Borders provide a complete look to the document. We can apply borders to MS-Word document also, to do so, click on the Page Layout '! Page Background '! Page Borders. Select the desired options in the Borders and Shading dialog box.

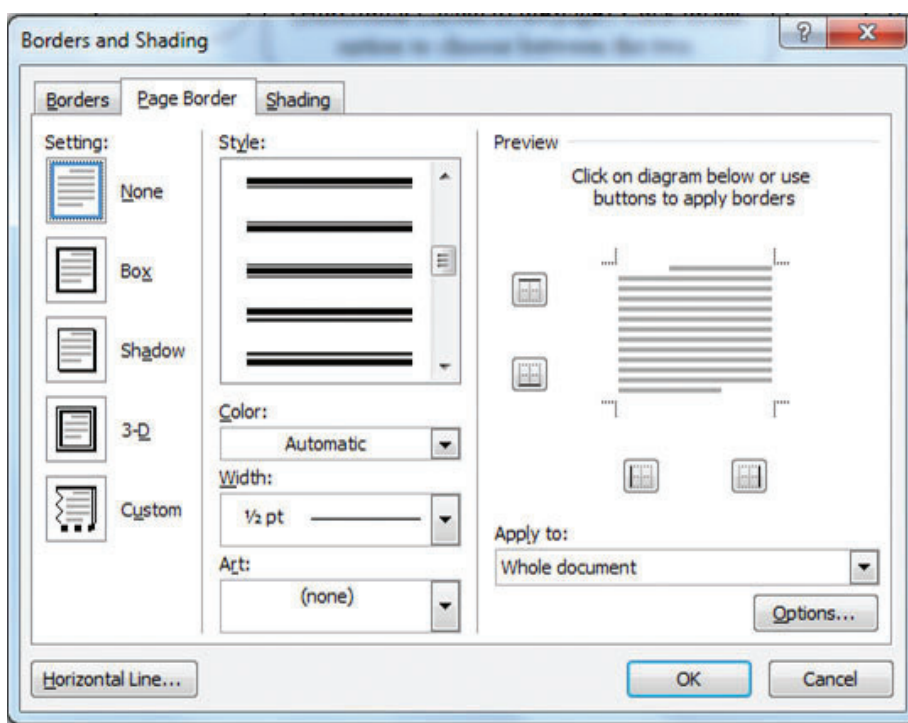


Fig. 9.20: Borders and Shading dialog box

Activity 9.5

Diary writing is believed to be a stress-relieving task. Let's create an eco-friendly diary, which saves paper. Create a document in MS-Word and perform the following tasks in it:

1. Insert a Table of Contents at the starting of the document
2. Insert Header and Footer, where the Header should display your name and Footer should display the page number
3. Set the margins to 2" from each side
4. Set the page size to A3
5. Set the orientation to Landscape
6. Apply page borders

Once you are done, save the document as "My Digital Diary", and write your experiences in it.



Notes

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Notes

9.3.4 Using Mail Merge

Imagine that you are planning to celebrate your birthday, design an invitation card in MS-Word. One of your friends suggests that rather than writing the names of your friends on each card, the printed ones will look smarter. But typing every name individually on each card will be a time consuming task! MS-Word has an excellent feature to fulfil this plan, called as Mail Merge.

Mail Merge is a powerful feature, which reduces the effort by creating list of recipients and customizes the information for each person, on a different page, in a directly printable form. This feature can be found in Mailings tab. Different options are used from various groups to complete the merging of mails.

To start Mail Merge, click on Start Mail Merge in the Mailings tab and select the type of document to be created. Here we will select 'Letters'.

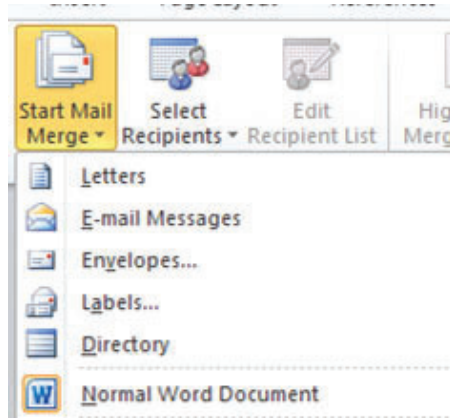


Fig. 9.21: Starting Mail Merge

Type the content and select the recipients list as shown in Figure 9.22

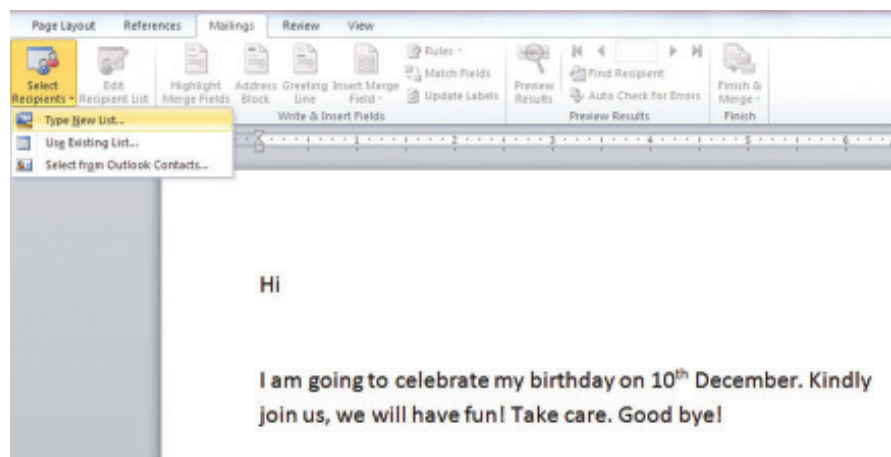


Fig. 9.22: Selecting recipients in Mail Merge



Notes

Type a new list of recipients or use existing list, if already created. The following dialog box appears when we click on ‘Type New List...’ option. Click on ‘Customize Columns...’ to add, delete or rename columns. Click on New Entry or Delete Entry to enter or delete a record. Enter the required data and press Ok. MS-Word will ask you to save the list. Save it with a meaningful name.

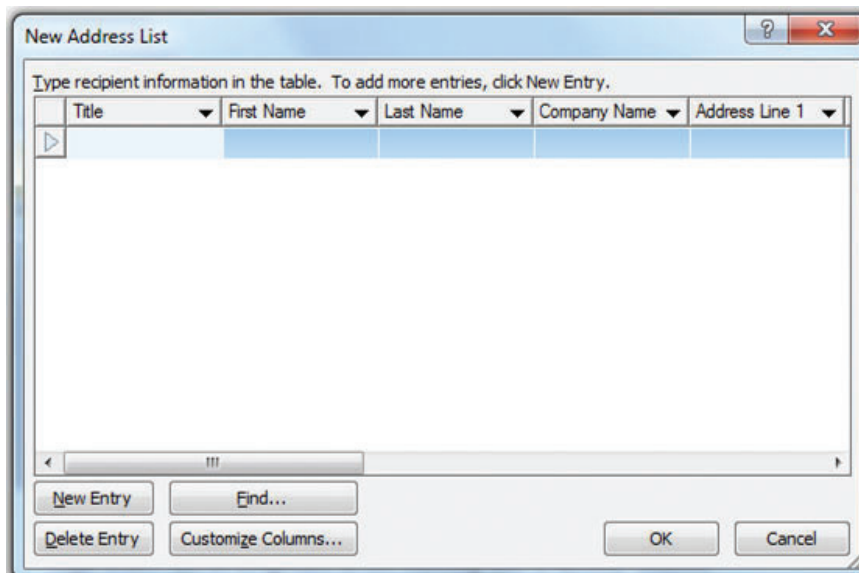


Fig. 9.23: Entering Data of Recipients

Insert the fields as shown in Figure 9.24



Hi «Name»

«Mobile_Number»

I am going to celebrate n
join us, we will have fun!

Fig. 9.24: Entering Fields

Click on Finish & Merge and select the desired options in the further dialog boxes. The Mail Merge feature generates a new document, merging the recipients list and the letter together in it, as shown in Figure 9.24.

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Notes

Hi Kiran
987654321

I am going to celebrate my birthday on 10th December. Kindly join us, we will have

Hi Manoj
987654321

I am going to celebrate my birthday on 10th December. Kindly join us, we will have

Hi Ajay
123958746

I am going to celebrate my birthday on 10th December. Kindly join us, we will have

Fig. 9.25: Completed Mail Merge

Activity 9.6

Design your birthday invitation card, as given in the figure below. It has been designed in MS-Word, using only the components discussed in this chapter. Go through the details to find it!



Activity 9.9

You must have created your CV and cover letter in the Activity 9.3. Customize the cover letter for five different companies, using Mail Merge. It must have the company's name, address and contact number at the top, though the rest of the content will remain same.

**Notes****INTEXT QUESTIONS 9.3**

1. Choose the correct option:









(i) Which of the following is not the name of a tab in MS-Word 2010?

- A. Insert
- B. Mailings
- C. Home
- D. Clipboard

(ii) Which tab consists of the option to insert the Table of Contents?

- A. Home
- B. References
- C. Page Layout
- D. Insert

2. Match the following statements:

- | | |
|--|----------------------|
| (i)  | A. Bullets |
| (ii)  | B. Mail Merge |
| (iii)  | C. Insert Table |
| (iv)  | D. Superscript |
| (v)  | E. Underline |
| (vi)  | F. Justify Alignment |
| (vii)  | G. Insert Shapes |
| (viii)  | H. Orientation |

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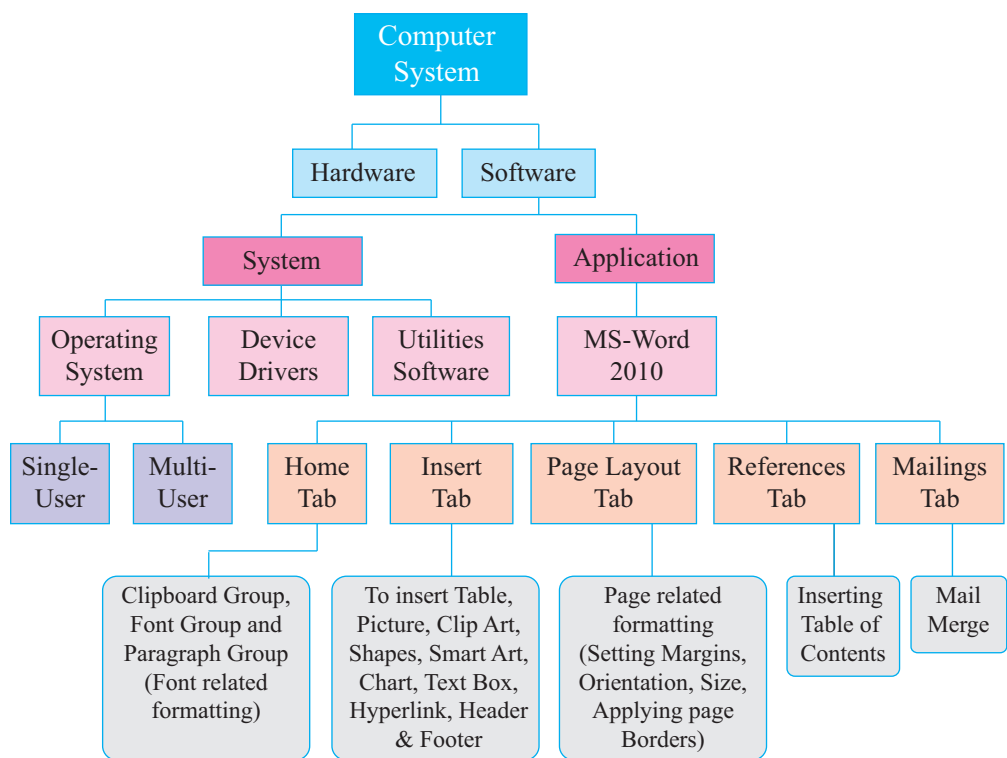


Notes

3. Sanchita is working in MS-Word. She wants to format the document. Suggest any five features available in MS-Word, using which she can beautify the document.
4. Identify the features of MS-word, required in the following situations:
 - (i) To create multiple copies of a letter customized for different people.
 - (ii) To write the chemical formula of Carbon Dioxide.
 - (iii) To put a symbol before every sentence in a list.
 - (iv) To denote some information through graphics.
 - (v) To display the same text on every page.



WHAT YOU HAVE LEARNT



TERMINAL QUESTIONS

1. Write any two differences between Hardware and Software.
2. Name and explain the types of Software.
3. Explain the use of word processing software.



Notes

4. Manya has bought a printer. She has attached it with her computer, and tries to take out a print, but failing to do so. Explain the possible reason for this.
5. Differentiate between Chart and SmartArt Graphic. Which of these should be used, if some numerical data has to be compared and analyzed?
6. Which category of hardware devices, does CPU fall in? Explain with a reason.
7. Define the Mail Merge feature.
8. In the following table, the Tab name or the Group name is missing for the given options. Fill in the correct information to complete the table:

TAB	GROUP	OPTION
Home		
	Links	
	Page Background	
Mailings		
Insert		



ANSWERS TO INTEXT QUESTIONS

9.1

1. (i) B. Monitor
(ii) C. Scanner
2. (i) False, Output devices are used to give the result to the user.
(ii) True
(iii) False, Software is visible but cannot be touched physically.
3. He is not correct. The keyboard and the monitor are both connected with CPU, and they are not directly connected with each other.

9.2

1. (i) C. RAM
(ii) C. Operating System

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**Notes**

2. (i) Multi-User Operating System : Unix
(ii) Single-User Operating System : Windows NT
(iii) Device Driver : Software in the CD provided with a printer
(iv) Utilities Software : Disk Defragmenter
(v) Application Software : OpenOffice Calc
(vi) Mobile Operating System : iOS
3. (i) A presentation software: Libre Office Impress or MS-Powerpoint etc
(ii) A word processor: OpenOffice Writer or MS-Word etc
(iii) An image editing software: Adobe Photoshop or Gimp etc
(iv) A spreadsheet software: MS-Excel or Libre Office Calc etc
(v) A browser: Internet Explorer or Google Chrome etc
(vi) Its device driver

9.3

1. (i) D. Clipboard
(ii) B. References
2. (i) → Superscript
(ii) → Underline
(iii) → Bullets
(iv) → Justify Alignment
(v) → Insert Table
(vi) → Insert Shapes
(vii) → Change Orientation
(viii) → Mail Merge
3. Text Effects, Font Styles, Font Size, Font Colours, Bullets, Page Borders, Inserting Graphics (Shapes, Clip Arts, Charts etc). She can format the graphics also.
4. (i) Mail Merge
(ii) Subscript
(iii) Bullets
(iv) SmartArt Graphics, Charts etc
(v) Header or Footer



10

SPREADSHEETS

Dear learners, you have learnt the basics of computers in the previous lessons. In this lesson you will learn how to use this skill to analyse your work as an entrepreneur. You must have seen some people who have become financially successful while some who have remained at the same level in spite of hard work. Have you ever wondered why? Successful people regularly analyse their work including time, money and the energy spent. These calculations can be done by using a paper and pen. But when there are too many calculations, the probability of errors increase. In this lesson we will learn about Spreadsheets which will simplify the process of calculating and analysis. We would also learn about visual presentation of your work.



OBJECTIVES

After studying this lesson, you will be able to:

- create a spreadsheet by using functions, formulae and various referencing techniques;
- create a spreadsheet by freezing pane for entering data; and
- analyse the data using filter, sort, validation checks, conditional formatting, charts, pivot table.

10.1 CRUNCHING NUMBERS USING SPREADSHEET

A spreadsheet is a tool for storing data in tabular form consisting of rows and columns. Data is entered in cells of a table. Each cell may contain either numeric or date or text data. Results of formulas that are automatically calculated can also be displayed in a cell. Do you know that if we change a value of a particular cell, changes are automatically reflected in other cells in reference to that cell? Doesn't it make your work simpler? Let us learn how to create a spreadsheet.

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Notes

1. Creating a Spreadsheet

In this section we will be learn some of the features of MS Excel 2007. You have already learnt about opening the word processor. For MS Excel you need to go to

Start ’!

All Programs ’!

Microsoft Office ’!

Microsoft Office Excel 2007

The spreadsheet can be created by clicking on the Microsoft Excel 2007 icon in the start menu. The opened spreadsheet is shown in figure 10.1.

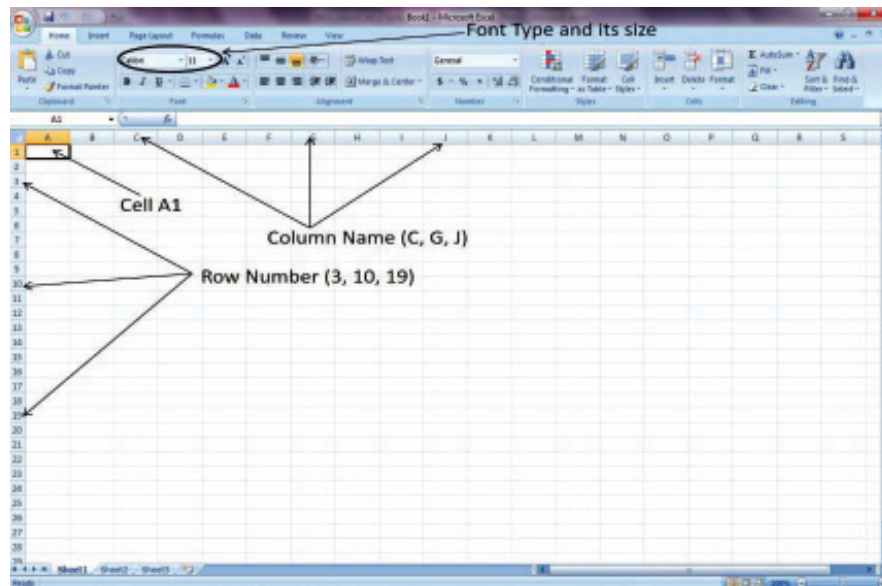


Fig. 10.1: Spreadsheet

An opened spreadsheet consists of following:

- Column Name: Each column has a capital English alphabet such as A, B, C and so on at the top.
- Row Number: Each row is indicated by a number to the immediate left of the first column such as 1, 2, 3 and so on.
- Each cell has unique address consisting of the column letter followed by the row number. For example, the address of the cell in the third column, third row is C3. The user has to enter the data in it.
- A worksheet is a single spreadsheet which contains cells organized in a tabular form consisting of rows and columns.

2. Navigating through a Spreadsheet

Each new opened spreadsheet contains three blank worksheets: Sheet1, Sheet2 and Sheet3. We can rename or add more sheets as per our requirement. For working, a particular sheet is selected by clicking on the icons as shown in figure 10.2. The sheet which is active is displayed in bold and it appears that its tab is on top of others sheets.

On the Left bottom of the spreadsheet, four scroll buttons appear: First sheet, Previous sheet, Next Sheet and Last Sheet. It is followed by the active worksheet tabs in a spreadsheet and the Insert worksheet Button. You can insert more worksheets by clicking the insert worksheet button that appears immediately to the right of the last worksheet tab.



Notes

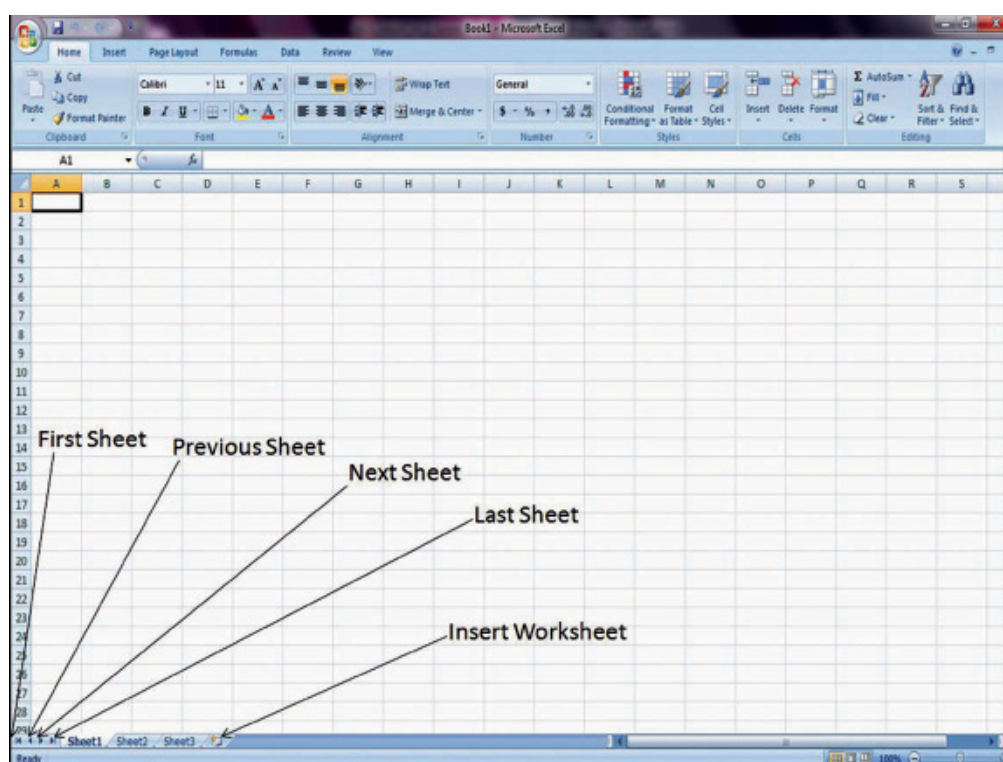


Fig. 10.2: Different sheets in a Spreadsheet

Activity 10.1

Topo is working as a Team Leader in a company. He wants to quit his job and open his own company. Unfortunately, he does not have any computer background. He has listed his total salary and deductions, current expenditures and savings. Help Topo to enter the following data in 3 tables of spreadsheet:

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Notes

Salary (pm)

Total Salary	25000
Deductions (PF, Tax, etc)	5000

Current Expenditures (pm)

House Loan EMI	5000
Bike/ Loan	2000
School fees of children	2000
Monthly Utility bills (electricity, water, gas, etc)	1500
General expenditure (food, entertainment, conveyance, medical)	5000
Misc Expenditures	2000
Insurance policies (Life and mediclaim)	500

Savings

Fixed Deposits	50000
Provident Fund Account	75000
Saving Account	10000

Now that you have entered the data, check if all the data is reflected in the sheet.

3. Referencing Techniques

Cell referencing techniques play an important role in creating formulas in spreadsheets. It allows your formulas to update automatically if the value of a particular cell changes. It also assists in updating formulas as cells are copied or moved. In spreadsheet, we have two types of referencing techniques:

1. Relative
2. Absolute

These techniques behave differently when copied to other cells. All cell references are **relative references** by default.

1. **Relative:** It changes when a formula is copied to another cell. For example, if you copy the formula =A3*B3 from row 3 to row 5, the formula will become =A5*B5. It is used when you want to repeat the same calculation across multiple rows or columns.
2. **Absolute:** It does not change when copied or filled. It is used when you want a row and/or column value to be constant. It is indicated by adding a dollar sign (\$) before either the column or row location or both.

A mixed cell reference is either a relative column and absolute row or absolute column and relative row.

The examples of above techniques are shown below:

- **Relative (A1):** The column A and the row 1 changes when copied.
- **Absolute (\$A\$1):** The column A and the row 1 do not change when copied.
- **Mixed (A\$1):** The row 1 does not change when copied.
- **Mixed (\$A1):** The column A does not change when copied.

4. Using Existing Functions

Let us see how you can use the existing functions to calculate. Existing functions are like built-in formulas that perform calculations using specific values in selected cells. Some of the basic functions are:

- SUM for summing up numbers
- AVERAGE for calculating an average
- COUNT for counting the numbers
- MAX for identifying the largest number
- MIN for identifying the smallest number in a range of selected cells

Functions are used for handling different needs: working with numbers, text, date, time or financial calculation. Using existing functions saves time since we do not have to write the formula ourselves. The function has a specific syntax that has to be followed to work correctly. Syntax is a set of rules for the structuring of statements. The syntax of a function has the following order:

- All functions begin with '=' sign.
- Mention the function **name** after = sign (for example, count).
- The parameter list which contains the **cell range or cell references** is enclosed by parenthesis. Each parameter is separated by a comma.

An example of a summation function (SUM (B2:B7)) with one parameter that sums a range of cells B2 to B7 is shown in figure 10.3:



Notes

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Notes

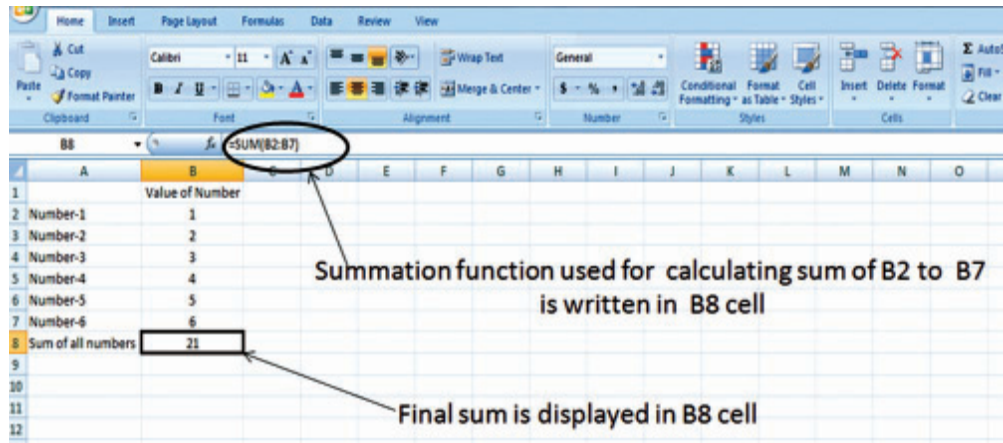


Fig. 10.3: Using Summation function in a spreadsheet

Calculation of sum of range of data can be done by using AutoSum as follows:

1. Select the formulas tab
2. Select the cell where you want to use the function; in this example it is B8
3. Select the AutoSum and then Select SUM.
4. A formula will appear in selected cell B8. The function is = SUM (B2:B7). The AutoSum automatically selects the range of cells from B2 to B7. The cell range can also be altered by changing cell numbers.
5. The total sum will appear after entering Enter button (as in figure 10.4).

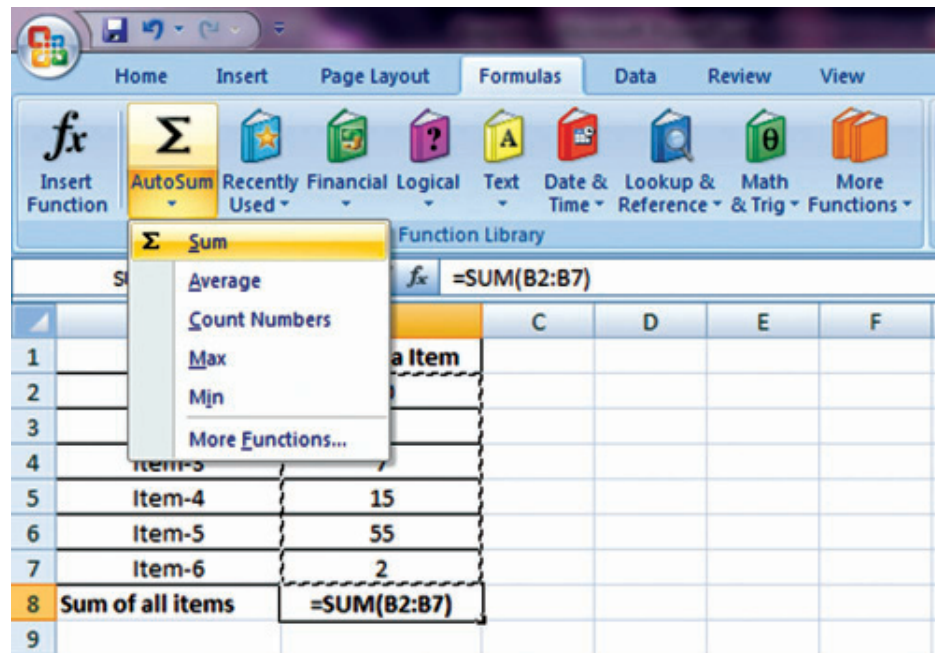


Fig 10.4: Using AutoSum in a spreadsheet

Activity 10.2

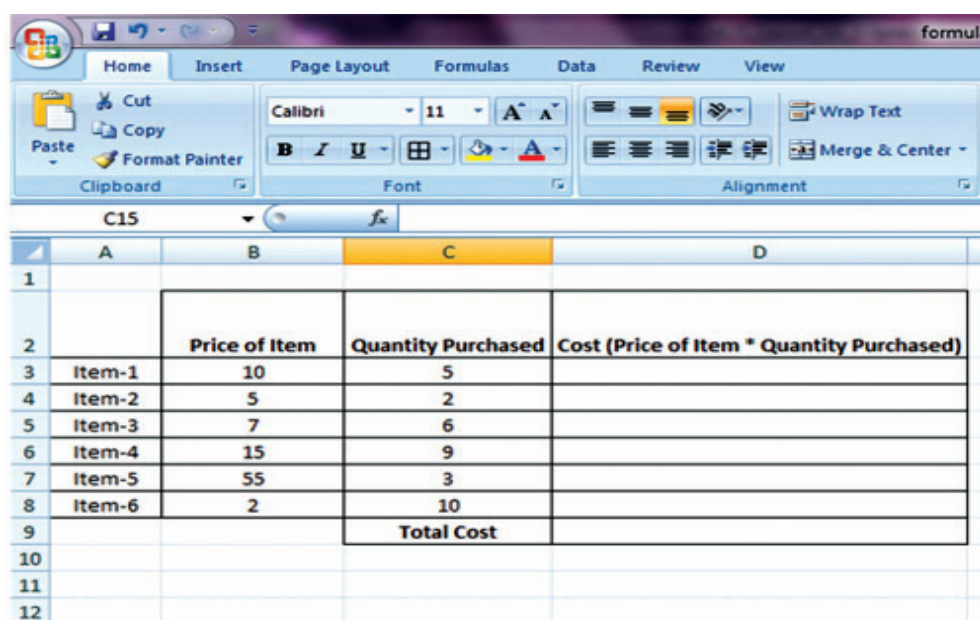
After entering all the major financial data in Activity 10.1, now Topo wants to know his total outgoing expenses, net income and total savings.

Help Topo calculate the above by doing the following things:

- Take your mouse cursor below all the 3 tables created in Activity 10.1.
- Then, insert a new row by clicking the Insert icon on the Home tab and then selecting Insert Sheet Rows.
- Label the cells as Total_Net_Income, Total_Outgoing_Expenditure, Total_Savings.
- Make a function to calculate the Total_Net_Income (that is, Total Salary-Deductions).
- Use SUM function to calculate the Total_Outgoing_Expenditure.
- Use SUM function to calculate the Total_Savings.

5. Creating formulas

Creating a formula in a cell requires the calculations to be performed in order to get a value. It can combine the results of two or more different existing formulas also. Consider the following example in which the total cost of purchasing has to be calculated.



	A	B	C	D
1				
2		Price of Item	Quantity Purchased	Cost (Price of Item * Quantity Purchased)
3	Item-1	10	5	
4	Item-2	5	2	
5	Item-3	7	6	
6	Item-4	15	9	
7	Item-5	55	3	
8	Item-6	2	10	
9			Total Cost	
10				
11				
12				

Fig. 10.5: Creating formulas



Notes

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Notes

The total cost of the items purchased involves following calculations:

- Cost of different items purchased has to be calculated by multiplying price of item and quantity purchased i.e., $D3=B3*C3$ (see figure 10.6), etc.

	A	B	C	D
1				
2		Price of Item	Quantity Purchased	Cost (Price of Item * Quantity Purchased)
3	Item-1	10	5	=B3*C3
4	Item-2	5	2	
5	Item-3	7	6	
6	Item-4	15	9	
7	Item-5	55	3	
8	Item-6	2	10	
9			Total Cost	
10				

Fig. 10.6: Calculating cost

- Total Cost has to be calculated by summing cost of all items in D9 cell by using function SUM (D3:D8) (see figure 10.7)

	A	B	C	D
1				
2		Price of Item	Quantity Purchased	Cost (Price of Item * Quantity Purchased)
3	Item-1	10	5	50
4	Item-2	5	2	10
5	Item-3	7	6	42
6	Item-4	15	9	135
7	Item-5	55	3	165
8	Item-6	2	10	20
9			Total Cost	=SUM(D3:D8)
10				
11				
12				

Fig. 10.7: Calculating Total Cost

The total cost is displayed in D9 cell as 422 in this example.

Activity 10.3

After calculating Net incoming salary, total outgoing expenses, and total savings in activity 10.2, now Topo wants to know his total net income left in his hand per month. Help Topo calculate the above by doing the following things:

- Write a function which calculates the net income in a new cell by subtracting Total_Outgoing_Expenditure from Total_Net_income.
- Select a cell at appropriate place for labelling the above cell.

**Notes****6. Freeze Pane**

This feature allows you to freeze portions of a worksheet, typically column and row headings, so that you can view and enter the data in distant parts of the worksheet while the headings remain in place.

The freeze panes in a worksheet can be done by positioning the cell cursor as follows:

- Rows: Select the row below the rows you want to freeze. For example, to freeze rows 1 and 2, click row 3.
- Columns: Select the column to the right of the columns you want to freeze. For example, to freeze column A and B, click column C.
- Columns and rows: Click the cell below the rows and to the right of the columns you want to freeze. For example, to freeze both column C and row 3, click cell D4.

Freeze Panes: Select Freeze Panes in the View tab, and then click Freeze Panes. A thin black line separates the sections. As you scroll down and to the right, notice that the columns above and rows to the left of the cell cursor remain fixed. An example to freeze first column A and first 2 rows is shown in figure 10.8:

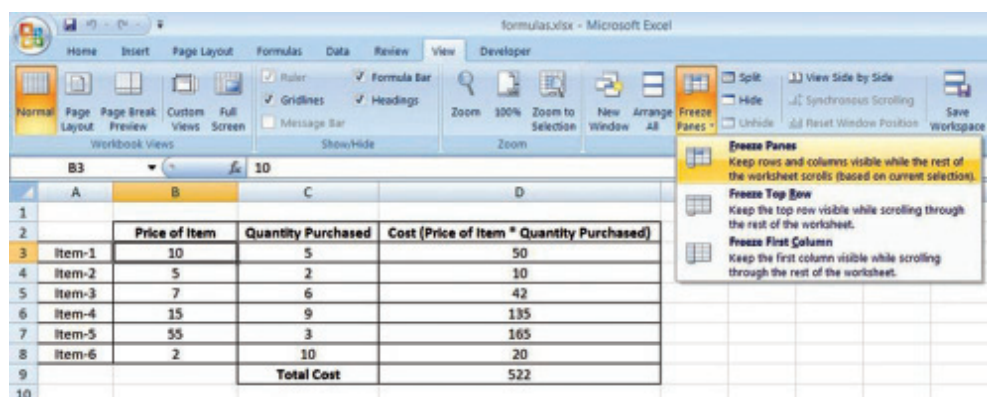


Fig. 10.8: Freeze Panes

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Notes

Unfreeze Panes: Select Freeze Panes in the View tab, and then click Unfreeze Panes. It unlocks the fixed rows and columns as in figure 10.9.

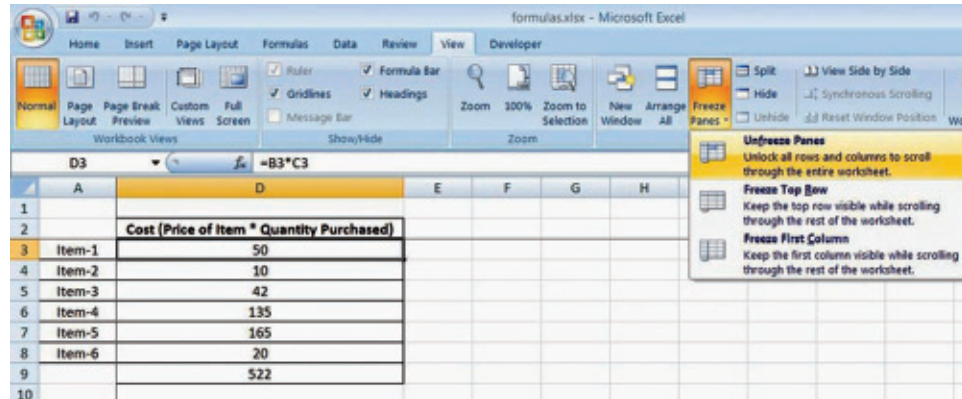


Fig. 10.9: Unfreeze Panes



INTEXT QUESTIONS 10.1

Find out what went wrong in the steps. Write the correct steps:

1. Iqbal wanted to start a new spreadsheet. He clicked Start → Microsoft Office → All Programs → Microsoft Office Excel 2007 → File.

Ans: Iqbal should have clicked _____

2. Mixed Referencing: While referencing Satbir did not want the contents of row 10 to change while copying the contents from B column, so he used the formula (\$B10)

Ans: Satbir should have _____

3. Formula: Juhi wants to add all the data from C2 to C10 cell in C11 cell, she has calculated the sum by mentioning C2 + C3 + C4 + C5 + C6 + C7 + C8 + C9 + C10

Ans: Juhi should have used _____

10.2 ANALYSING DATA USING SORT, FILTER, CONDITIONAL FORMATTING

Once the data has been input, it is ready to be analysed. In this section you will learn how the sorting, filtering and conditional formatting is done on the data.



Notes

1. Filtering Data

Filtering is a method of locating and managing data in a spreadsheet. It is applied when we want to display some specific data instead of the entire data. Filtered data can be copied, manipulated, and printed without moving it to a new spreadsheet.

- Select the column to which you want to apply the filter. If you want to apply filter on all columns, then select the row consisting of column labels of your data. We have selected second row for applying filter.
- Select locate the Sort & Filter group from the Data tab, then click the Filter Icon.

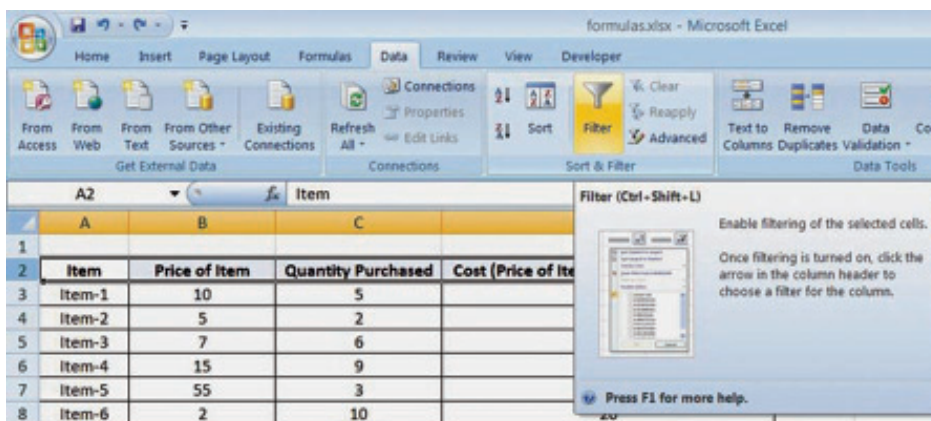


Fig. 10.10: Filtering data

- Drop-down arrows will appear in the header of each column.
- Filtering of a column can be done by clicking the **drop-down arrow**. In this example, we'll filter the **Item** column to view only certain types of Item.

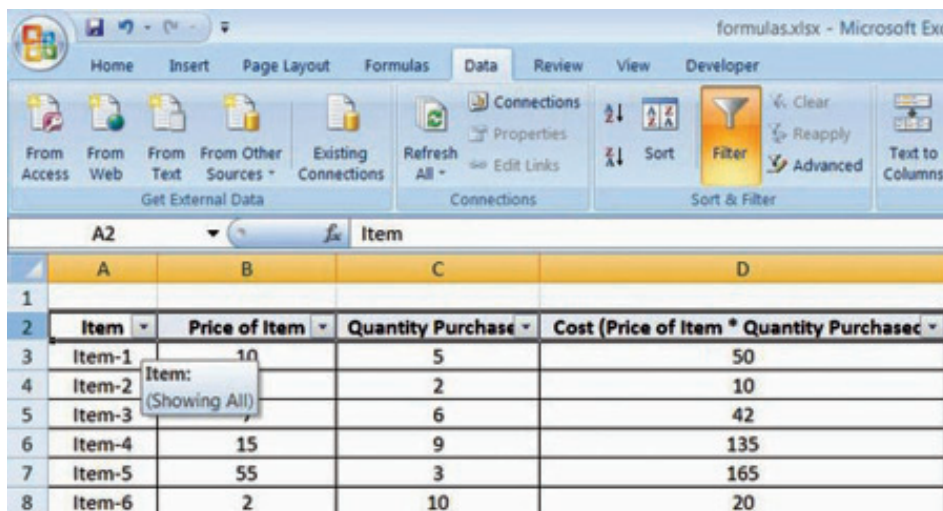


Fig. 10.11: Filter menu



Notes

- e. The Filter menu appears as in figure 10.11.
- f. **Uncheck** the boxes next to the data you don't want to view in the result or uncheck the box next to Select All to quickly uncheck all.
- g. Check the boxes next to the data you do want to view. In this example, we'll check Item-2 and Item-4 to view only these items (see figure 10.12).

	A	B	C	D
1				
2	Item	Price of Item	Quantity Purchase	Cost (Price of Item * Quantity Purchase)
			5	50
			2	10
			6	42
			9	135
			3	165
			10	20
			Total Cost	522

Fig. 10.12: Applying Filter

- h. Click Ok. All other data will not be visible, or temporarily hidden. Only Item-2 and Item-4 will be visible (see figure 10.13).

	A	B	C	D
1				
2	Item	Price of Item	Quantity Purchase	Cost (Price of Item * Quantity Purchase)
4	Item-2	5	2	10
6	Item-4	15	9	135
10				

Fig. 10.13: Filtered data

You can also apply another filter on above data to narrow down results.

2. Sorting Data

Sorting allows you to reord data in a worksheet. The common type of sorting is alphabetical ascending or descending ordering. You can sort data by numbers (smallest to largest or largest to smallest), text (A to Z or Z to A), dates and times (oldest to newest and newest to oldest) in one or more columns. The sorting of data can be done as follows:

- a. Select the cells of a column you want to sort.

- b. On the Data tab, in the Sort & Filter group, do the following:
- To sort in ascending order, click A to Z icon in worksheet. It sorts A to Z or smallest number to largest.
 - To sort in descending order, click Z to A icon in worksheet. It sorts Z to A or largest number to smallest.

For sorting multiple levels, click in the Sort & Filter group of the Data tab and do the following:

- c. Click the Sort icon to open the Custom Sort dialogue box (see figure 10.14).

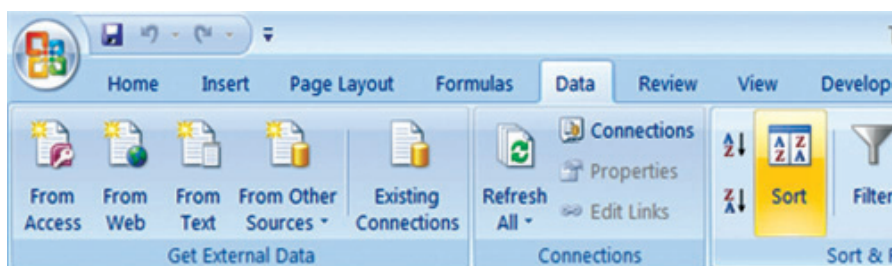


Fig. 10.14: Custom Sort dialogue box

- d. Choose one of the options after clicking the drop-down arrow in the **Column Sort by** field. Let us select “Cost” column (see figure 10.15).

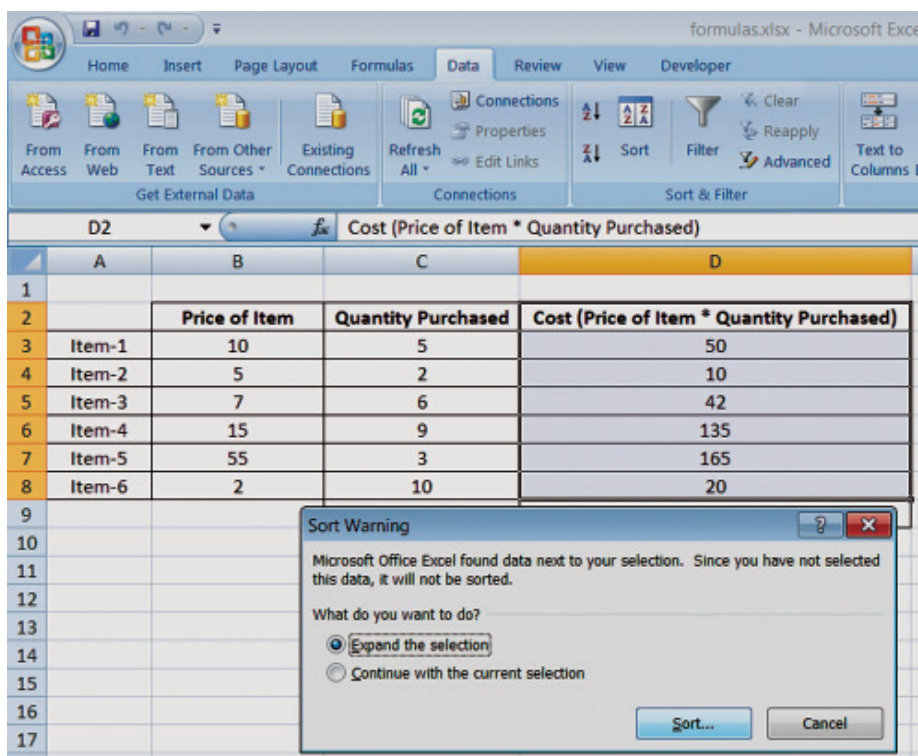


Fig. 10.15: Drop down menu of custom sort



Notes

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Notes

- e. Next, you have to choose **sort on**. In this example, we have left the default as **Value**.
- f. **Order** the results is chosen next. Leave it as **A to Z** so it is organized alphabetically.
- g. Click **Add Level** to add another item to sort by.

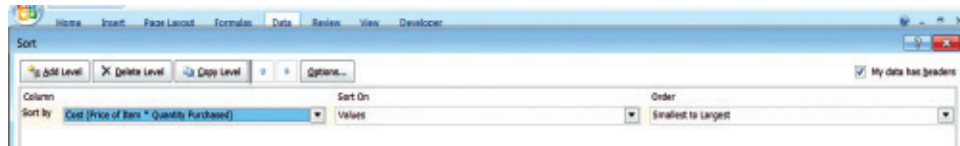


Fig. 10.16: Sorting by column Cost

- h. Select an option in the **Column “Then by”** field. In this example, we have chosen **“Price of Item”**.
- i. Next, you have to choose **sort on**. In this example, we have left the default as **Value**.
- j. Choose how to **order the results**. Order is selected as **smallest to largest**.
- k. Click **Ok** (see figure 10.16).

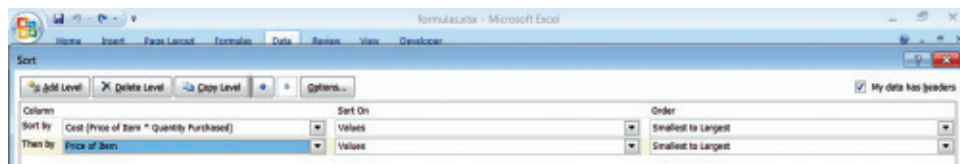


Fig. 10.17: Sorting by column Price

- l. The worksheet is sorted as follows (see figure 10.18):

	A	B	C	D
1				
2	Item	Price of Item	Quantity Purchased	Cost (Price of Item * Quantity Purchased)
3	Item-2	5	2	10
4	Item-6	2	10	20
5	Item-3	7	6	42
6	Item-1	10	5	50
7	Item-4	15	9	135
8	Item-5	55	3	165

Fig. 10.18: Data displayed after applying sorting on Cost and Price columns



Notes

3. Conditional formatting

It is difficult to examine the raw data consisting of hundreds of rows in a spreadsheet. Conditional formatting helps you to highlight interesting or unusual cell values in a spreadsheet. It also helps you to visualize the data formatting by using data bars. In conditional formatting chosen rules and formatting are applied to one or more cells based on the value of the cell. Before choosing a formatting rule, you must identify the questions you are trying to answer.

Conditional formatting can be applied as follows:

- Select the cells on which you want to apply conditional formatting.
- Click the **Home** tab and then locate the **Styles** group.
- Click the **Conditional Formatting** icon. A menu will appear with formatting options.

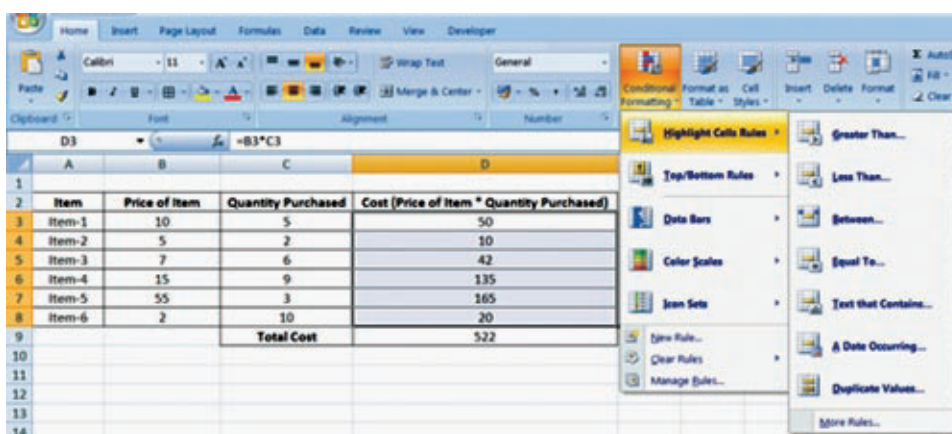


Fig. 10.19: Conditional formatting options

- Select **one of the Conditional formatting options** to apply it to the selected cells. A cascading menu will appear (see figure 10.19).

Different Conditional formatting options are as follows:

- Highlight Cell Rules:** This option highlights **specific cells** based on your option choice. It has options like greater than, less than or equal to a number, and between two numbers, etc. It can also be used to highlight cells that contain specific text or date. When this option is selected, a **dialog box** will appear, and then you have to mention the cell or range of cells to highlight and the colour to be used for highlighting the cells. **For example, we have applied Greater Than 100 on the column Cost (excluding 522 value)** (see figure 10.20).

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Notes

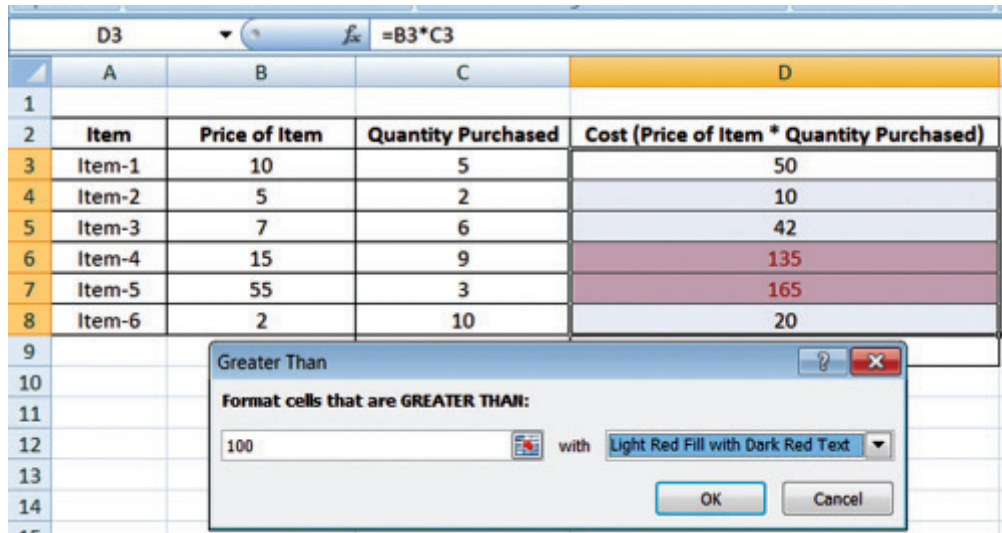


Fig. 10.20: Applying Highlighting cells

- ii. **Top/Bottom Rules:** This option highlights cell values that meet a specific criteria. It has options like top or bottom 10%, above average, and below average, etc. This option is selected, a dialog box will appear, and then you have to mention the cell or range of cells to highlight and the colour to be used for highlighting the cells. For example, we have applied Top 10% on the column Cost (excluding 522 value) (figure 10.21).

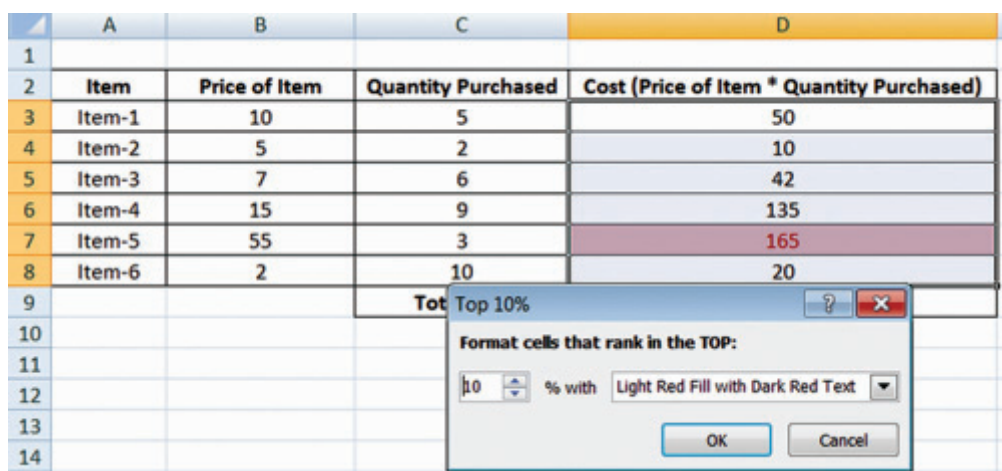


Fig. 10.21: Applying Top 10% Rule

iii. **Data Bars:** This option formats the selected cells with coloured bars. The length of the data bar represents the value in the cell. The longer the bar, the higher the value (see figure 10.22).

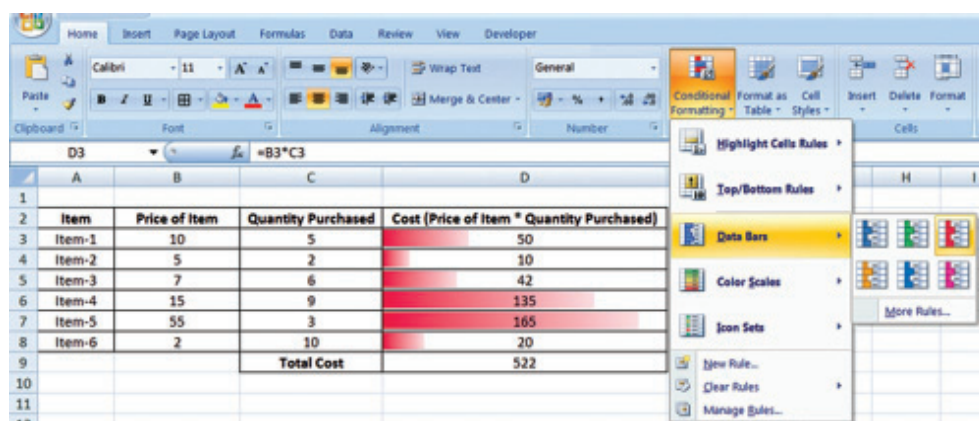


Fig. 10.22: Formatting cells using Data Bars

iv. **Colour Scales:** This option applies a two or three colour gradient to the cells. The shade of the colour represents the value in the cell (see figure 10.23).

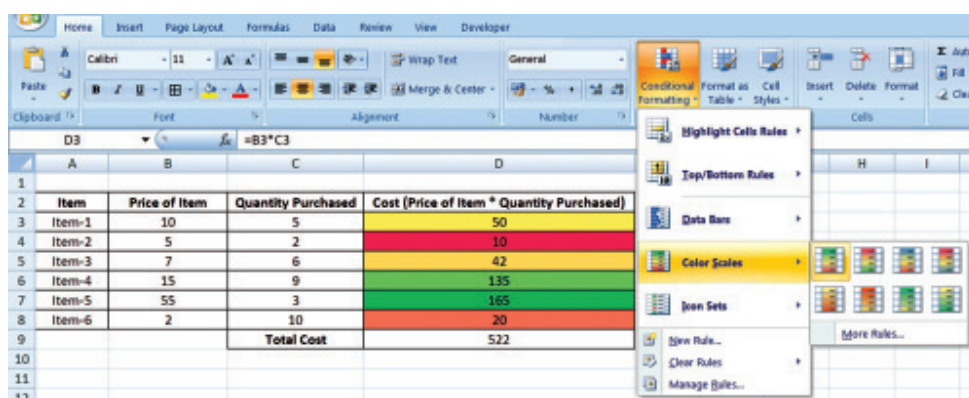


Fig. 10.23: Formatting cells using Colour Scales

The conditional formatting can be removed as follows:

- Click on the **Conditional Formatting** icon.
- Select **Clear Rules**. A cascading menu appears.
- Choose to clear rules from the **entire worksheet** or the **selected cells**.

The conditional formatting can be managed as follows:

- Click the **Conditional Formatting** icon.

Notes



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Notes

- Select **Manage Rules** from the menu. The Conditional Formatting Rules Manager dialog box will appear.
- The editing, deleting and changing the order of the rules can be done.

4. Data Validation Checks

Data validation is the process of ensuring that correct, meaningful and useful value of data is only entered. It uses validation rules for checking it. The following actions can be done:

- Determine if an entry is valid based on calculation in another cell.
- Set a range of numeric values that can be entered in a cell.
- Restricting the values allowed in a cell from a list of entries.
- Create a prompt message about the kind of data allowed in a cell.
- Create messages that appear when incorrect data has been entered.

We are aware that quantity of an item should be greater than zero. Let us make a validation check on the quantity column as follows:

- Select cells C3:C8.
- On the Data menu, click Data Validation (see figure 10.24).
- On the Settings tab, click Whole number in the Allow drop-down list.
- By default, the **Ignore blank** is checked. Uncheck it.
- In the Data, select greater than.
- Next mention the Minimum value as 1.

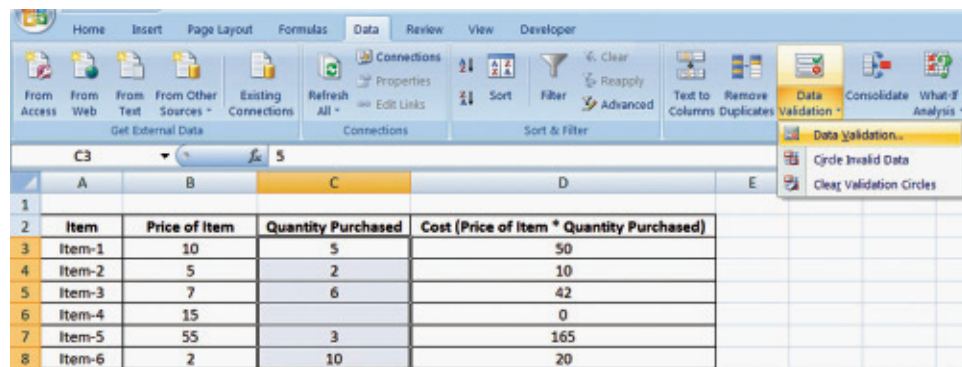
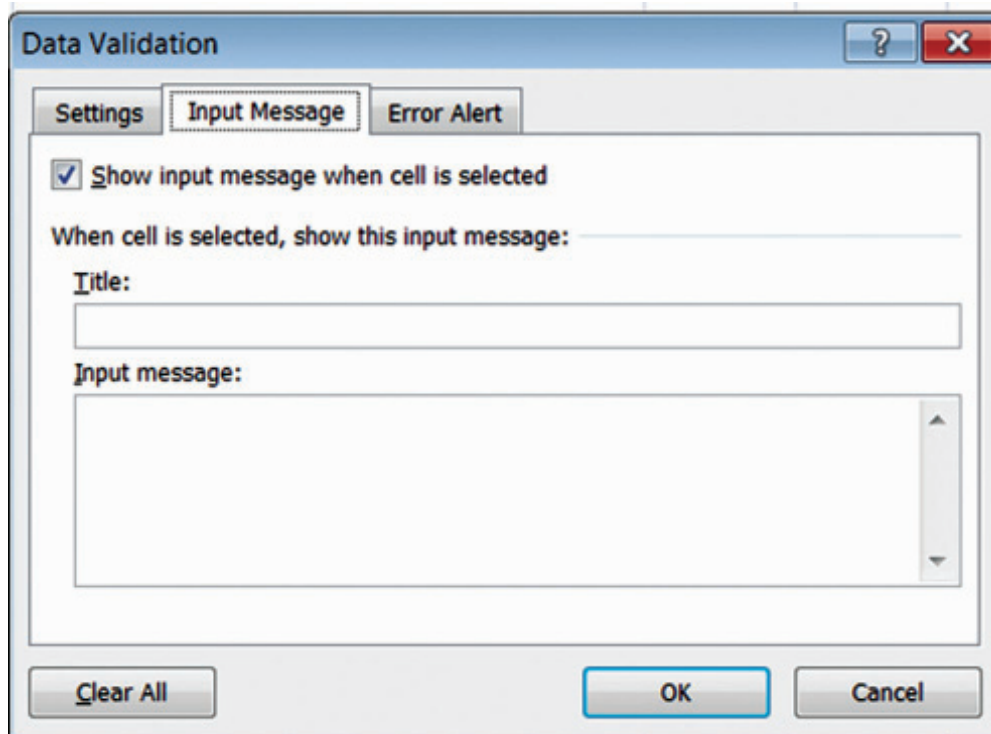


Fig. 10.24: Data Validation

g. Click OK.

You can also create an input message and error alert that appears when incorrect data is entered (see figure 10.25).



Notes



Fig. 10.25: Input message and Error Alert window for Data Validation

5. Pivot Table

Pivot Tables are used to summarize, explore, analyse, and present your data in a spreadsheet. It can be created by using a few clicks. Pivot Tables are flexible and can help you to **quickly find the answer** to different questions. The pivot table can be created as follows:

- Select the cells in a spreadsheet that you want to use in the Pivot Table.
- Select the Insert tab and then click the Pivot Table icon.
- Click Pivot Table again. It selects cells in the active spreadsheet, and then Pivot Table dialog box is opened.

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Notes

	A	B	C	D
1				
2		Price of Item	Quantity Purchased	Cost (Price of Item * Quantity Purchased)
3	Item-1	10	5	50
4	Item-2	5	2	10
5	Item-3	7	6	42
6	Item-4	15	9	135
7	Item-5	55	3	165
8	Item-6	2	10	20
9			Total Cost	522

Fig. 10.26: Range of data

- d. The Table/Range field shows the range of the selected data. New Worksheet is selected by default at the place where the Pivot Table will be created (see figure 10.27).

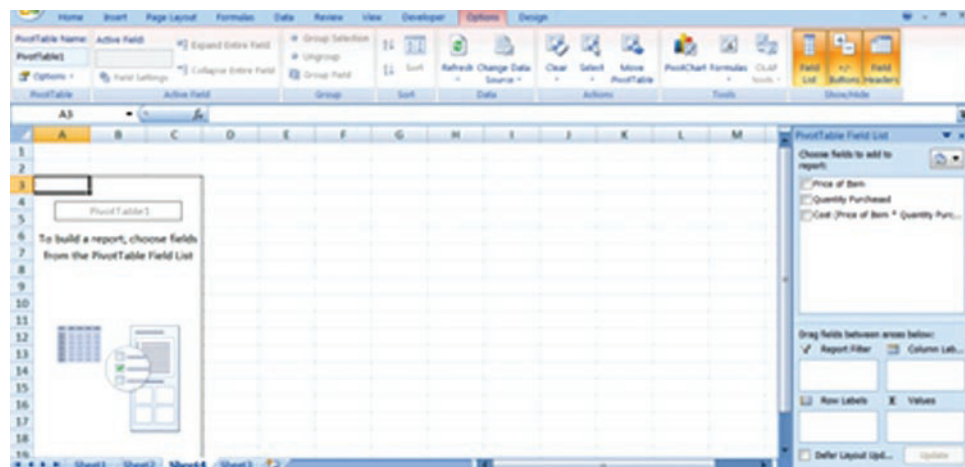


Fig. 10.27: Pivot Table

- e. Each column label in your data becomes a field that can be used in PivotTable. The Field List appears on the right side of the report, while the layout area appears on the left.
- f. The fields are selected depending upon the analysis. For example, you might want to know the cost of each item. Then the fields that are necessary to answer this question, Item and cost are selected by clicking check box next to both fields.
- g. The field will appear in the drag-and-drop area at the bottom of the field list and in the layout area. By default, the data with numbers will always appear on the right.

h. The answer to question in the report is on the left.

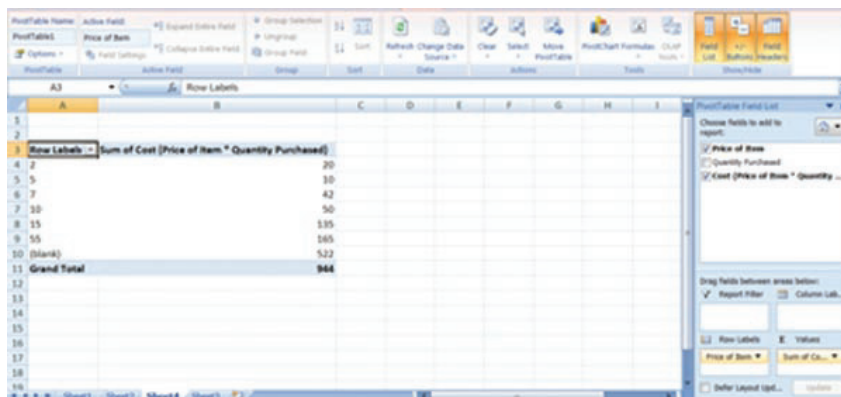


Fig. 10.28: Fields of the pivot table

We can also add filter to above report by using “Report Filter” icon in the right side (see figure 10.28).

Activity 10.4

After calculating Net income left per month in his hand, help Topo analyse the current expenditure components where he can optimize his expenditure by doing following things:

- Apply the validation checks on different columns, so that only whole number can be entered.
- First sort the current expenditure in descending order
- Highlight the components ≥ 2000 in red colour
- Find the components having top 10% of total cost
- Find the components having bottom 10% of total cost
- Create the data bars for the different components in different colours
- Select the components where expenditure can be reduced

6. Creating Charts

Charts are used to display numeric data graphically so that it becomes easier to understand large amount of data and the relationships between data. Spreadsheet supports many types of charts to display data which will be useful for the user. Some of the commonly used charts are Pie, Bar, Line, Column, Scatter (XY), Area, etc.



Notes

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Notes

When you create a chart in spreadsheet, it will appear in the selected worksheet in which data has been selected. The chart can be created as follows:

- a. Select the worksheet to work with.
- b. Select the cells including column titles and row labels from which a chart has to be created.
- c. Click the Insert tab.
- d. Select the type of chart that has to be created.

Figure 10.29 shows the snapshot in creating chart for the data mentioned in the example of section 10.1.4.

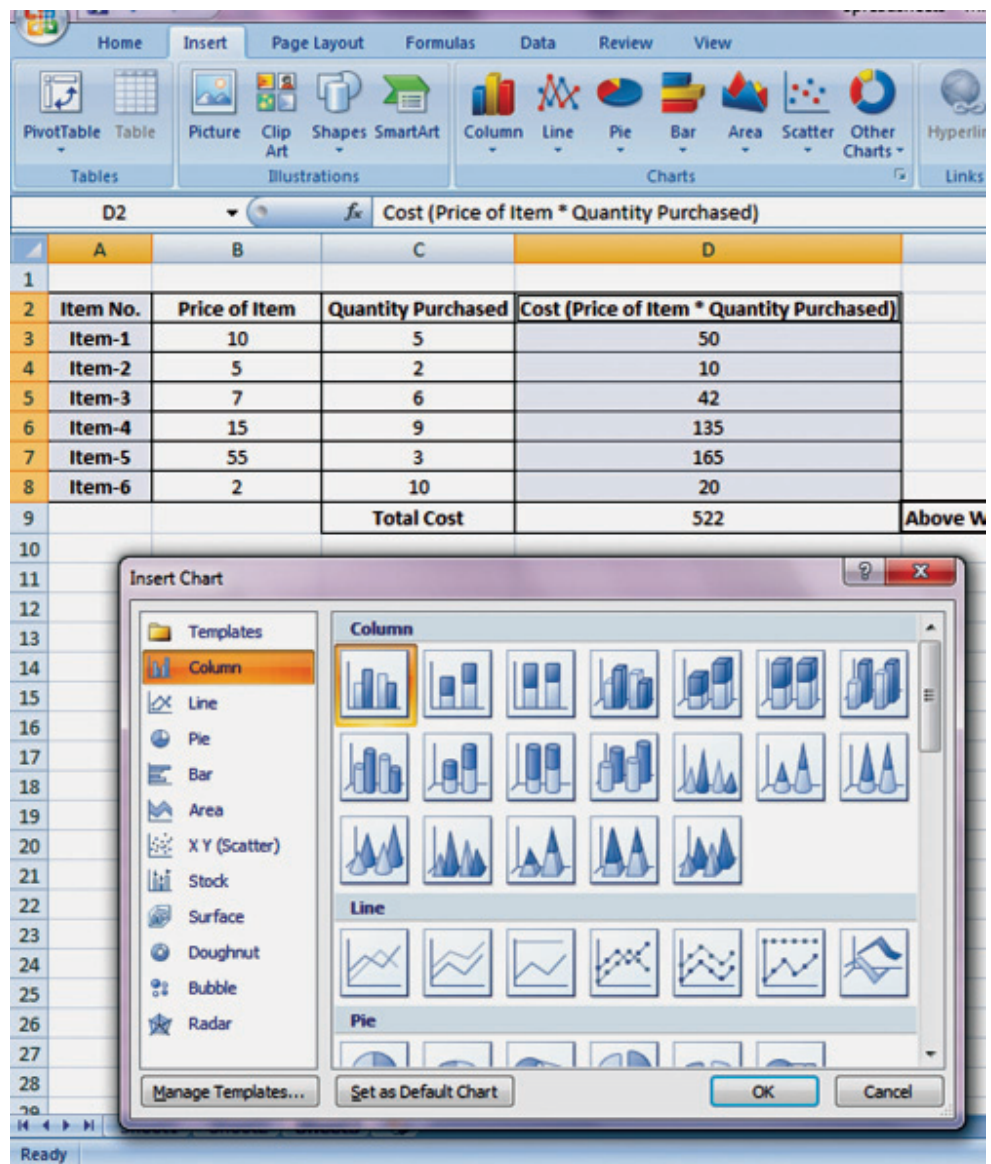


Fig. 10.29: Creating Chart

A chart contains different elements. When a chart is created some of the elements are displayed by default, others can be added as needed. The display of the chart elements can be changed by moving it to other locations in the chart, resizing it or by changing the format. The chart elements that you do not want to display can also be removed. Different elements of the chart are shown in figure 10.30:

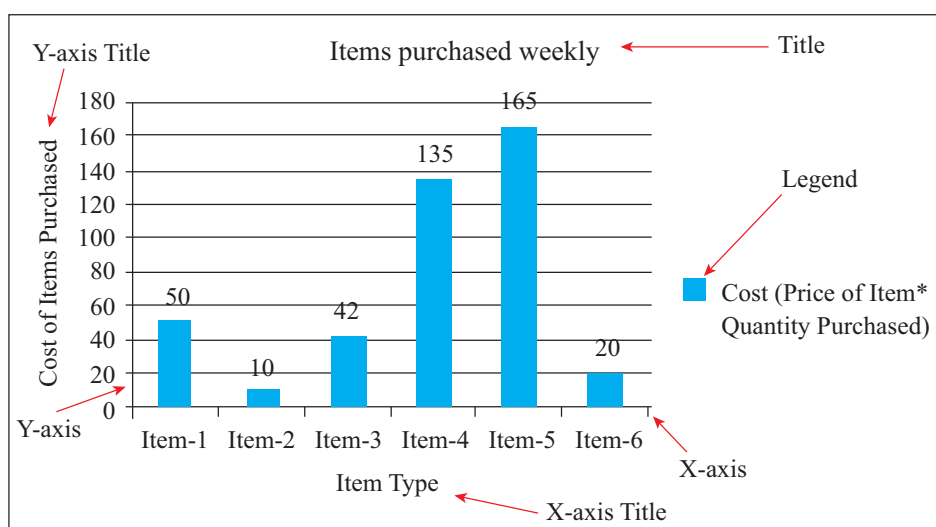


Fig. 10.30: Elements of chart

7. Analysing data

Consider the data from figure 10.8 in section 10.6.1. The total weekly budget for purchasing items is Rs 500. But from the data, it appears that planned expenditure is Rs 522 which is above weekly budget. The following analysis can be done so that the expenditure is within the limits.

- How much more money is spent above the budget?
- Which items are expensive?
- Which items are of minimum cost?
- Which items are of higher priority?
- The minimum number of quantity of higher priority items required for purchase.
- Which item(s) can be eliminated/reduced/added as per the requirements?

Activity 10.5

Now Topo wants to analyse his current financial situation by visualizing the following data:

- Salary and deductions components,
- Current expenditures components,



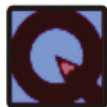
Notes

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Notes

- Total savings components,
 - Breakup of Total_Net_income, Total_Outgoing_Expenditure, Total_Savings.
1. Help Topo to graphically visualize all above by creating appropriate charts.
 2. Topo also wants to improve his financial situation by reducing Total_Outgoing_Expenditure. Help Topo to identify the components where Topo can reduce his expenses.



INTEXT QUESTIONS 10.2

Find out what went wrong in the following steps. Write the correct way of doing these steps.

1. Ishan wanted to view his grades in a specific subject consisting of all subjects grades in a spreadsheet. He has used sorting technique for it.

Ans: Ishan should have applied _____

2. Saahil wanted to change colour of the cell in which he has scored less than 30 marks for different subjects. He has used colour scales technique for it.

Ans: Saahil should have used _____

3. Aafreen wants to display her expenditure of different items in percentage form. She has used the bar graph for it.

Ans: Aafreen should have used _____

8. Writing Macros

A macro is a piece of programming code that runs in spreadsheet environment and helps **automate routine tasks**. Macros are available in developer option. The tab for developers is not displayed in spreadsheet by default. In order to record macros, the Developer tab can be displayed as follows (see figure 10.31):

- a. Click the Spreadsheet Options button.
- b. From the Popular section, select the Show Developer Tab in the Ribbon check box.
- c. Click OK, then Developer tab appears.

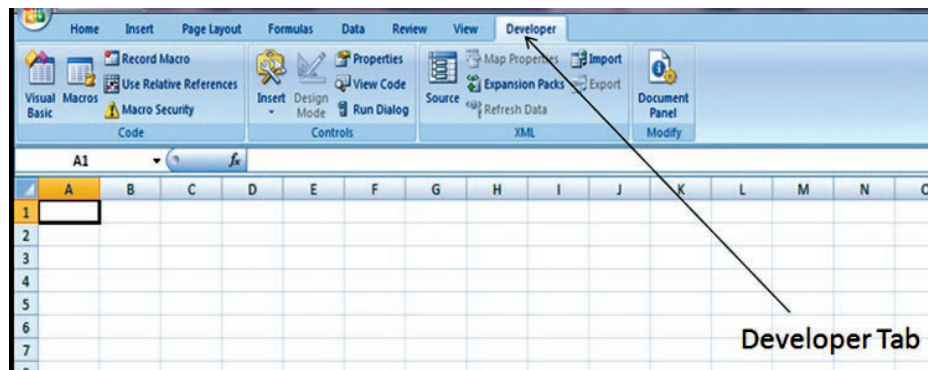


Fig. 10.31: The Developer Tab



Notes

In order to record a macro, the following steps have to be followed:

- a. Select the Record Macro in the Code group of the Developer tab. The Record Macro dialog box appears.
- b. Assign a name for the macro in the Macro Name text box. The first character of the macro name must be a letter, and the name cannot contain spaces or cell references.
- c. Assigning a Shortcut Key is optional.
- d. From the Store Macro in drop-down list, select where you want to store the macro:
 - This Workbook: Save the macro in the current workbook file.
 - New Workbook: Create macros that you can run in any new workbooks created during the current session.
 - Personal Macro Workbook: Choose this option if you want the macro to be available whenever you use spreadsheet.
- e. Description text box is used for writing a description of the macro. This field is optional.
- f. Click OK in order to create a macro.
- g. Perform the actions you want to record.
- h. Choose Stop Recording in the Code group of the Developer tab.

Let's create a macro which converts a decimal number to a percentage (see figure 10.32):

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Notes

- a. On the Developer tab, click Record Macro
- b. Enter a name, for example, percentage
- c. Select “This Workbook” from the drop-down list
- d. Click Ok
- e. Right mouse click on the active cell. Then click Format Cells
- f. Select Percentage
- g. Click Ok
- h. Click Stop Recording

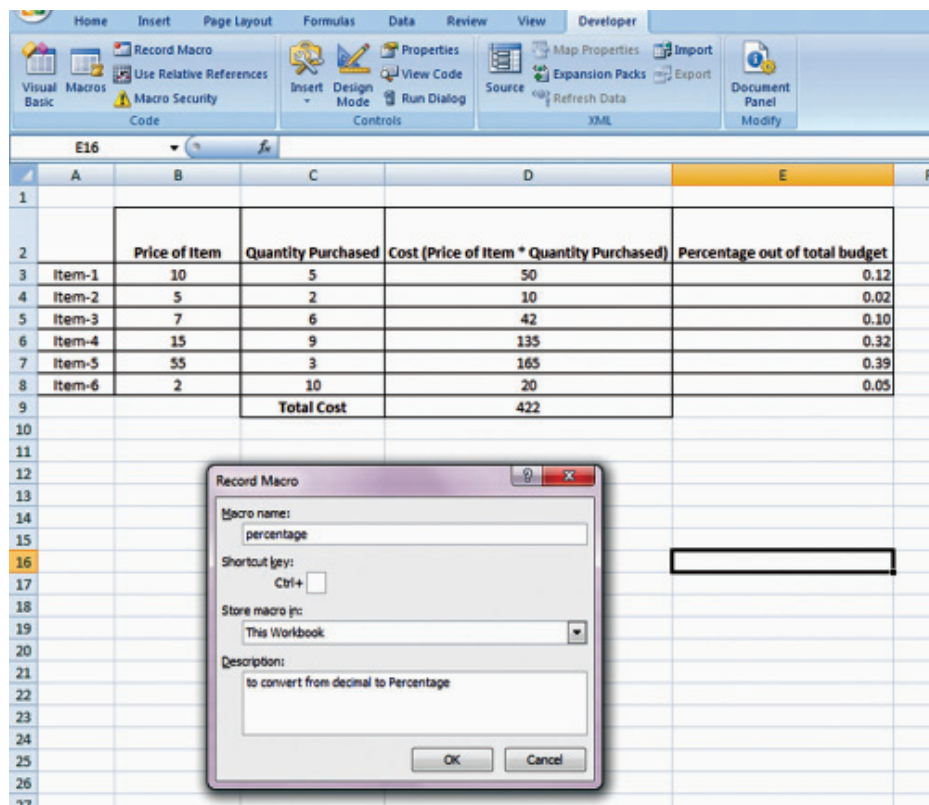


Fig. 10.32: Macro to convert decimal numbers to percentage

Now the macro named “percentage” is created. Save the file as Macro-enabled Workbook.

Now we will run this macro to change a number format to percentage.

- a. Select the cells containing data of “percentage out of total budget”.
- b. On the Developer tab, click Macros.
- c. Select “percentage” macro and then click Run.

d. The values of numbers will be converted to percentage format.

	Price of Item	Quantity Purchased	Cost (Price of Item * Quantity Purchased)	Percentage out of total budget
Item-1	10	5	50	12%
Item-2	5	2	10	2%
Item-3	7	6	42	10%
Item-4	15	9	135	32%
Item-5	55	3	165	39%
Item-6	2	10	20	5%
		Total Cost	422	

Fig. 10.33: Converting decimal numbers to percentages

The code of percentage macro can be viewed by first clicking Macro in code menu and then clicking the edit button. The information can be seen when the Visual Basic Editor window appears as shown in the figure 10.34.

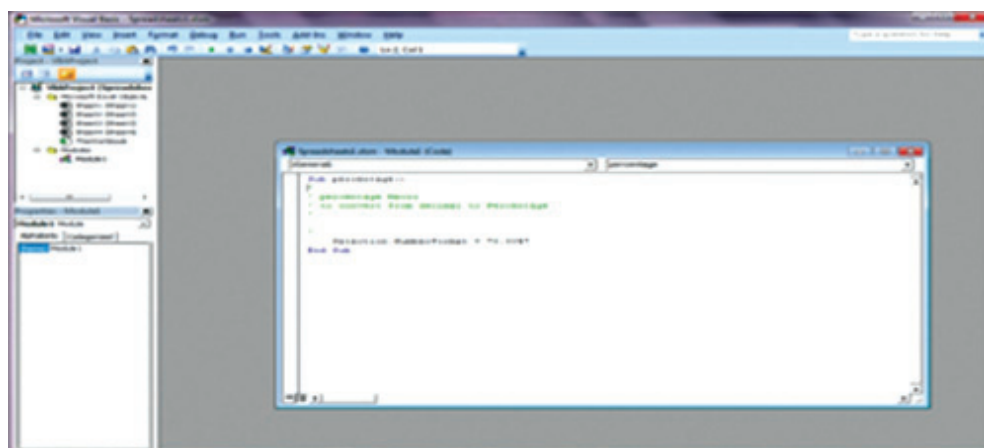


Fig. 10.34: Visual Basic Editor Window

We can also write the code for creating macros but it requires programming knowledge. So, we can create macros to automate your routine tasks in spreadsheet without going in deep of programming.

10.3 OPENSOURCE SOFTWARE

In this lesson we have used excel 2007 for understanding the working of spreadsheet. We can also use the **Calc** application in OpenOffice which is a free and open productivity software from Apache (<https://www.openoffice.org/>).



Notes



Notes



WHAT YOU HAVE LEARNT

In this lesson, you have learned the following:

- Different sheets present in a spreadsheet are First sheet, Previous sheet, Next Sheet, and Last Sheet.
- Two ways of cell referencing techniques are Relative and Absolute.
- All cell references are relative references by default.
- Some of the commonly used functions are SUM, AVERAGE, COUNT, MAX, MIN.
- Freeze Panes allows user to view and enter the data in distant parts of the worksheet.
- Filtering of data is used when we want to display some specific part of data instead of the entire data.
- Sorting of data is used for reordering data in a spreadsheet.
- Different Conditional formatting options are Highlight Cell Rules, Top/Bottom Rules, Data Bars, Colour Scales, etc.
- Data validation checks are required to ensure that only correct data is entered in a cell.
- Pivot Tables are used to summarize, analyse, explore and present your data in a spreadsheet by using few clicks.
- Charts are used for displaying data graphically for the analysis purpose.
- Visual analysis of data can be done by using charts.
- Macros are pieces of programming code used for automating routing tasks.



TERMINAL QUESTIONS

1. What are the different data formats available in Spreadsheet?
2. Mention some frequently used functions in Spreadsheet.
3. What is the benefit of using formula in Spreadsheet?
4. What are the different cell referencing techniques used in calculation?
5. What is benefit of using Freeze Panes in Spreadsheet?

6. Explain pivot tables and its uses.
7. What are the different techniques for analysing data without using charts?
8. Mention different types of charts used for data presentation.



ANSWERS TO INTEXT QUESTIONS



Notes

10.1

1. Iqbal should have clicked Start '!' All Programs '!' Microsoft Office '!' Microsoft Office Excel 2007.
2. Satbir should have used referencing B\$10 instead of \$B10
3. Juhi should have used formula =SUM(C2:C10) in C11 cell.

10.2

1. Ishan should have applied filtering on the subject cell column and then selected the specific subject from it.
2. Saahil should have used Highlight Cell Rules technique for it.
3. Aafreen should have used pie chart for displaying the percentage of different items.



PRESENTATIONS

Dear learners, you have learnt the basics of spreadsheet in the previous lesson. In your daily life, as a student/employee/employer, you have to present your work in front of others. You can present your work either verbally or in written format. The visual medium of communication is a good way to present your work to others. It aids in good understanding between the presenter and the audience. In this lesson, you will learn about PowerPoint a tool for presentation, which will help you to make a good presentation of your work in a concise and in a simple way.



OBJECTIVES

After studying this lesson, you will be able to

- design a presentation using a slide template, themes, graphics, audio, video;
- create a presentation with custom animation, transitions;
- create and modify a master slide layout, and
- print and present the slides in different ways.

11.1 PRESENTATION

PowerPoint includes features needed for making a good presentation. It consists of a series of slides. A slide in a presentation displays the information you want to communicate to your audience. This information can include text, graphics, charts, video, sound, etc.

1. Creating a Presentation

In this section, we will be learning how to create a presentation. For creating presentation using PowerPoint you need to go to:

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

The opened presentation is shown in figure 11.1:

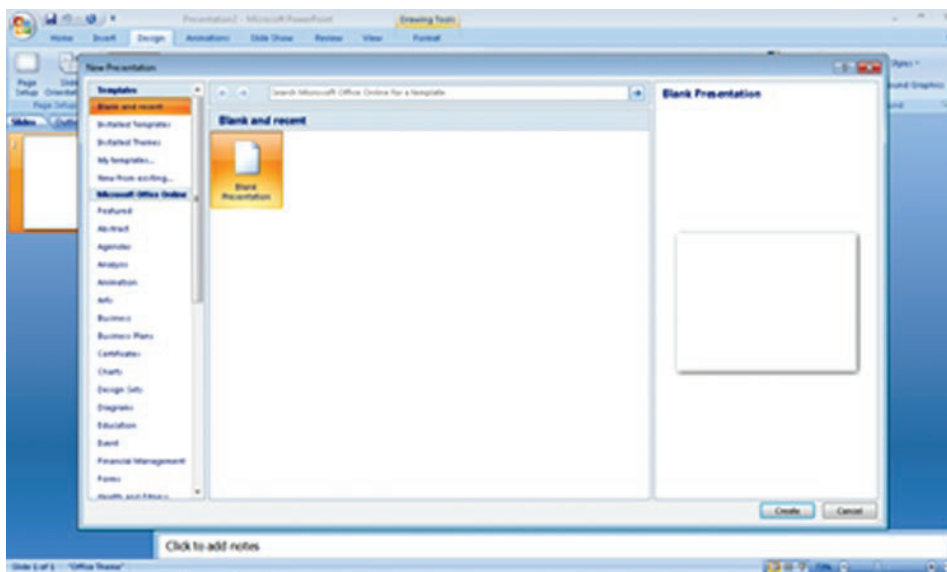


Fig. 11.1: Opened Powerpoint

When a new PowerPoint presentation is created, only one slide appears by default. Click Create button and a new presentation will open in the PowerPoint window. The default slide that appears in presentation is a Title Slide layout.

2. Slide Basics

Slides contain placeholders (areas) on a slide that are enclosed by dotted borders. Placeholders can contain many different items, including text, pictures, and charts. Thumbnail-sized icons represent specific commands such as Insert Picture, Insert Chart, and Insert Clip Art, etc. You can get the details of each icon by taking your cursor over different icons.

The placeholders are arranged in different ways in the layout that is selected when a new slide is inserted or applied to existing slides. The layout in figure 11.2 is called Title and Content that includes title and content placeholders. Click inside the placeholder for inserting text. The placeholder text will disappear and the insertion point will appear. Start typing your text when the insertion point is visible. Once you have entered all the text, click outside the placeholder.



Notes

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Notes



Fig. 11.2: Different areas on a Slide

3. Layout

A slide layout arranges the slide contents. Layouts contain different types of placeholders depending on what information has to be included in the presentation. Each layout has a name and the image of the layout shows you how the placeholders are arranged on the slide.

The layout of an existing slide can be changed by clicking the Layout command in the Slides group on the Home tab. A menu appears with different options. Choose an option to select it. The layout of the presentation will change in the presentation (see figure 11.3).

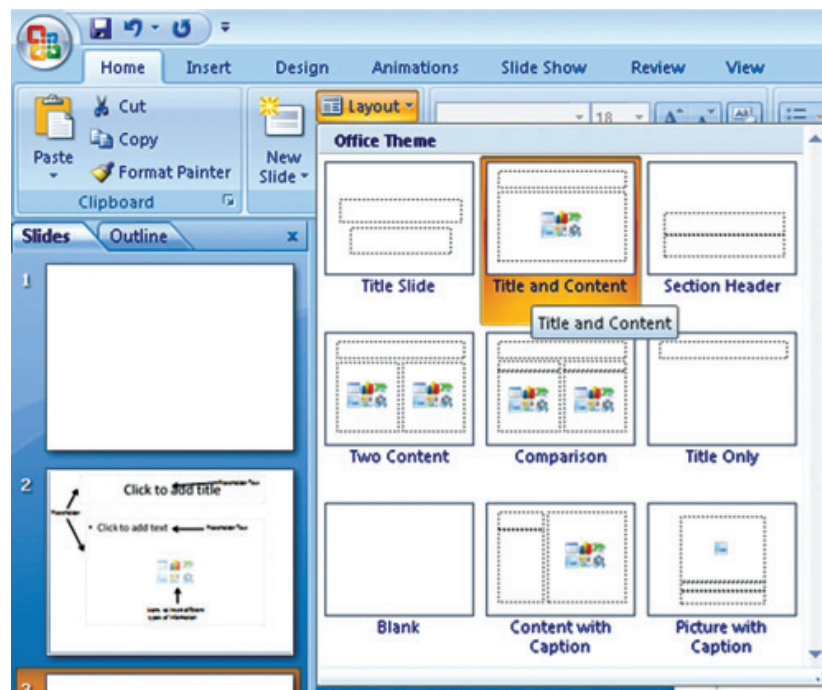


Fig. 11.3: Slide Layout

4. Inserting a New slide

- a. A new slide can be inserted by clicking **New Slide** icon on the Home tab. A menu will appear with your slide layout options (see figure 11.4).

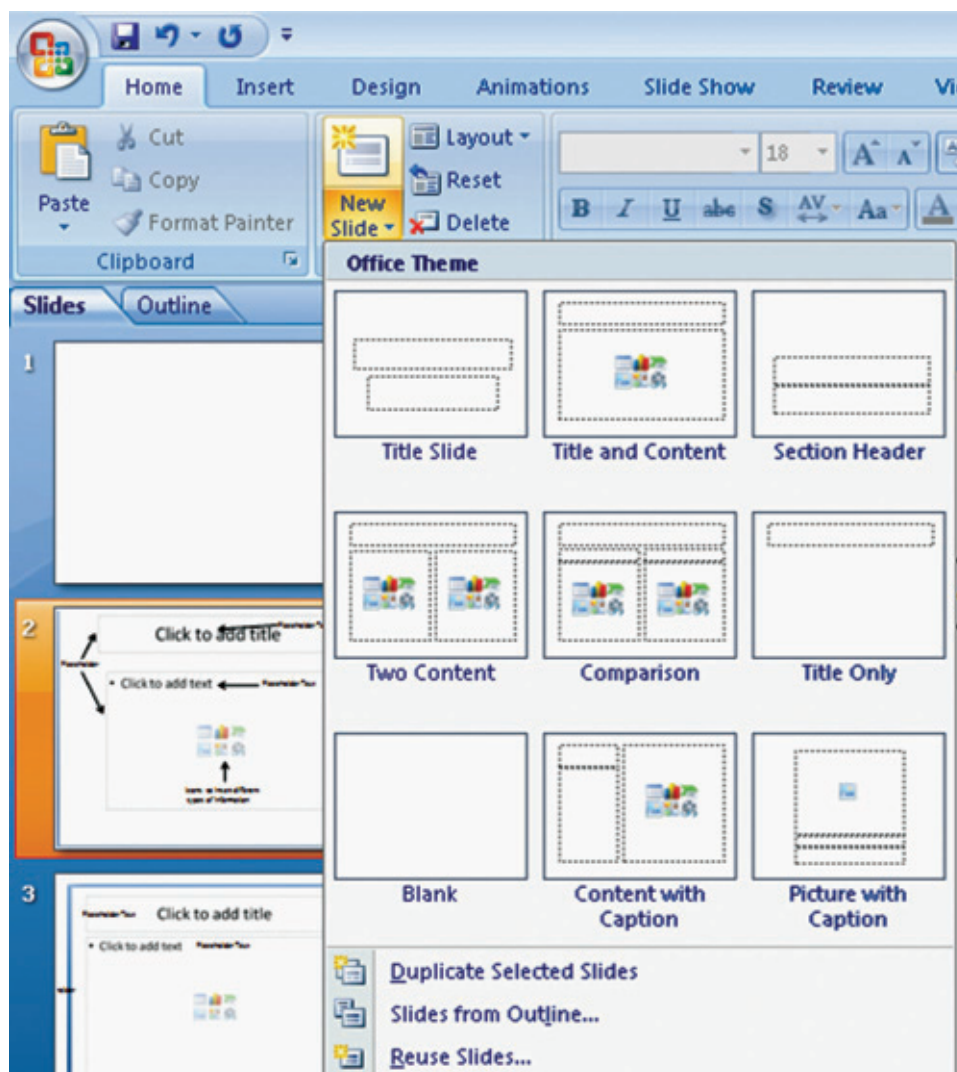


Fig. 11.4: Inserting a new Slide

- b. Click the slide you want to insert. A new slide with the chosen layout will appear in the center of the PowerPoint window and in the pane on the left.

5. Copy, Paste, Delete, Move Slide

The copy and paste of a slide can be done by using icons on Home tab as shown in figure 11.5. Alternatively, the keyboard shortcuts Ctrl+C and Ctrl+V respectively can be used for it. You have to select the slides you want to copy and move the insertion point to the location where you want the copy of the



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slide and then use the Paste icon on the Home tab. The copied slide will appear. The slides can also be deleted by using the delete icon on Home tab.

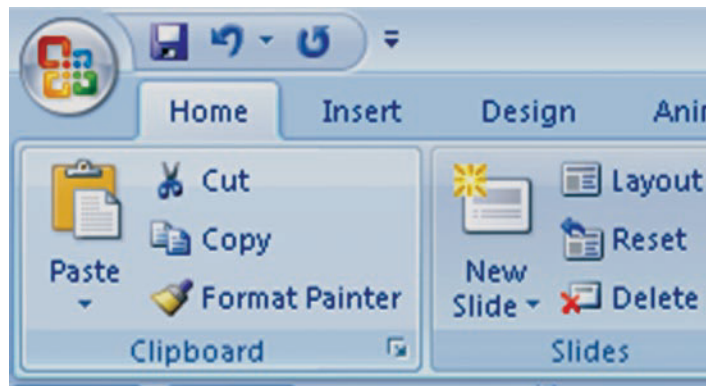


Fig. 11.5: Copy, Paste, Cut icons in presentation tool

A slide can be moved from one location to another by first selecting the slide in the left task pane and then clicking and dragging the slide to a new location. The insertion point will appear.

6. Different views from the PowerPoint window

PowerPoint gives you the ability to view the presentation in different ways. For example, if you want to present your work to an audience you can use the “Slide Show” view. PowerPoint window has four **view** options. The view can be changed by clicking the following (see figure 11.6):

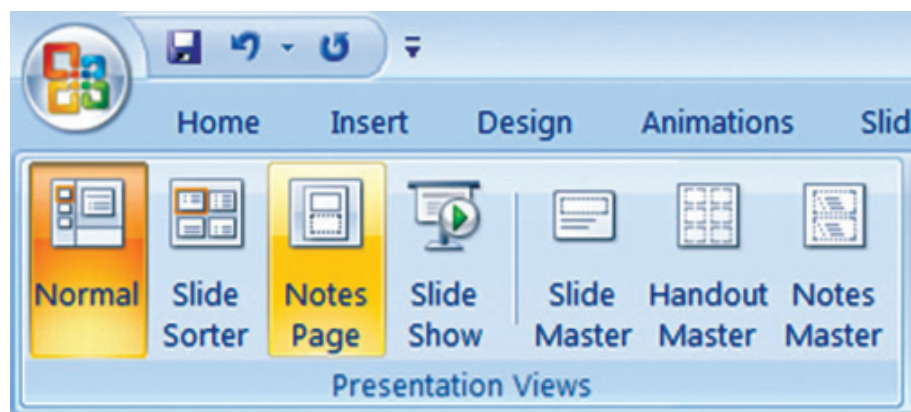


Fig. 11.6: Different views of a PowerPoint

- (i) **Normal:** It is the **default view**. Creating and editing of slides is done in the center slide pane. All of the slides will appear on the Slides tab in the left task pane.

- (ii) **Slide Sorter:** This view has all slides in thumbnail form. The slides are presented horizontally and more slides can be seen at the same time.
- (iii) **Slide Show:** The entire presentation slide will appear on complete screen.
- (iv) **Notes Page view.** It provides space for notes. It is also known as speaker notes view. The notes can be added to the presentation from this view.

First three views are also available in the bottom-right corner as shown in figure 11.7.

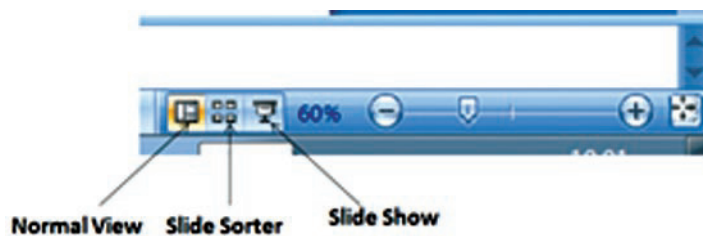


Fig. 11.7: Views available at the bottom right corner

11.2 THEME

A theme is a predefined combination of colours, fonts and effects that can be applied to your presentation. PowerPoint includes built-in themes that can be used for creating presentations in order to save time in formatting (see figure 11.8). Each theme has additional background styles associated with it that can be applied to the slides to modify the theme. A theme is automatically applied when a new presentation is created.

A theme can be applied by locating Themes on the Design tab. Each image represents a theme. More themes can be selected by clicking the drop-down arrow. You can click a theme that you want to apply in your slides.



Fig. 11.8: Different Theme Options

The current theme colours, fonts, and effects can be modified to create a new custom theme. A different theme font option can be applied by clicking the Fonts icon in the Themes group on the Design tab. In order to switch to a different



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theme effect, click the Effects icon in the Themes on the Design tab and then select an effect option from the menu that appears.

Background styles can be added to your slides after a theme is applied. The background styles are updated when you switch to a different theme. The colours are different based on the theme colours. A background style can be selected by clicking the Background Styles icon in the Background group on the Design tab.

11.3 TEMPLATE

A PowerPoint template is a blueprint of a slide or group of slides that is saved as a .potx file in your computer. Templates can contain layouts, theme colours, theme fonts, theme effects, background styles, etc. A custom template can be created and saved so it can be reused later as in figure 11.9.

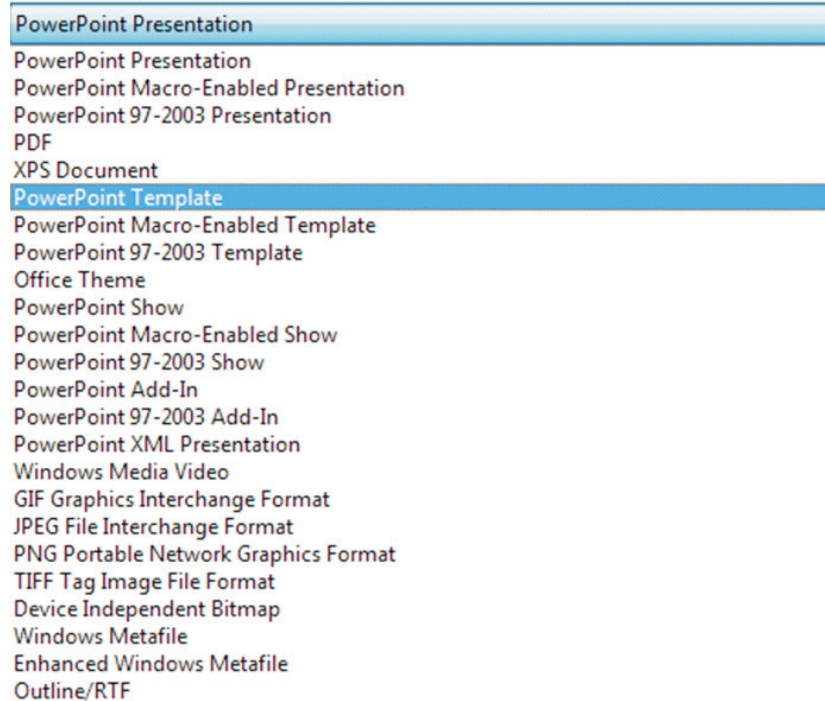


Fig. 11.9: Saving a Custom Template



INTEXT QUESTIONS 11.1

Find out what went wrong. Write the correct steps to do the following.

- (i) K. Mostak wanted to start a new presentation. He clicked Start → Microsoft Office → All Programs → Microsoft Office PowerPoint 2007 → File.

Ans. K. Mostak should have clicked _____

- (ii) Abhilash wants to save colours, font, effects used in his present presentation for further use, so he saved the file as .pptx

Ans. Abhilash should have _____

- (iii) Jasmine wants to present her presentation slide by slide, she has chosen normal view, she should have chosen _____

Ans. Jasmine should have chosen _____



11.4 INSERT GRAPHICS, AUDIO, VIDEO, CHART, CREATING HYPERLINKS

1. Insert Graphics

Graphics can be inserted by using the Insert tab or by using icons in the placeholders as in figure 11.10. After selecting the Insert tab, click the Insert Picture icon in the Illustrations. Locate and select the picture in the Insert Picture dialog box that appears. Finally, click Insert so that graphics appears on the slide. The resizing and moving of graphics can also done by using the appropriate steps.

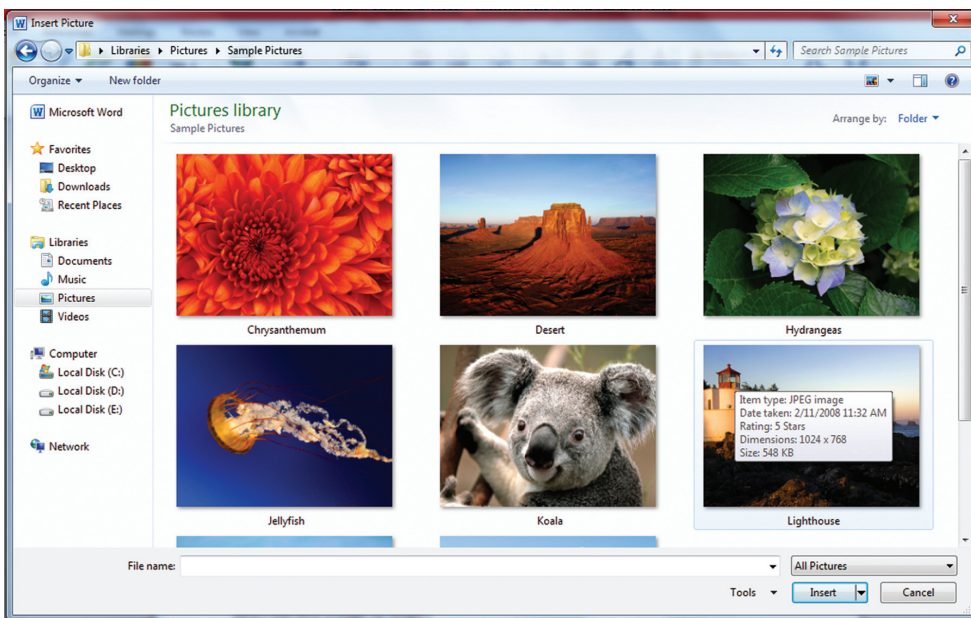


Fig. 11.10: Inserting graphics from a location

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For inserting graphics using placeholder, click the Insert Picture icon in the placeholder. Locate and select the picture in the Insert Picture dialog box that appears. Click Insert so that graphics appear on the slide.

2. Inserting Audio, Video

An audio or movie clip can be inserted from a file on your computer or from the Microsoft Office clip organizer. You can also manage how the movie will operate in the presentation.

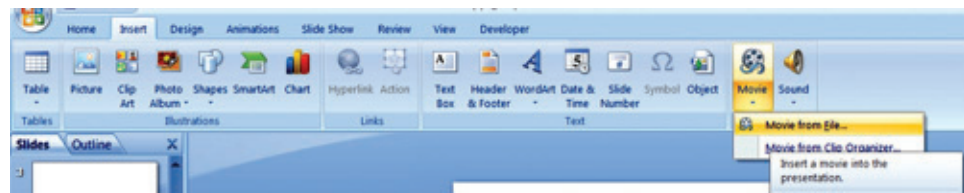


Fig. 11.11: Inserting video in a presentation

Different steps to insert audio or video are as follows:

- Select the slide where you want to insert the movie/audio.
- Select the Insert tab. Click the drop-down arrow on the Movie/audio icon in the Media Clips (see figure 11.11).
- Select Insert a Movie/audio from File from the menu. The Insert Movie dialog box will appear. Locate the file you want to insert from your computer. Click the file name.
- Click Ok.
- The movie/audio will appear on the slide. Click Automatically or When Clicked. Automatically will start the movie automatically as soon as the slide appears in Slide Show view, while When Clicked will start the movie when you click.

3. Inserting Chart

Charts help the audience to understand and compare the data in different ways. A chart can be inserted in the slide as follows:

- Click the Insert Chart command. The Insert Chart dialog box appears.
- Click and drag the scroll bar to view the chart types, or click a label on the left of the dialog box to see a specific chart style as shown in figure 11.12.
- Click a chart to select it.
- Click Ok. Excel will open. Usually, Excel will appear on one side of the screen, while PowerPoint appears on the other side of the screen.

- e. The data that appears in the Excel spreadsheet is placeholder source data you'll replace with your own information. The Excel source data is used to create the PowerPoint chart.

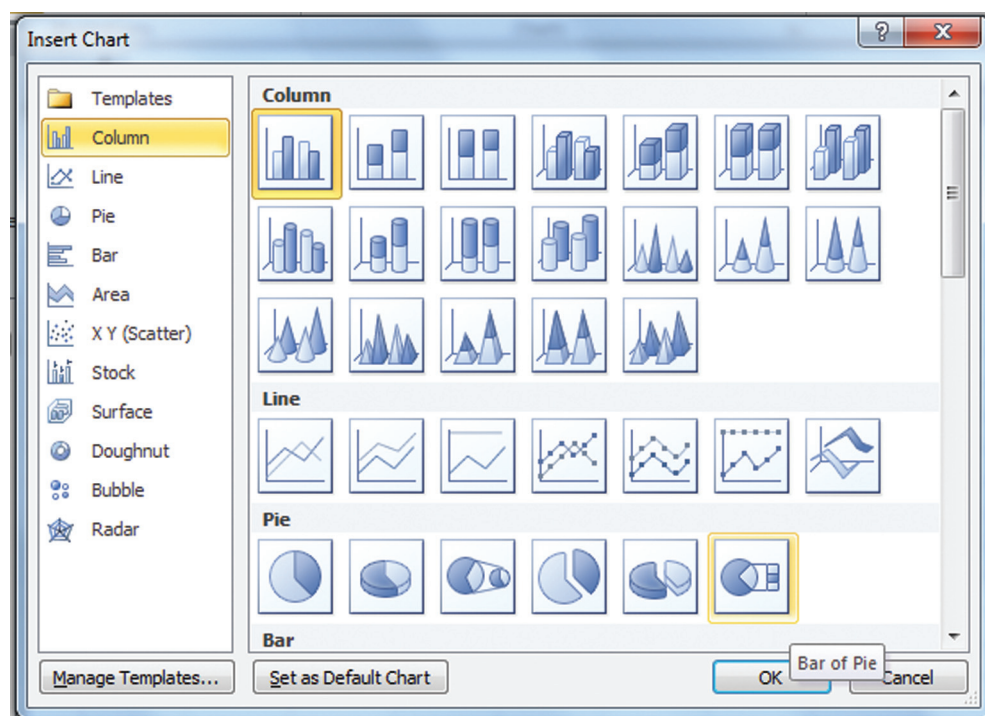


Fig. 11.12: Inserting chart in a presentation

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4. Creating Hyperlinks

A **hyperlink** is a link or reference from a slide to a webpage, slide, file, etc. A person can directly follow to a particular location by clicking it. A hyperlink can be created as follows:

- Select the Insert tab.
- Select the text or object you want to use as a hyperlink.
- Select the Insert tab. Click the Hyperlink command in the Links group. The Insert Hyperlink dialog box will appear.
- If you use text for the hyperlink, the Text to display field will appear active in the dialog box. The text you select on the slide will appear in this field. In this example, text is selected as “NIOS”.
- Click Existing File or Web Page.
- In the Address field, enter the website address you want to display when the link is clicked. In this example address is <http://www.nios.ac.in/> (see figure 11.13).

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g. Click Ok in the Insert Hyperlink dialog box.

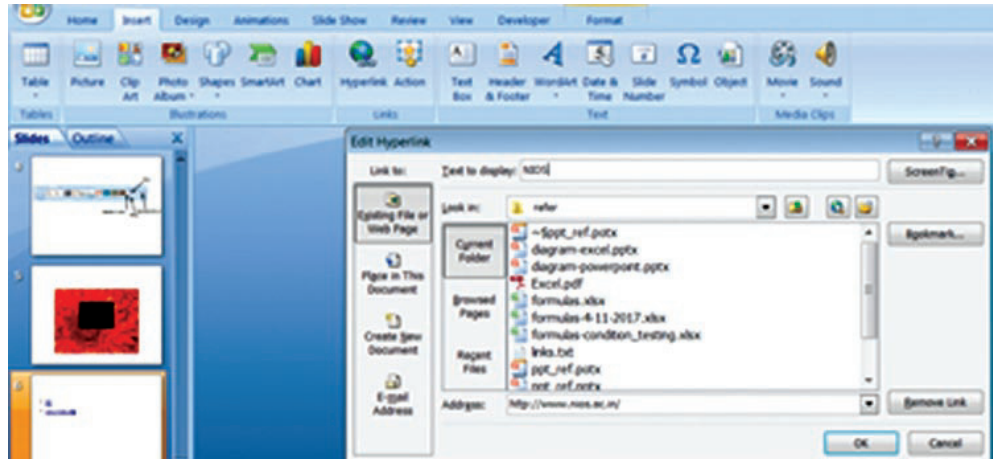


Fig. 11.13: Inserting Hyperlink

Activity 11.1

After analysing his current situation, Topo has decided that he wants to open a small business as part time beyond his job hours. He approaches a small bank for a loan to start his business. Bank manager has told him to fill the loan application and give a presentation about what he proposes to do. Help Topo to prepare a presentation including the following things:

1. About him
2. Inserting his picture
3. His education including hyperlinks to the schools or university sites.
4. Job expertise including hyperlinks to the company website, if it exists.
5. Total expenditures
6. Net savings
7. Total salary drawn
8. Proposed business plan
9. Proposed loan amount

11.5 APPLYING CUSTOM ANIMATIONS, TRANSITIONS

1. Applying Animation

Animation on a slide is used to draw the attention of audience to specific content or to make the slide easier to read. An animation can be implemented as follows:

- a. Select the **text** or **object** on the slide you want to animate.



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- b. Click **Custom Animation** in the **Animations** tab. The Custom Animation task pane will appear on the right.
- c. Click **Add Effect** in the task pane to add an animation effect to the selected text or object.
- d. Select **Entrance**, **Emphasis**, **Exit**, or **Motion Path** to display a submenu of animation effects for the category.
 - (i) **Entrance**: Changes how the selected item appears on the page
 - (ii) **Emphasis**: Draws attention to the selected item while the slide is displayed
 - (iii) **Exit**: Changes the way the selected item disappears from the slide
 - (iv) **Motion Path**: Animates the selected item so it moves to a specific place on the screen
- e. Select an **animation effect** to apply it.
- f. The animation will display on the selected item on the slide and will appear listed in the Custom Animation task pane.
 - (i) A **number label** appears **on the slide** next to the animated object. A matching number label also appears next to the animation in the Custom Animation **task pane list**.
 - (ii) **Drop-down menus** appear **at the top** of the Custom Animation **task pane**. You can define the animation effect in greater detail here.
 - (iii) **Play Animations** icon appears beneath the slide on the Slides tab in the task pane on the left. It indicates that the slide has an animation effect.

An example of created animation is shown in figure 11.14.

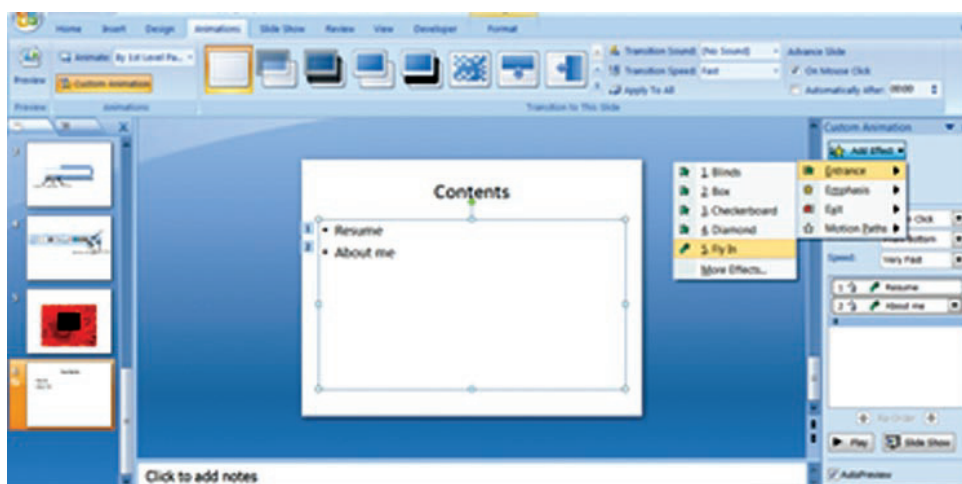


Fig. 11.14: Including a Custom Animation

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2. Applying Transitions

Transitions are movements when one slide changes to another in Slide Show view. A transition refers to the movement of the slide as it changes to another slide while animation refers to the movements of text and objects on the slide. The transition to one slide can be applied as follows:

- Select the slide you want to modify.
- Select the **Animations** tab as shown in figure 11.15.
- Locate the “**Transition to This Slide**”. By default, No Transition is applied to each slide.
- Click the More drop-down arrow to display all available transition effects.
- Click a slide transition effect to apply it to the selected slide.



Fig. 11.15: Applying a transition in a slide

The transition to all slides in the presentation can be applied by clicking “Apply To All”.

11.6 CREATE AND MODIFY MASTER SLIDE LAYOUT

The slide master allows you to make changes to all slides or a specific slide layout. It saves time when you are making the same changes to all slides in your presentation. It stores information on the theme, including font style, colours, effects, placeholder size, text alignment, etc.

- Select the View tab.
- Click the Slide Master view icon on the Presentation Views as shown in figure 11.16.

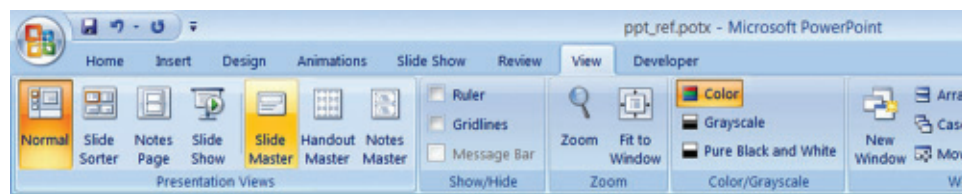


Fig. 11.16: Location of Slide Master

- c. The Slide Master tab will appear as the active tab on the Ribbon, and the slide master task pane will appear on the left.
- d. The Slide Master view appears similar to Normal view; however, in Slide Master view, master slides are displayed in the task pane rather than actual slides. The first thumbnail image in the task pane on the left is the slide master that controls all slides.



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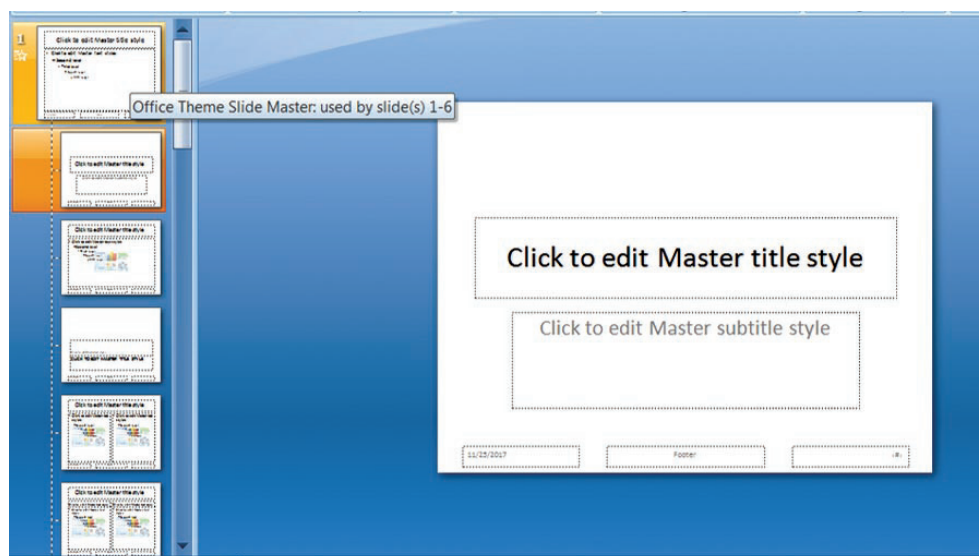


Fig. 11.17: Opened Slide Master

To change text colour/alignment on all slides, the following steps can be followed:

- a. Select the slide master for all slides, if it is not currently selected.
- b. Select the text you want to modify, and format it how you want.
- c. Select the **Home** tab. The slide master and supporting layouts will remain in the slide task pane on the left because Slide Master view is the current view.
- d. Click the Font Colour icon in the Font.
- e. Select a font colour from the menu options. The font colour change will appear on all the slides in the task pane on the left.
- f. Click an alignment command to change the alignment of the selected text as shown in figure 11.18.

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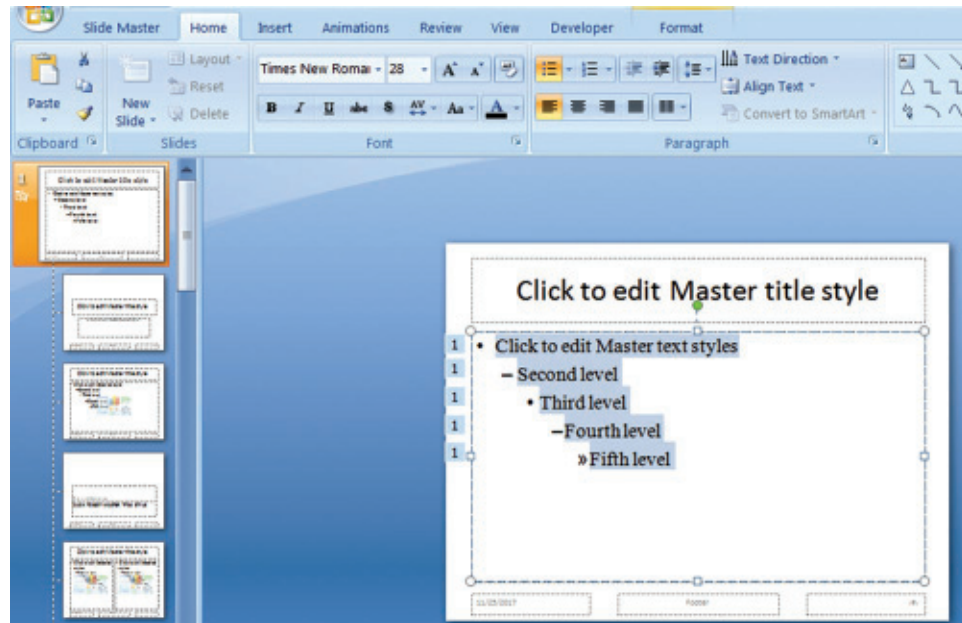


Fig. 11.18: Changing Text Alignment in Master Slide

Similarly, a picture can be inserted in all slides.

Activity 11.2

After creating the presentation in Activity 11.1. Topo want to improve his presentation.

Help Topo to improve his presentation by doing the following things:

1. Include animations in slides
2. Include the spreadsheet charts prepared in the previous activities.

11.7 PRINTING SLIDES IN DIFFERENT WAYS

Printing of the slides can be done in different ways depending on your needs (see figure 11.19). Different ways of printing are as follows:

1. **Slides:** It is used when you want to print one slide per page of a presentation.
2. **Handouts:** It is used when you want to print several slides per page. The default is six, but you can change it to four or set another amount of slides per page.
3. **Notes Pages:** It is used when you want to print speaker notes for the slides.
4. **Outline:** It is used to print all the text of the slides in a presentation.

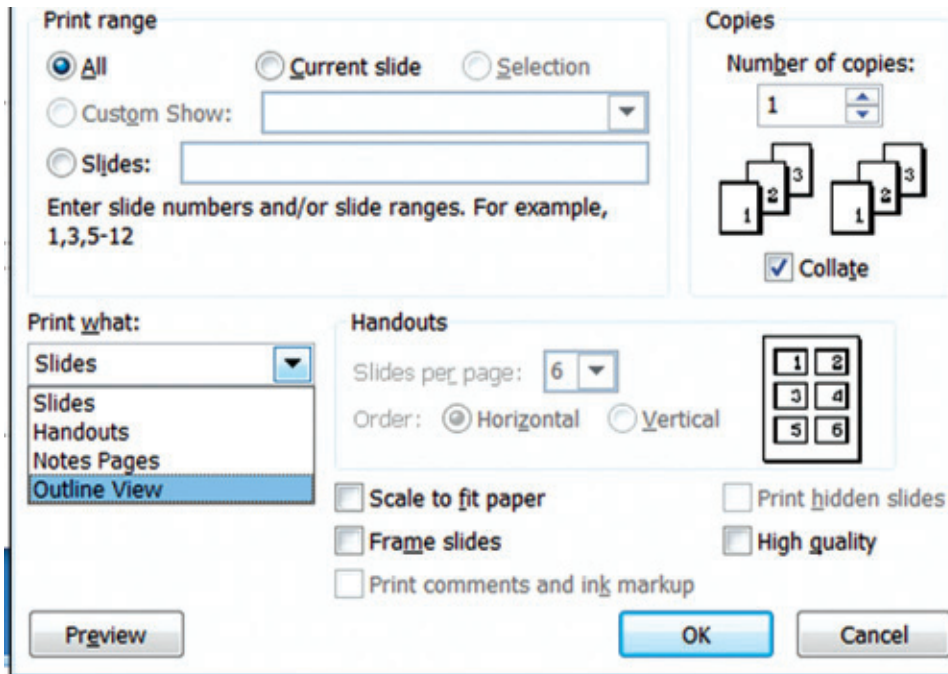


Fig. 11.19: Different printing option of a presentation

Activity 11.3

After improving his presentation in Activity 11.2, help Topo to take the print out in as notes pages and handout formats.

Topo was very happy when his loan was approved by the bank after his good presentation indicating his strengths in a good manner.



INTEXT QUESTIONS 11.2

Find out what went wrong in the following. Write the correct steps.

- (i) Ramesh has done the same alignment of text in his all slides, he do not want to repeat the alignment again and again, he should have done

Ans. Ramesh should have done _____

- (ii) Juhi wants to display the entire contents of NIOS website in a slide, so she has taken print screen (PrtScr) of the website contents, she should have

Ans. Juhi should have _____

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(iii) Sopu wants to take a print out of presentation for review purpose, he has taken one slide per page print out, he should have

Ans. Sopu should have _____



WHAT YOU HAVE LEARNT

- **Placeholders** Slides contain placeholders on a slide that contain different items, including text, pictures, and charts.
- **Slide Layout** A slide layout arranges the slide contents.
- **Views** Different views of PowerPoint are Normal, Slide Sorter, Slide Show, Notes Page view.
- **Theme** A theme is a predefined combination of colours, fonts, and effects that can be applied to a presentation.
- **Template** A template is a blueprint of a slide or group of slides that contain layouts, theme colours, theme fonts, theme effects, background styles, etc.
- **Hyperlink** A hyperlink is a reference from a slide to a webpage, slide, file, etc.
- **Slide Master** The slide master allows you to make changes to all slides or a specific slide layout.
- **Format of Printing** Different formats of printing a presentation are slides, handouts, notes pages and outline.



TERMINAL QUESTIONS

1. What are the benefits of using a presentation?
2. What is a Master Slide?
3. What are the benefits of making a Master in the beginning?
4. Mention the process by which you can insert a video in your presentation.
5. What are the different effects of animation?
6. What are the different ways of printing presentation slides?

**ANSWERS TO INTEXT QUESTIONS****11.1**

- (i) K. Mostak should have clicked
Microsoft Office → All Programs → Microsoft Office PowerPoint 2007
→ File.
- (ii) Abhilash should have saved the template as .potx.
- (iii) Jasmine should have chosen slide show for her presentation.

11.2

- (i) Ramesh should have done this alignment in the master slide of the presentation.
- (ii) Juhi should have given hyperlink of NIOS website on a slide instead of pasting the contents by using print screen.
- (iii) Sopu should have taken handouts of the presentation.

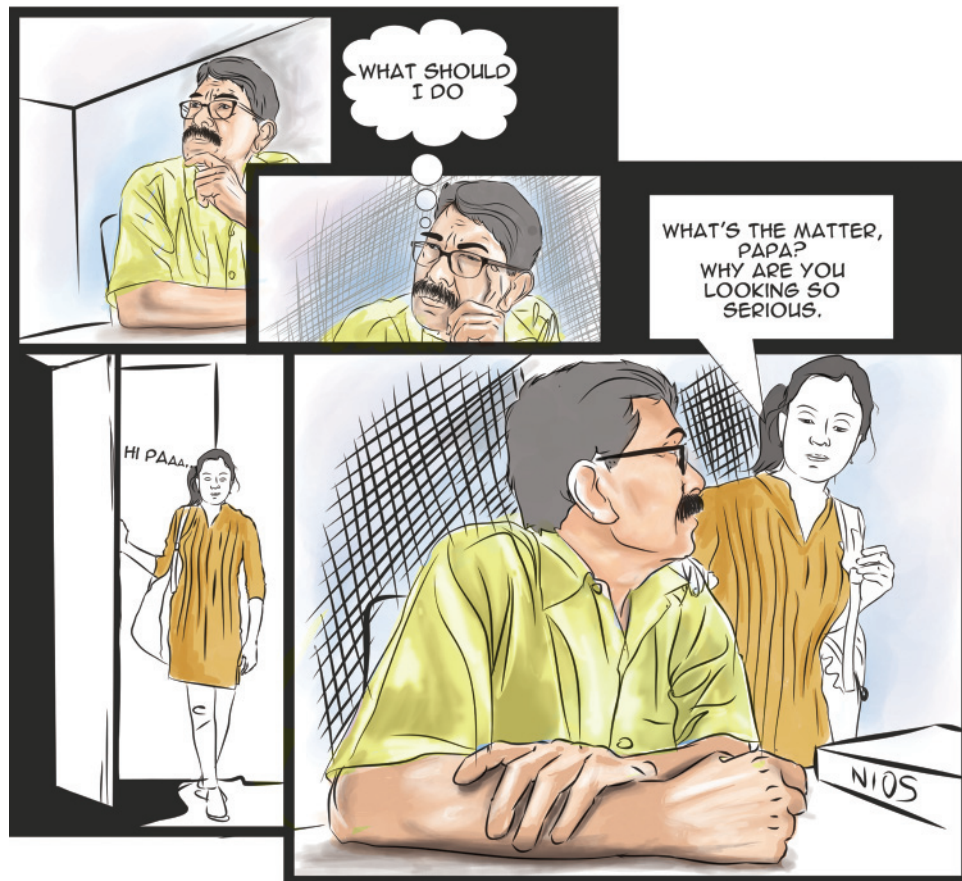
**Notes**



12

YOU IN THE WORLD OF WEB

Ashok has been running a tailor shop in the bye-lanes of Karol Bagh for the last thirty years but today...



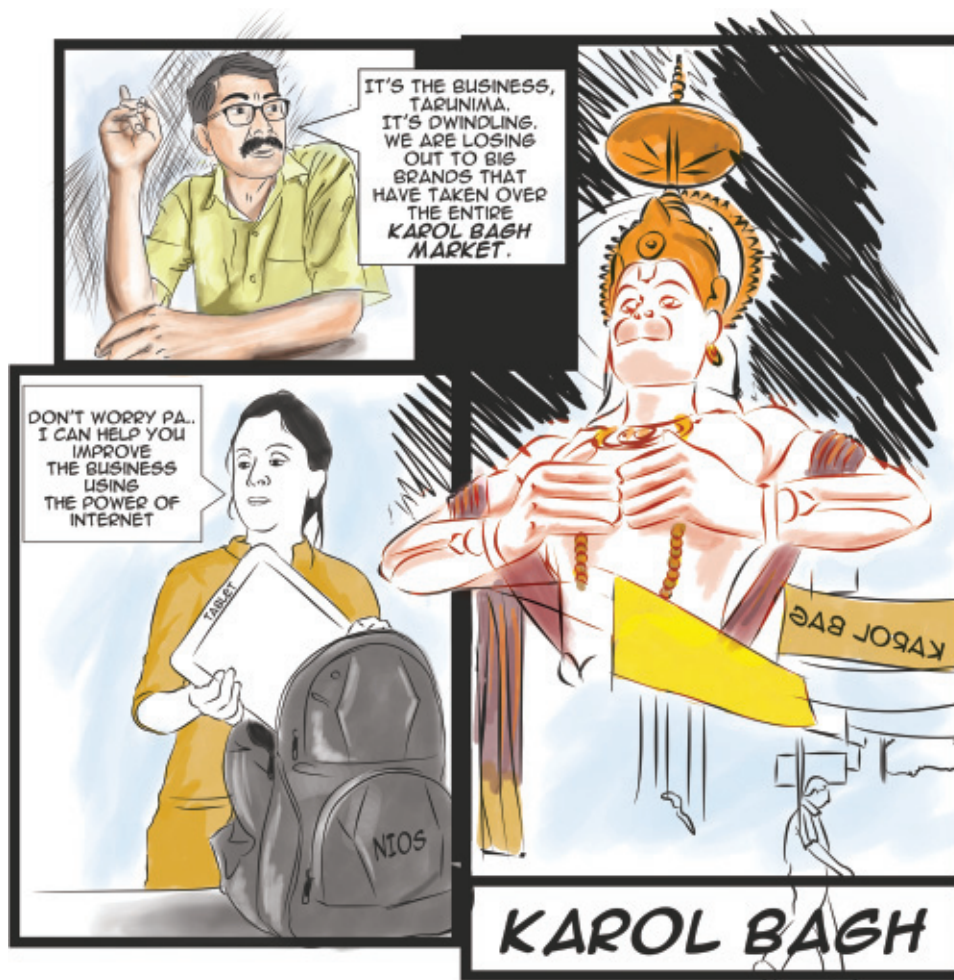


Fig. 12.1: Changing the way of business



OBJECTIVES

With Tarunima's help, you and his father will be able to:

- surf the internet and use basic internet tools using web browser and search engines;
- create and sign in to an email account;
- discuss important terms like URL, IP Address, ISP, bandwidth;
- describe the role of emails for sending mailers to improve business, and
- explain cloud computing and its practical application.



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12.1 THE POWER CALLED INTERNET

“Power of internet? What is this internet???” asks her father.

“Papa, the internet is a large network of connected computers. It is so big that many computers throughout the world are connected to it and that is why we call it “**World Wide Web**” or **WWW** or even **internet** in short.

According to the Merriam-Webster dictionary:

<p>Internet</p> <p><i>noun</i> In-ter-net \ in-tr-net</p>	<p>an electronic communications network that connects computer networks and organizational computer facilities around the world</p>
--	---

“But I have heard that this internet is a very bad thing. Just yesterday, our neighbor Sharmaji told me how his son has got so addicted to it that he is not concentrating on his studies. He is not even helping his father in their sweet shop.” said Tarunima’s father with a deep concern.

“Well Papa, the internet is an open medium available to everyone. It has both positive and negative aspects but I strongly feel that we should have the ability and the conscience to use it positively.

If we use it positively, we can really do wonders in our life by imbibing the infinite knowledge that internet has to offer. For example, the computers are connected to the internet and store millions of pages of information on almost anything you can think of. It has thousands of pages of suit designs which we can view and use for creating our own special suits. In the world of web, these pages are called as **websites** and we need a tool in our computer to open these websites. This tool is known as a **web browser**.

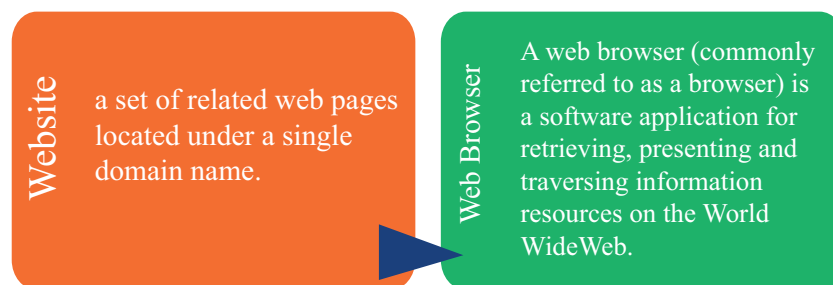


Fig. 12.2: Understanding website and web browser

On the negative side, there are cyber-crimes like cyber bullying and cyber stalking where people bully or threaten other people without any reason. Again,

Merriam Webster defines cyber stalking as, “the use of electronic communication to harass or threaten someone with physical harm”. There is account hacking where people hack these websites and put profane messages there. Hackers also release ransomwares which lock the recipient’s computer and these hackers then demand money to unlock them. We should be aware of these negative aspects. I will tell you more later about this but for now let’s continue from where we left.”



hacker:
a person who uses computers to gain unauthorized access to data.



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“Yes, you well telling me about web browsers”, replied father.



Fig. 12.3: Different web browsers

There are many web browsers available on the internet. Some of the popular ones are: Google Chrome, Mozilla Firefox, Internet Explorer, Apple Safari and Opera. Other than Internet Explorer, all the rest are **freewares** or softwares which are available free of cost.

Here is what a Google Chrome browser looks like:

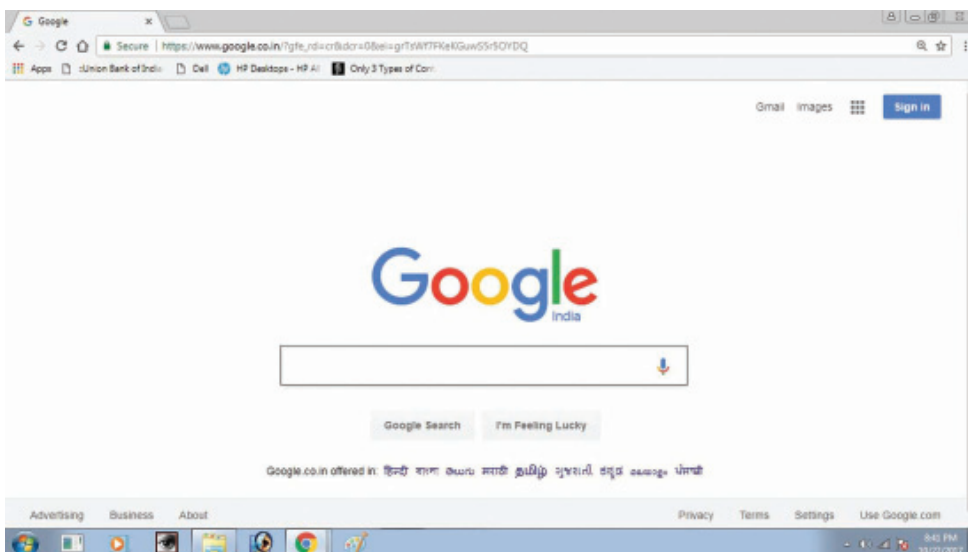


Fig. 12.4: Google chrome browser

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You will notice that just under the logo of the browser, there is a ‘search’ field. This is where we write what we want to search and we press the ‘enter’ key of our computer. Now I will search ‘suit embroidery designs’ and see!”

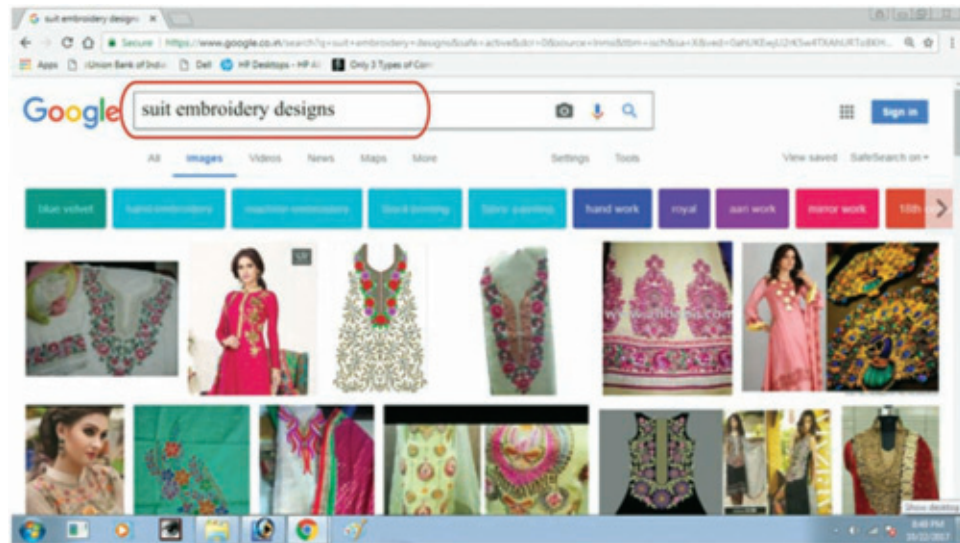


Fig. 12.5: Google Image search

“Wow. This is amazing!! But how are these designs coming on your laptop?” asked her father.

“Every browser has a search engine integrated into it which helps us find the desired information from web. These search engines pick up our keywords and find the relevant pages or websites having the same keywords in them. Various search engines used for this purpose are Google, Bing, Yahoo, AOL, etc.”

Activity 12.1

Explore internet and find out the names of various search engines available on internet? List top three search engines below:

- 1.
- 2.
- 3.

Also mention how many search queries do they receive every second.



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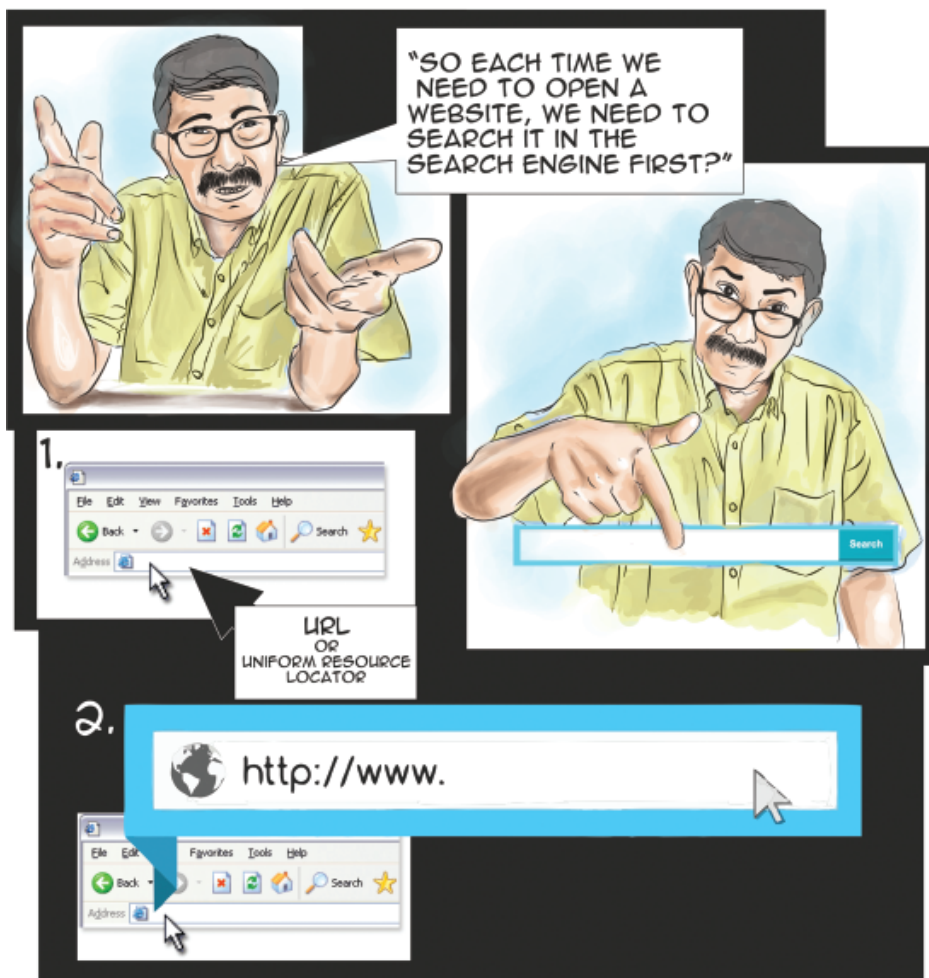


Fig. 12.6: Websites address

“Not necessary papa. These pages or websites can be opened by writing their address in the address bar of the browser. This address is called **URL or Uniform Resource Locator**. It starts with the letters ‘WWW’ which is the short form of World Wide Web. After WWW there is the actual name of the website followed by a domain name which is normally signified as ‘.com’ for commercial sites, ‘.org’ for non-profit organisations, and ‘.in’ for Indian sites.”

? Did you know?

There are more than 255 domains registered in the names of countries like **.in** (India), **.uae** (United Arab Emirates), and **.jp** (Japan)

“Wow, tell me more!” exclaimed her father with joy while looking through the pages showing hundreds of embroidered suit designs, patterns, colour schemes, apparel textures, etc.



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12.2 KEEPING IN TOUCH WITH CUSTOMERS!

Tarunima continued further, “As a next step, we can also keep in touch with our existing customers using another tool called e-mail. An email is an electronic form of sending letter to a recipient with a few clicks only which reaches within few seconds.”

“But how does it find the address of the recipient so quickly?” asked herfather.

“Good question, papa!” laughed Tarunima, “It doesn’t need the physical address. What it needs is an email address to reach the recipient. Every person using an email has to create an email address. This is a unique address and no two people can have the same email address. This is called as an email ID. The email ID typically has two parts – the **username** and the **domain/host name**. The user name and the domain name are both connected with each other with an ‘@’ (at) sign. Here let me write down my email ID to explain you the format for your easy understanding.” said Tarunima.

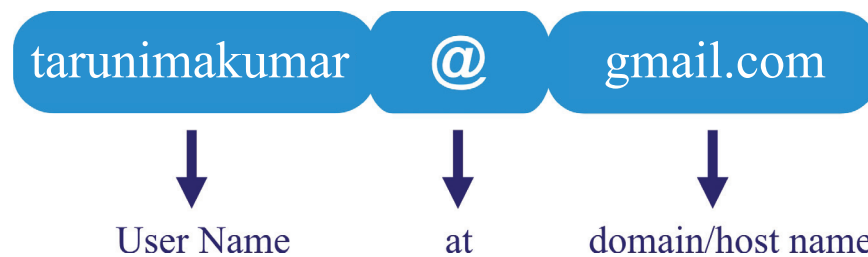


Fig. 12.7: Component of an email ID

Now if you notice, my username at gmail is **tarunimakumar** which is connected to the second part of my email ID called the domain name. The domain name is the name of a particular area within the internet over which an organization has control. This area is registered in the name of that organization by a body called as a Domain Naming Registrar and once registered, the organization can do many things like hosting a website or creating email IDs for all its people.

So if I have my email ID created at gmail domain and if you send me any email at this ID, I will receive it immediately” said Tarunima’s father.

“No papa first you will have to connect my laptop to the internet and only then would you be able to open your email. To connect to internet, I will connect my smart phone to the internet and turn on the **hotspot**. Then I will connect our laptop to the hotspot and we will be connected to the world of web!”

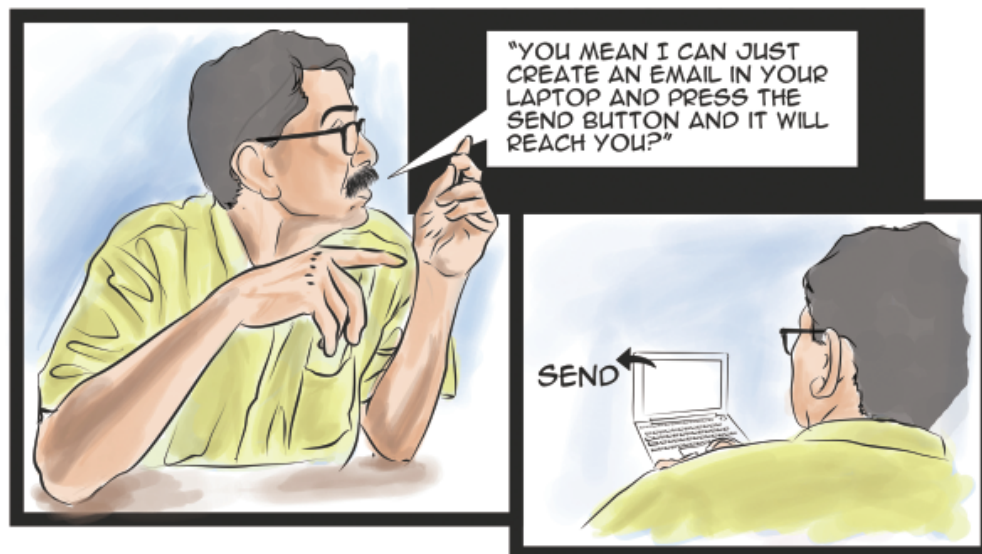


Fig. 12.8: Sending an email



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“Hotspot?”

Well, you connect a computer or laptop to the internet using a smartphone these days. There is a function called hotspot which when switched on, other laptops or computers can connect to it and get connected to the internet.

“Oh! So we need to connect to the internet...but who gives us this internet?” father again asked.

“Yes papa, we need to connect to the internet using our account which is given to us by our **ISP or Internet Service Provider**. The ISP is the organization which maintains our internet account and gives us a usage plan which is limited to a certain bandwidth and data usage.”

“Bandwidth?”

“Yes, Bandwidth. Each time we open a website or send/receive an email on the internet, a certain amount of data is exchanged. In simple words, the speed with which this data is exchanged is called as the **bandwidth** whereas the amount of data exchanged is called **data usage**. Bandwidth is measured in bits per second while data is measured in bytes. You know how many grams make a kilogram? Tarunima asked trying to test her father’s general knowledge.

“Yes, yes. Why wouldn’t I know? We get so many things in our raw material in kilograms. It’s one thousand grams. **One Thousand Grams** make one kilogram.” Exactly, but do you know in the world of web, it’s not one thousand but One Thousand and Twenty Four bits per second that make One Kilobit per second or **1 kbps of bandwidth** in short. Similarly, One Thousand Twenty Four bytes of data make One Kilobyte or **1 Kb of data**.

Going Digital



Notes

? Did you know?

Bandwidth

1024 bits per second = 1kbps

1024 kbps = 1mbps

Data

1024 bytes = 1Kb

1024 kb = 1mb



Fig. 12.9: Everyone can have an email ID

“Relax papa, we can still get an email ID even if we are an individual. There are many free email providers in the world of web like Google, Hotmail, Yahoo mail, Indiatimes, Rediffmail, etc. which offer free email services. Let’s make your email ID at one of these service providers. We will create our ID at one of the popular email ID providers called ‘Gmail’. Here are the steps:

1. Open the email ID creation page on gmail website. The URL or website address for this is <https://accounts.google.com/SignUp>
2. Fill up the form as shown below.”

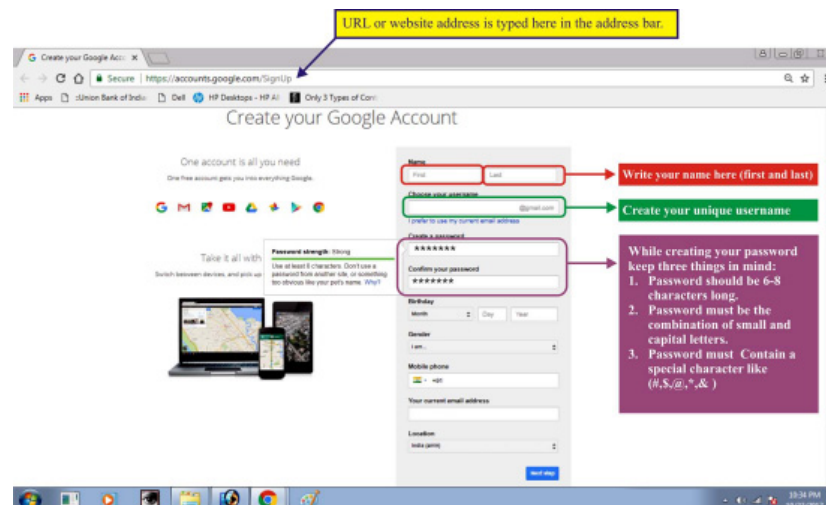


Fig. 12.10: Steps of creating an email ID

3. Be careful to create a strong password to protect it from hacking. Strong passwords are the ones which are created using the guidelines given in purple box in figure 12.10. If we don't create strong passwords for our email accounts, hackers can easily break them and gain access to all our mails and related data.

URL or Uniform Resource Locator is the address of a World Wide Web page that you type in the address bar of the browser.



Notes

Activity 12.2

1. Create a decent email ID for your friend's profession and write it down here:
2. Create your email ID on Gmail.com, yahoo.com, and rediffmail.com and note down the difference in the fields you filled in while creating these email IDs.
3. Write an email to your friend/tutor sharing your aspiration that you wrote for lesson 3.

Now we have created our email ID called *bharattailors1@gmail.com*. We can now use this email to send mailers to our existing clients on the latest designs that we are creating by attaching the pictures of these designs in the mailer.

“You mean we can attach pictures like the ones we saw in the website on suit embroidery designs that you opened just now?” asked her father.

“Not only pictures but we can also attach articles, files, or even videos in an email message. On our smartphone, we can record a video of how you make some of the finest hand woven embroidery on a suit and we can send it to all our clients so that they can see the workmanship and hardwork behind each suit unlike the machine embroidered ones available at other sites.”

“So how do we attach such a video or pictures, Tarunima?” father was keen to know more.

“Very simple. Just open the newly created email ID by writing the URL *www.gmail.com* in the browser address field and upon hitting the enter key on the laptop, you will see the login screen. Fill in the required details of username and password and press the ‘Submit’ button and you will enter the inbox of your email. On the left side frame, click on the ‘Compose’ button and a new email form like the one shown below will open.”

Going Digital



Notes

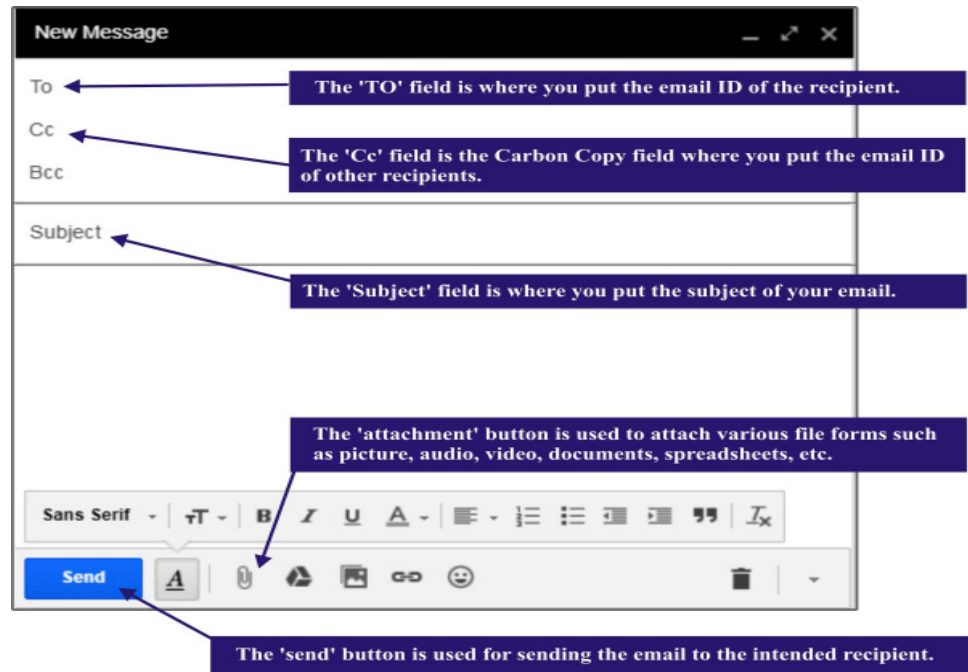


Fig. 12.11: Composing and sending an email

Activity 12.3

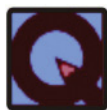
Assuming you are Tarunima and one of your friend needs your help in learning to open his email and create a message. Write all the steps required to do so and also. inform him about the dangers of cyber stalking and advise him about the responsible use of email.

.....

.....

.....

.....



INTEXT QUESTIONS 12.1

- Differential between:
 - www.nios.ac.in and abc@nios.ac.in
 - 1mbps and 1mb
 - Username and domain name



2. State True or False and support your answer with one reason :
 - a) All browsers perform different function.
 - b) An email has user name and host name separated by dot.
 - c) www.google.com and www.nios.ac.in are search engines.
 - d) URL called as the address of the website.
3. Choose the correct answer:
 - a) A software application used to display web pages is called
 - A. Search Engine
 - B. Home Page
 - C. Web Browser
 - D. Web Site
 - b) A Domain name ending with .com belongs to
 - A. An educational institution
 - B. A commercial website
 - C. An organization
 - D. A site that is highly organized.
 - c) Full form of ISP is
 - A. Information Search Protocol
 - B. Internet Service Process
 - C. Information Service Provider
 - D. Internet Service Provider
4. What would happen if you:
 - A. click the send button without writing the email address?
 - B. Forget to attach a file and click the send button ?
 - C. Send a mail without writing the subject?
5. Internet is both a positive as well as a negative medium. Can you give three examples of each of its positive and negative facets?

12.3 CLOUD COMPUTING



Notes

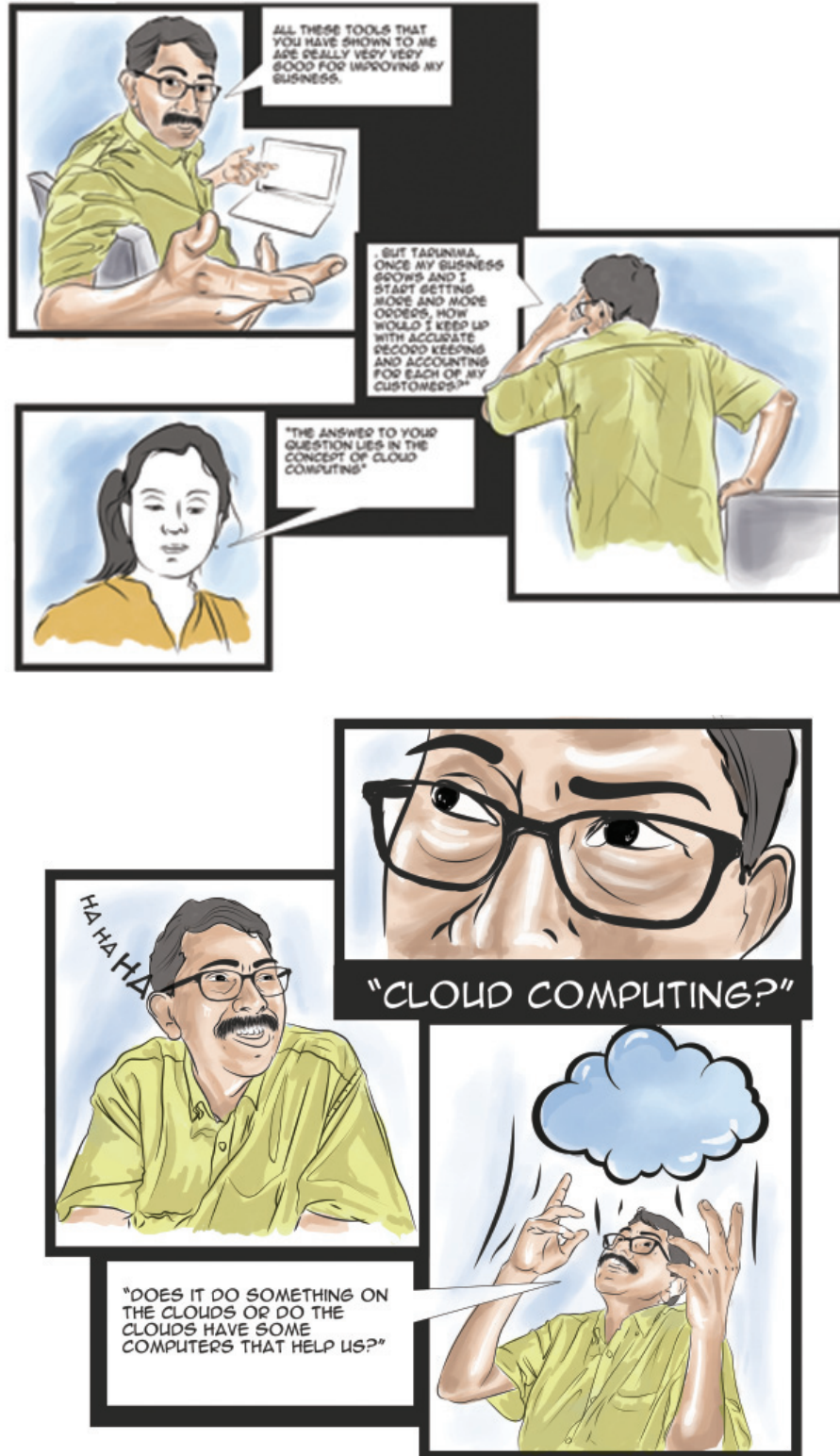


Fig. 12.12: Cloud computing

“No, No father. Cloud computing refers to large data centers that look like factories with lakhs of computers kept in endless racks. These computers are shared with us over the internet and our email and websites run on these computers. Since they keep our data in the virtual world, saving us from the need to store it locally on our hard drive, we refer to this concept of computing as cloud computing. For example, all the emails and attachments coming in or going out from our gmail account *bharattailors1@gmail.com* will be kept at the google cloud and not on our laptop. These computers never stop working, they are always available any time, and from any place.”



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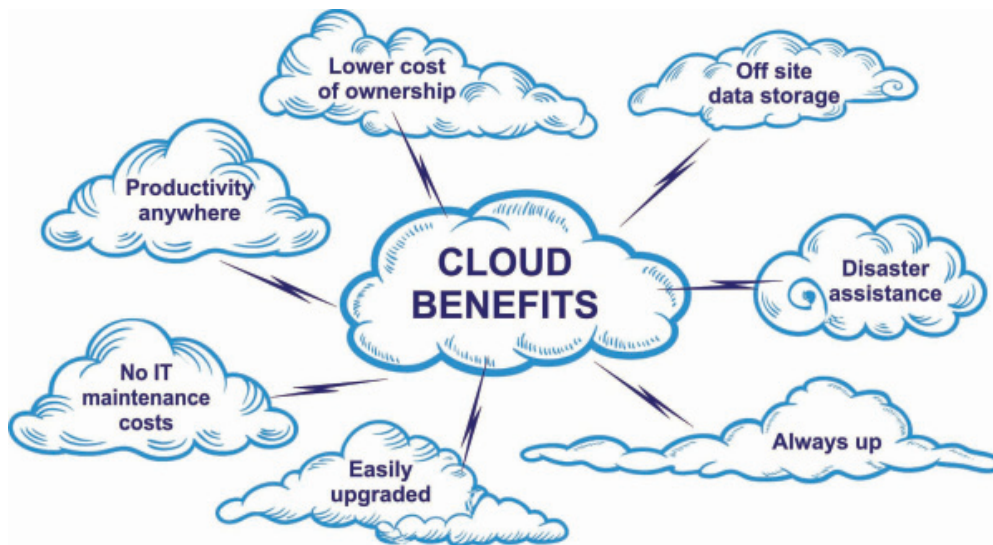


Fig. 12.13: Benefint of cloud computing

? Did you know?

The cloud also offers us tools like documents, spreadsheets, presentations, and online forms to automate our day to day transactions.

12.4 ADDITIONAL APPLICATIONS OF CLOUD COMPUTING

“So other than email and websites, what all does the cloud has to offer?” asked father.

“You initially talked about accurate record keeping remember?”

“Yes, yes...that is my biggest pain area. I always tend to forget how many customers had purchased suits or got their ones stitched from me on credit.”

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Notes

“In chapter 9, you learnt about spreadsheet which were available on your local computer/laptop. In cloud computing you would find these spreadsheets available online. For example, such documents offered by ‘Google’ as google drive service. This service is a free Web-based application in which documents, spreadsheets, drawings and presentation can be created, edited and stored online. Files can be accessed from any computer with an Internet connection and a full-featured Web browser.



Fig. 12.14

Small businesses can start using cloud storage services for free.”

“Free!!! That’s really great. A small tailoring business like mine cannot afford to buy expensive software.” father was really happy now.

“Now that we already have a Gmail account, we can use the same to login to Google Docs and begin to create, store and most importantly, share the documents we have created. Further papa, we no longer need to worry about its data storage and back-up since this will be completely handled by the cloud service provider. Also, do you know that from now onwards your business will walk with you where ever you go? asked Tarunima.

“Walk with me? How can my tailoring business walk with me?” father was keen to know.

“Cloud computing also offers you an online hard drive which is your personal storage space to save your documents, audio, video, etc. online. For example, Google Drive is one such drive which can be accessed with your gmail account from anywhere, anytime. Google Drive is also available on most of the android smartphones as a mobile app. Whenever you are visiting a valuable customer for that special suit, you can simply record all the measurements online in a spreadsheet without the fear of losing it on a piece of paper.



Fig. 12.15: Drive

Similarly, you could create a separate sheet for each customer keeping a record of all the payments and overdue collections in one place.

“Tarunima, all this is really really great but is there a way we can take care of unhappy customers?”

“Father, I know you get very upset when clients give a negative feedback but fail to let you know when they are happy. Feedback is extremely important for any small business. It helps us improve our products or services thereby improving the loyalty of our valuable customers towards us. We can use online forms to actively seek feedback for every sale we make.



Notes

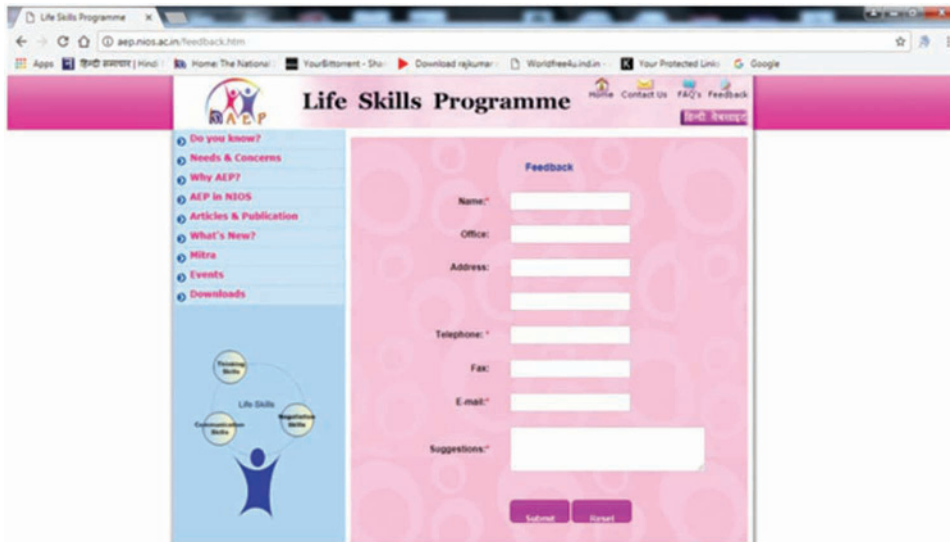


Fig. 12.16: Online forms

Online Forms is a free online option for capturing data. After every sale, we can send an online survey form to our valuable customers asking as many questions as we can.

Collecting Responses

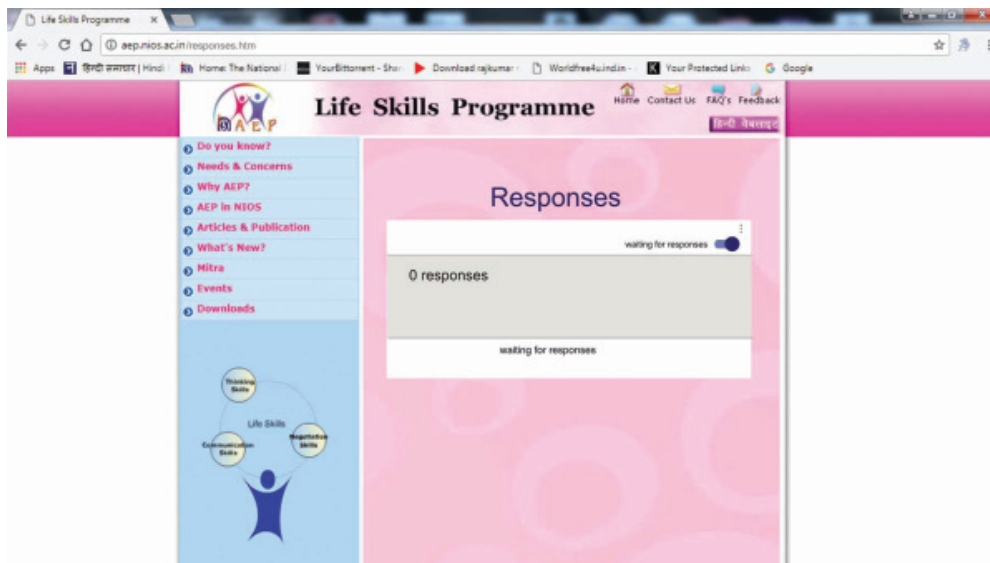


Fig. 12.17: Collecting Responses

Going Digital



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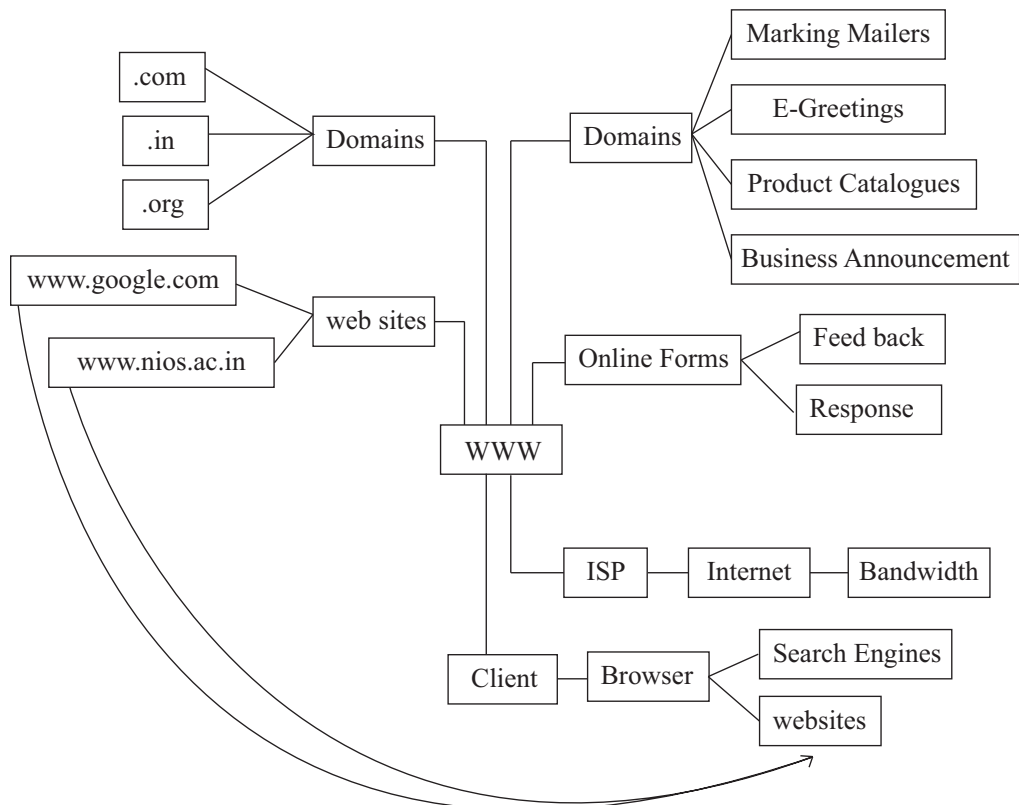
These forms give us the functionality to view responses to our feedback at the click of a button. Just click “Responses” at the top of the screen and you’ll see how many responses you’ve got. If you want to get those responses in a spreadsheet, click the green box with the cross on it. It will export to a Google Sheet.

So now papa, are you ready to dive into the world of web and make waves with your beautiful designer suits?”

“Tarunima, today I am so happy that I sent you to NIOS for the Employability and Entrepreneurship Course inspite of our family and friends opposing my such a move.” father had tears in his eyes while he hugged his beloved daughter to thank her for the new world she had lead him to...the world of web!



WHAT YOU HAVE LEARNT





TERMINAL QUESTIONS

1. Write a short note on internet in changing the face of business today?
2. What is the difference between internet and website? Which authority registers a website?
3. How is a website different from a search engine?
4. How is sending an email is different from posting a letter? Write five differences.
5. Explain the difference between the Bit an Byte .
6. How can online docs help you to improve your business? Explain in 150 words.
7. You have been requested to help your friend to,keep a track of daily sales in his grocery business using cloud computing Explain the process.
8. In what ways do online forms Help in maintaining quality standards of a business?
9. As a budding entrepreneur explain five ways in which you will use internet in making your business customer friendly.



Notes



ANSWERS TO INTEXT QUESTIONS

12.1

1. (i) www.nios.ac.in is a URL (Uniform Resource Locator). abc@nios.ac.in is an email address.
- (ii) 1 mbps is 1 mega bits per second which is the amount of data that can be transmitted in a fixed amount of time.
1 mb is 1 mega byte which is the size of data.
- (iii) User name – A username is a name that uniquely identifies someone on a computer system. For example, a computer may be setup with multiple accounts, with different usernames for each account. Many websites allow users to choose a username so that they can customize their settings or set up an online account.

Domain name - A domain name is a unique name that identifies a website. For example, the domain name of the Value Consultant Company is “valueconsultant.com”.

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Each website has a domain name that serves as an address, which is used to access the website.

2. (i) False, all browsers perform the same function of retrieving, presenting and traversing information on internet in the form of websites.
(ii) False, an email has a user name and a host name separated by an “@” sign.
(iii) False, google is a search engine while nios.ac.in is the domain name of NIOS.
(iv) True. A URL is the domain name of a website prefixed with the letters WWW.
3. (i) C; (ii) B; (iii) D
4. A. Clicking the send button without putting the email address will pop up an error message and the email would not be sent anywhere since recipient address is missing.
B. If you forget to attach a file and click the send button, the email will still be sent.
C. The email will be sent without a subject.
5. Positive Facets-
 - (i) Finding new designs
 - (ii) Finding best raw materials
 - (iii) Contacting customersNegative Facets-
 - (i) Cyber stalking
 - (ii) Spreading rumours or hate messages
 - (iii) Obscene sites.



13

E-BUSINESS

In the last lesson you saw how Tarunima, a young and enthusiastic learner of NIOS helped her father understand the world of web. Together they explored various tools and technologies available in it. This helped her father learn new ways of conducting business.



OBJECTIVES

After studying this lesson, you will be able to

- utilize the digital media platform to promote your social identity in digital world;
- equip yourself to maintain socially safe digital identity;
- identify various ERP (Enterprise Resource Planning) packages that can facilitate the strategizing and policymaking for the company;
- create a relevant market for your products or services; and
- identify various secured websites before making any online transactions.

Ashok Kumar was very happy today. It had been a month since his daughter, Tarunima, had trained him on using internet tools like search engines and email to serve his customers better. With some savings, he had already bought himself a laptop equipped with licensed software to help him surge ahead in business. He was now well versed with using search engines to look for new designs and fashion trends around the world. Having mastered the art of creating eye-catching mailers on his online emails, he began to send his new suit designs to all his valuable customers every fortnight. In turn, he would get a lot of queries from customers asking about the availability of designs and prices. This practice gradually picked up so well that he was spending almost 2–3 hours each day replying to his customers about the availability and price.

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Notes

“If I could save these two to three hours a day, I could utilize them at creating more designs. Let me ask Tarunima once she is back from NIOS,” he thought.

Tarunima entered the shop with a thick file and some books as she was busy preparing for her practical project at NIOS.

“Tarunima, I wanted to discuss something very important with you,” he said with a voice of concern.

“What is it papa?” asked Tarunima.

“You see Tarunima, now that you have given my life a new meaning by training me on the wonderful world of web and its related tools and we have both started using it for promoting our business. The business is doing extremely well. I am proud of you for bringing in such a positive change in our lives. But one thing that I have noticed recently is that I am spending too much time on online record-keeping or sending replies to my customers on design availability and prices. Most of my customers have stopped calling me over the phone. They have started using the email for all their queries. Hence I have to spend a couple of hours daily responding to them. I was wondering if there is a way to channelize these two hours to my core skill of creating new designs.”

“Ok, papa. We would have to adopt ‘e-business’ now. This will to help you find time for your creative pursuits.”

13.1 USE OF DIGITAL WORLD TO PROMOTE BUSINESS

“E-business?”

“Well papa, technically speaking, e-business means carrying out business transactions of marketing, sale, purchase, and distribution of products or services on the internet. The computer or laptop is an important tool to conduct e-business which can also be done using tablets or smartphones now,” replied Tarunima.

“So where do we start?” asked father.

“Well, the first place to start from is getting ourselves registered with the e-commerce portals like amazon.com, flipkart.com, snapdeal.com and others.”

“Now what is this e-commerce?” asked father impatiently.

“Ok. Electronic commerce or e-commerce is the process by which businesses and consumers buy and sell goods and services through an electronic medium. E-commerce means covering the entire lifecycle of sale and purchase of a product or service right from receiving the order and receiving payments from the customer to receiving feedback after the delivery of the product. E-commerce is a subset of the wider concept of e-Business.

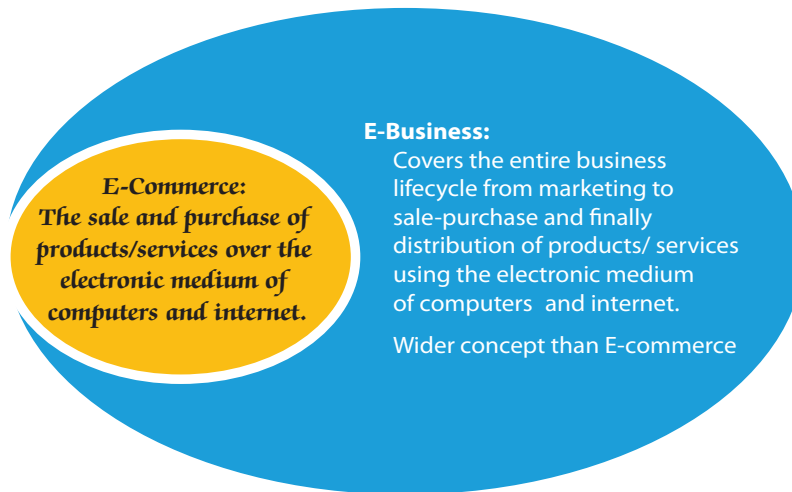


Fig. 13.1: Understanding E-commerce and E-business

E-commerce portals have a worldwide reach so the entire world becomes our market. People go to these portals to buy products online since they want to save their time of travelling to a real market, finding the right shop and then negotiating with the shopkeeper for better prices. Everything from food and clothes to entertainment and furniture can be purchased online. Once we build our identity on these e-commerce portals, we can reach thousands of valued customers who can place orders with us and that too with advance payments.”

“You mean the payment will also come through the computer?”

“Have you forgotten papa? We searched for your laptop from one of these online marketplaces using our smartphone and once we found a model we could afford, we paid for it online from your bank account?” remarked Tarunima.

“Yes, that was really wonderful! I still don’t understand how those people got the payment just at the click of a button and sent me the laptop the very next day through courier.” Father was still wondering while silently admiring his new laptop.

“And after you opened your email on your new laptop, what did you find?” Tarunima asked again.

“Yes I remember. There was this email from the seller requesting me to give them a feedback on how was the laptop I had ordered; did I receive it on time or not; would I recommend the seller to others or not?” replied father.

“So once you gave the feedback to the seller, you had actually completed the transaction lifecycle of a typical e-commerce transaction which is shown in figure 13.2.” informed Tarunima.

“And you also said in e-commerce, the businesses buy and sell goods. Can you explain that a little more?” Father wanted to know more.



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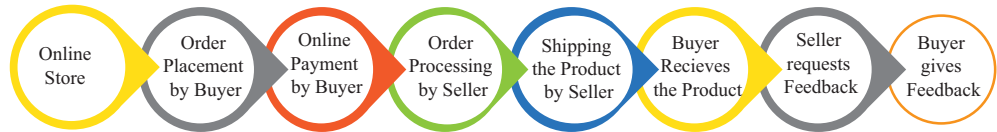


Fig. 13.2: Models of E-commerce

“I am glad you asked that question Papa. Now tell me if you had to source the best Zari thread for some Zari work on one of your special silks, how would you source it?” Tarunima asked smiling.

“Wait a minute, you mean we can do that through e-commerce?” Father was now coming up with answers himself.

“Yes... off course! The way you searched for suit embroidery designs on one of the search engines, let me open my Amazon.in account for you. Just type in Zari thread?” instructed Tarunima.

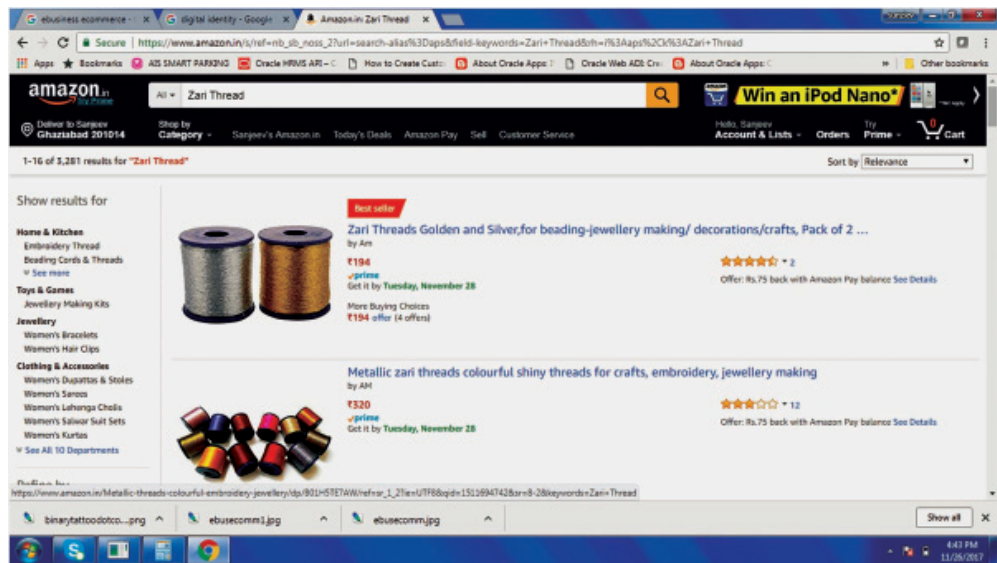


Fig. 13.3: Home page of e-business site

“Oh my God! I can see hundreds of sellers online selling the Zari thread.” exclaimed father.

“So you see, not only can you sell your products to the end customers or consumers online but you can also purchase all the required raw material for your products online from various raw material suppliers. These two different modes where on one hand we are customers to raw material suppliers and on the other hand are sellers to end customers are respectively called as B2B and B2C channels of e-commerce.

In **B2B or business to business channel**, one seller sells raw materials, machinery or services to buyers who use them for intermediate consumption, that is, for producing goods or services for the end consumer.

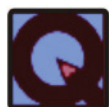
In **B2C or business to consumer**, the business sells directly to the end customer or consumer who consumes such goods or services.”

“So when I will be selling my suits directly to a customer through let’s say, Amazon.in, I will be doing a B2C transaction and when I will buy raw materials like this Zari thread from some company based out of Kanjivaram, I will be doing a B2B transaction, right?”

“Right you are, Papa!” Tarunima replied joyfully.



Notes



INTEXT QUESTIONS 13.1

1. E-business and e-commerce are same. Comment.
2. List the tools/hardware required in e-business.
3. Name any three e-commerce portals that you would visit online for buying a birthday gift for your friend.
4. State True or False giving reasons:
 - (i) E-business means conducting business in physical form.
 - (ii) Only very limited products can be purchased using e-commerce portals.
 - (iii) E-commerce portals reach very few customers.
5. Complete the lifecycle of an e-commerce transaction.
6. Your friend wants to buy air conditioner online. Help him by listing all the steps to search for it.
7. Name the business model if you are buying groceries from internet.
8. Name the business model if you are selling wood to furniture houses.

“Okkk...So what next?” asked father.

“Both B2C and B2B channels of marketing are created by adopting digital marketing instead of the conventional mode of marketing and to adopt digital marketing, we need digital identity.”

“Digital marketing, digital identity... what is all digital here? The only digital thing I know is my digital calculator which I use for measurement and rate calculations.

“OK, so we will start with Digital Marketing. Now according to **Financial Times**,

‘The marketing of products or services using digital channels to reach consumers is called digital marketing. The key objective is to promote brands through

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various forms of digital media. Digital marketing extends beyond internet marketing to include channels that do not require the use of the internet. It includes mobile phones (both SMS and MMS), social media marketing, display advertising, search engine marketing, and any other form of digital media.'

Now... for digital marketing to be a reality, it is important for us to have a digital identity. According to Digital ID and Authentication Council of Canada (DIACC), 'A **digital identity** is an electronic representation of who you claim to be and who you are.' So a digital identity is actually your identity in the digital world," replied Tarunima.



Fig. 13.4: Digital Identity

"You mean 'Bharat Tailors' can have a digital identity?" asked father.

"Yes, papa. Not only can 'Bharat Tailors' have digital or social identity, it can also transact business with others using this identity. We just need to create our own page on each of the digital marketing tools like linkedin, facebook, youtube, twitter and others. Each of these tools started as social media tools with the sole objective of bringing like-minded people together but have slowly evolved into very powerful online or digital marketing tools. For example, once we have created our 'Bharat Tailors' page on facebook, we can start uploading all our designs there and this will bring all people searching for new suits to our webpage. People can view our designs and give us likes or comments on these designs. We can tag all these designs with a product code and a price so that customers can get the prices from the facebook page itself instead of calling us or writing to us. This entire set of activities is called as **social media integration.**"

Activity 13.1

Create a facebook page for your business and share it with your friends. Upload pictures of your products along with prices and description so that your friends can view all information and give you likes/comments.

Also mention how many search queries do they receive every second.

13.3 SOCIALLY SAFE DIGITAL IDENTITY

“Wow that’s great, so does it mean that ‘Bharat Tailors’ will be able to reach thousands of customers through its digital identity?” asked father.

“Yes papa, but there is one thing you should be very careful about.” remarked Tarunima.

“Careful about! What Tarunima?”

“Papa, remember I told you in the first session ‘You in the world of web’ that just like the real world, this digital world is also full of cyber criminals like hackers and cyber stalkers?”

“Yes, yes I clearly remember but why do you think we are at risk from these hackers?”

“Once we create our digital identity for e-commerce, we would be having a lot of information pertaining to our business going online on the internet. This could be as follows:

- Your personal information
- All our customer records
- All payment records for payments received online
- Your creative designs which are actually your intellectual property

Besides these records, we would also face the risk from the following:

- viruses and malware
- spam (junk emails and adware)
- cybercrime, such as being hacked
- online scams
- online payment and credit card fraud

13.4 ERP (ENTERPRISE RESOURCE PLANNING)

“Wow that will be amazing! But I still spend a lot of time in preparing manual order lists and finally invoices. Is there any way we can automate these areas as well?” father was now ready to dive deep in to the sea of digital marketing.

“For that, you will have to adopt ERP,” replied Tarunima.

“ERP? I have only heard of TRPs for which these various TV channels are always competing with each other. What is this ERP?” asked father again.

“Oh Papa, ERP or Enterprise resource planning is business process management software that allows an organization to automate all its business processes like



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material purchasing, inventory control, marketing, finance and HR. Enterprise Resource Planning softwares consist of various modules which can be integrated with each other to build a complete process automation of entire business. Each module handles a specific business process like finance or sales for example, and can talk to other modules to complete the full cycle of business process. Look at some of the modules of SAP, one of the leading ERPs, has to offer.” Tarunima replied.

End-User Service Delivery					
Analytics	Strategic Enterprise Management	Financial Analytics	Operations Analytics	Workforce Analytics	
Financials	Financial Supply Chain Management	Financial Accounting	Management Accounting	Corporate Governance	
Human Capital Management	Talent Management	Workforce Process Management		Workforce Deployment	
Procurement and Logistics Execution	Procurement	Supplier Collaboration	Inventory and Warehouse Management	Inbound and Outbound Logistics	Transportation Management
Product Development and Manufacturing	Production Planning	Manufacturing Execution	Enterprise Asset Management	Product Development	Life-Cycle Data Management
Sales and Services	Sales Order Management	Aftermarket Sales and Service	Professional Service Delivery	Global Trade Services	Incentive and Commission Management
Corporate Services	Real Estate Management	Project Portfolio Management	Travel Management	Environment, Health, and Safety	Quality Management

Fig. 13.5: End User Service Delivery

“Each module can talk to other modules? What do you mean?” asked father.

“What I mean is Papa, that suppose a customer places an order for us through one of these e-commerce portals like Amazon.in, we can connect that order output to one of the ERP’s so that each time an order is placed, the ERP automatically creates a Purchase Order against it. This PO would contain the details of the suit required by the customer and the inventory module ERP would be able to tell us if we have this particular suit in our stock or not. In case we don’t have it, the ERP would send us a notification telling us that it’s not in stock and so we should stitch one immediately.”

All the ERPs come in various sizes and the customer has the choice to select one or more than one modules as per the size and requirements of their business. Some of the very popular ERPs available in the market today are as follows:

- SAP B1
- Microsoft Dynamics NAV
- JD Edwards EnterpriseOne
- Oracle E-Business Suite.

13.5 CREATING AN ONLINE MARKET

“So Tarunima, how do we start to create our own online business from here?” asked father.

“Well papa, let me put all the steps for your easy understanding, one by one:

1. Get a domain name registered
2. Get a GST number
3. Create your social identity on social media sites namely facebook.com, twitter.com and others
4. Register yourself as a seller with e-commerce portals, for example, Amazon.in, flipkart.com and others
5. Start promoting your products and services using your social identity on social media
6. Integrate your e-commerce site with a payment gateway to enable online payments
7. Use online document management system like Google docs to manage your sales and invoicing
8. Once your online business reaches a higher level, adopt ERP integration to automate the order processing, invoicing and payment collection processes of your business.
9. Going further from there, we can also build our own app which can be downloaded by our customers from the play store. This app can give them real time notifications of all the latest happenings at ‘Bharat Tailors’ besides the usual business of transactions using their mobile phones.”

“That sounds great! So let us start working together on making ‘Bharat Tailors’ online with social identity.”



INTEXT QUESTIONS 13.2

1. Why it is important for you to create your digital identity for selling goods online.
2. What all business processes can be handled through ERP?
3. List some of ERPs.
4. List all the steps to create an online business of electronic goods.





Notes

13.7 IDENTIFICATION OF SECURE WEBSITE FOR ONLINE TRANSACTIONS

“Sure papa, but before you go ahead and put your personal information online, you must ensure that the site on which you are putting your information is a secure website or a website which will not misuse your personal information for their own use,” replied Tarunima.

“What exactly do we mean by ‘secure website’?” asked father.

“Papa, each time we open a website, some information is sent from your computer to the web server and from the web server to our computer. This information is normally sent in ‘plain text’, which means anyone would be able to read it if they see it. This information passes through many computers called ‘nodes’ while it is on its way to reach the one that’s hosting the desired website.

Similarly, if we were to put our credit card information online to purchase something, this highly sensitive information can also be hacked and misused by cyber criminals,” said Tarunima.

“Yes, yes I know. Just yesterday I was reading in the newspaper how an innocent lady was robbed of sixty thousand rupees on her credit card after she put her credit card details on some fake online shopping site,” exclaimed father.

“Exactly, papa. So to avoid this problem, we should ensure that we share sensitive financial data only on websites that encrypt the data in such a way that even if it is hacked, no one will be able to use it for their benefit,” replied Tarunima.

“But how would we know if a website has encrypted our data for safety?” asked father.

“Very simple papa. Websites use a protocol called SSL or Secured Socket Layer which jumbles up the data into unreadable characters using a mathematical formula. This process is called encryption. Once this data is received by the host computer, it is unjumbled using the same formula which was used earlier. This is called as decryption. All SSL-enabled websites encrypt the transmitted data before transmission and later decrypt it to accept it into its relevant fields.”

“So how can we know if the site we are visiting is a secured site?” asked father.

“For that you just need to look at two things:

1. Check the web page URL, if it begins with the letters ‘https’ it’s a secure connection.

2. Check for the lock icon. The lock icon is displayed at different places in different web browsers. For example, on Microsoft Internet Explorer, it is displayed on the lower right portion as shown in figure 13.6.

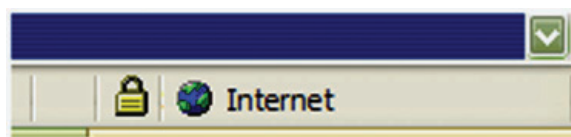


Fig. 13.6: Lock icon on Internet Explorer

In Mozilla's FireFox, the lock icon is displayed in the lower-left corner as shown in figure 13.7.



Fig. 13.7: Lock icon on Mozilla's Fire Fox

So once you are sure that it's a secure site, you can also make online payments like we did for your laptop earlier, without being scared that these would be siphoned off by cyber criminals," said Tarunima.

"That reminds me Tarunima, how are the payment made over the internet? I have only accepted cash payments."

"Well papa, we just need to give our bank account number and the **IFSC** code to the people running these e-commerce websites and they will link it to our payments. Any customer who will buy our suits online will pay through debit or credit card and that money will come into our bank account. Isn't it great?" asked Tarunima

"Yes it is great, but I have heard that for all this online business we will have to register with many government agencies. Who will keep running around all these government offices for days altogether?" asked his father.

"Papa, these days no one has to run around these offices. All these offices of **Aadhar Card, PAN Card and GST** will come to our shop through the internet and our registration will be just a few clicks away."

Activity 13.2

You are Tarun's friend and Tarun has approached you to help him in getting 'Bharat Tailors' online. Find out the respective websites and note down the specific URL to apply for these various statutory compliances.



Notes

Going Digital

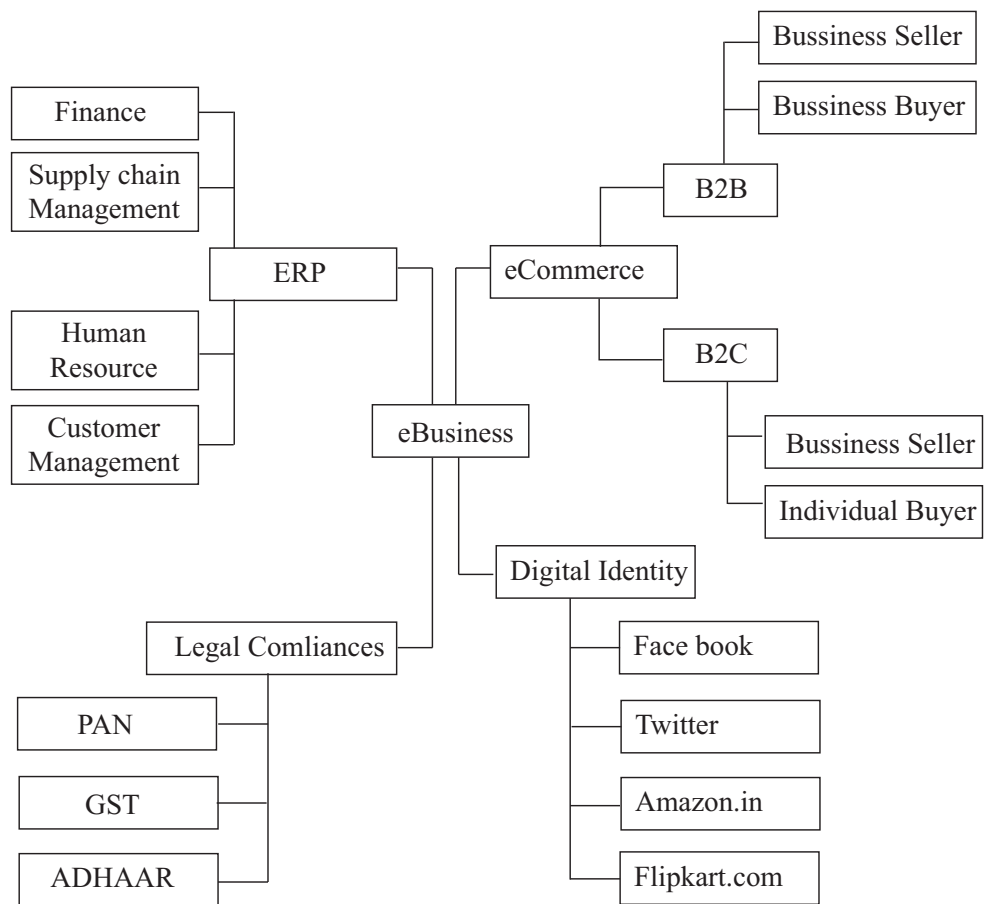


Notes

Site Type	Please provide the URL
PAN Card	
Aadhar Card	
GST	
Facebook.com	
Amazon.in	
Twitter.com	



WHAT YOU HAVE LEARNT





TERMINAL QUESTIONS

1. E-commerce has changed the way one conducts business. Do you agree? Please explain in detail.
2. Veena has started an online business of Handlooms (bedsheets, towels, curtains and so on). She wants to do the e-marketing of her goods. Help her by providing ways to do e-marketing.
3. Digital identity is both a boon and a bane. Discuss.
4. “<http://>” is a secure site. Please comment if the statement is true or false with justification.
5. Your friend wants your help in automating the inventory and finance of his business. What solution would you suggest and why?

With Tarunima’s help and guidance, Ashok worked hard on his newly established e-business. In two years, he was able to completely transform his old shop into a new sparkling showroom just like e-business had transformed his life. The board on his new showroom displayed his passion and read: ‘Bharat eTailors!’



ANSWERS TO INTEXT QUESTIONS

13.1

1. E-business and e-commerce are not same. E-commerce is a subset of the wider concept of e-business. Where e-Business means and includes the entire lifecycle of product/service from marketing to final distribution using the electronic medium of internet, E-commerce is restricted to only sale and purchase of products or services over electronic medium.
2. The tools required in e-commerce business are: Laptop/Desktop, Mobile Phone, Tablet PC.
3. Flipkart.com, Snapdeal.com, Amazon.in
4. (i) False. E-business means conducting business over an electronic medium such as internet.
(ii) False. E-commerce portals offer many products like clothes, furniture, electronic goods, mobile phones, computers, etc.
(iii) False. E-commerce portals reach thousands of customers using the power of internet.



Notes

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**Notes**

5. Lifecycle of e-commerce transaction:

Online Store → Order Placement by Buyer → Online Payment by Buyer → Order Processing by Seller → Shipping the Product by Seller → Buyer Receives the Product → Seller requests Feedback → Buyer gives Feedback

6. Steps to find air conditioner:

- (i) Go to flipkart.com and search for air conditioners
- (ii) Filter on the size and type you want to buy
- (iii) Compare price and specifications between various makes
- (iv) Pick the one you find matching your requirement
- (v) Click on 'add to cart'
- (vi) Go to cart and click on 'Online Payment Through Bank'
- (vii) Put your account details and click on 'Submit'

7. B2C

8. B2B

13.2

1. It is important to create a digital identity for selling online goods because one can only join an e-commerce platform using a digital identity.
2. All processes like Finance, Supply Chain Management, HR, Admin and Customer Management can be handled through ERP.
3. SAP, ORACLE, RAMCO.
4. Domain Name Registration → Statutory Compliance → Social Identity Creation → Registration on e-commerce portals → Online Promotion and Social Media Integration → Payment Gateway Integration → Document Management → ERP Integration



14

CYBER SECURITY

“Wow, we are rich! Just come and have look at this Tarunima!” exclaimed father with joy while looking at Tarunima’s laptop one fine day.

“What is it papa?” asked Tarunima as she looked at the computer and found an e-mail claiming that her father had won One million Pounds in lottery. The mail had a suspicious looking file attached to it and the email asked the recipient to double click the file and fill the relevant details. “No papa! Don’t open it. It must be a malware.” Along with Tarunima and her father, we will learn to protect ourselves and our business from various cybercrimes.



OBJECTIVES

With Tarunima’s help, you and his father will be able to:

- become aware of potential cyberthreats like virus, malware, adware, spam, Trojan, worm, spyware and others from devices;
- protect oneself from various cybercrimes like, phishing, identity thefts, Plagiarism and others;
- resolve issues related to computer and network security threats by keeping strong passwords, security checks, not allowing hardware, keeping antivirus in the system and not committing cybercrimes;
- develop the netiquettes for becoming responsible citizen; and
- explain the provisions of Indian IT act.

14.1 CYBER THREATS

“Malware?” exclaims Tarunima’s father looking very disturbed.

“Yes, malware. Well, actually it is a software which is malicious or harmful in nature. Once opened, it harms our computer in many ways. That’s why it is called

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Notes

a **malware**.” “Hmmm...malware, the software with malicious intent. So how can it harm our computer?” father was now anxious. “You see papa, there are many types of malwares in this world of web. The most common ones are viruses, worms, Trojan horses, ransomware, spyware, adware, scareware, and other malicious programs. Let me explain in detail about potential cyberthreats

1. **Virus** – “Papa, remember you told me that a virus is an infectious agent that can multiply only in living cells of animals, plants or bacteria when you were explaining about HIV. Similarly, a computer virus is a malware which copies itself and infects a computer without the knowledge of the user. It has the ability to attach itself to a file while it is being sent or emailed. As soon as the recipient of the email opens the file by double clicking it, the virus gets activated and infects the recipient’s computer by deleting important files and attaching itself to many others. In this way it continues to spread further. Just as HIV destroys human body, computer virus does the same to computer.”
2. **Worm**–“A worm is another malware which spreads from one computer to another over the network but does not delete any files. It just replicates itself over the network and consumes bandwidth, thereby making the network slower than usual. Just like I used to be tired and slow when I had worms in my stomach!”
3. **Trojan Horse** – Unlike the Trojan Horse depicted in the Greek Mythology which was used, to send soldiers inside an enemy territory, this Trojan horse in the world of computers is a malicious program. It is disguised as a legitimate application such as a game being offered free of cost. Once downloaded, it takes control of the computer and can even send sensitive information like one’s password or bank details to the owner of this Trojan horse over the internet.
4. **Ransomware** – A ransomware is an application which forces one to pay a ransom or money to get rid of it. It enters your computer just like any other computer virus or Trojan horse disguised as a free game, etc. but instead of harming the computer it locks it forever and shows a message on the computer screen with the contact details of the people who could help remove it. Once contacted, one is asked to deposit a certain sum of money in a bank account to have this application removed from the system. This kind of application which holds one to ransom to **cybercriminals** is called as a ransomware and is the latest threat to the world of web.
5. **Spyware**–It is a software that enables a user to obtain sensitive information such as website accessed, downloaded from another computer by transmitting data from the hard drive without the user’s knowledge.

6. **Adware** – An adware is a software that automatically displays or downloads advertising material such as banners or pop-ups when a user is online.
7. **Scareware** – A scareware is a malicious computer program designed to trick a user into buying and downloading unnecessary and potentially dangerous software, such as fake antivirus protection.
8. **Spam mail** – Spam is flooding the internet with many copies of the same message, in an attempt to force the message on people who would not otherwise choose to receive it. “Papa, we must take care that we do not send spam mails. It annoys the receiver and can even end up in negative image of our business.”
9. **Hacker** - A hacker is a person who uses computers to gain unauthorized access to data. Hackers are most often computer enthusiasts or programmers looking for advanced knowledge on programming languages or operating systems.



Notes

Activity 14.1

<p>(a)</p> <p>I am a piece of code that is secretly introduced into a system in order to corrupt it or destroy data.</p> <p>I am _____</p>	<p>(b)</p> <p>I am a self-replicating computer program who uses a computer network to send copies of myself to other nodes on the network without any user intervention</p> <p>I am _____</p>
<p>(c)</p> <p>I am a non-self-replicating malware that appears to perform a desirable function for the user but instead facilitates unauthorized access to the user's computer system.</p> <p>I am _____</p>	<p>(d)</p> <p>I am the term used to define all sorts of software designed to cause harm to a computer system.</p> <p>I am _____</p>

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Notes

(e)

I keep track of web pages that you look at and then send the data to a third party.

I am _____

(f)

I am unsolicited mail that has not received permission from a recipient to enter its inbox.

I am _____

(h)

I am a programmer who enjoys the challenge of breaking into other's computers.

I am _____

14.2 PROTECTION FROM CYBERTHREATS

“Oh my God, these are so many! How do we save ourselves from these malwares?” asked father looking a bit scared. “Well, there are some dos and don’ts which I will elaborate later but the first and foremost thing we should do is to install a good antivirus software in our computer.”

“Antivirus?”

“Yes papa, an antivirus. It is a software program that routinely checks for any malware entering our computer and destroying it.”

Antivirus – Antivirus software is a program or set of programs that are designed to prevent, search for, detect, and remove software viruses, and other malicious software like worms and Trojans. Examples MacAfee, Norton, Quick Heal, AVG and others.

“And what are those dos and don’ts you said you’ll tell me later?”

“So papa, here are the dos and don’ts in Table 14.1.”

Table 14.1: Dos and Don'ts to save from Malware

DOs	DON'Ts
Install an antivirus in your computer.	Do not open any unsolicited mail.
Update the antivirus regularly.	Do not download any tool/application from internet whose publisher is unknown.
Always buys licensed software for your computer.	Do not download any free game or application. Nothing is free in this world.
Enable the spam filter on antivirus.	Do not visit obscene websites. These are created by cyber criminals to take control of your computers.
Enable email scanning on antivirus.	Do not keep any sensitive information like passwords, credit/debit card nos. on your computer.



Notes

“Thank God! We have antivirus to protect our data.” Father took a sigh of relief.

“But this is not enough Papa, we should also be aware of various cyber crimes that we may commit unintentionally” Tarunima said. “Please tell me about various cyber crimes also,” asked Father. “Papa let us first understand what cyber crime is! **Cyber crime** refers to any crime that involves computer, mobile or a network. It is an unlawful act wherein the computer is used as either a tool or target or both.”

Some cyber crimes are:

1. **Plagiarism** – Many people think of plagiarism as copying another’s work or borrowing someone else’s original ideas. But terms like “copying” and “borrowing” can disguise the seriousness of the offence: Dictionary meaning of “plagiarize “ is to steal and pass off the ideas or words of another as one’s own or to use another’s production without crediting the source or to commit literary theft.”

In other words, plagiarism is an act of fraud. It involves both stealing someone’s original work and falsely claiming it as one’s own. We can avoid this by giving credits to the sources and providing necessary information to locate it. “Papa we must never do this. Internet lets us see the designs of best people in this field. While it’s great to be inspired by such designs it’s not right to copy someone else’s work and call it ours. It is cheating and all cheats get caught sometime or the other. It also does not give us the opportunity to grow as an independent professional.”

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Notes

2. **Phishing** – It is a form of fraud in which the attacker tries to learn information such as user name, password, credit card details or bank account information, often for malicious reasons by disguising as a reputable or trustworthy entity in an email or through another communication channel.
3. **Identity Theft** - It is a serious crime which happens when someone uses personal and confidential information without the permission of the concerned person. They could use your name and address, credit card or bank account numbers, adhaar card numbers, medical insurance account numbers or any other sensitive data.
4. **Computer Vandalism** – Damaging or destroying data rather than stealing or misusing them is called cyber vandalism. These are programs that attach themselves to a file and then circulate.
5. **Denial of Service Attacks** – This is an act by the criminals who flood the bandwidth of the victim’s network or fills his email box with spam mail depriving him of the service he is entitled to access or provide.
6. **Cyber Stalking** – It is a crime in which the attacker harasses a victim using electronic communication, such as email or instant messaging or messages posted to web site or a discussion group.

“Papa, now that we are trying to enter into online business we must install licensed antivirus in systems to protect our financial, personal and confidential data. The people behind these crimes feel that they can hide behind the internet and are safe. However, there are a lot of checks and balances. Ultimately, they are always caught and are punished under the laws.”

You will learn more about these laws further in this lesson. Don’t you think that each one of us should develop the ability to say ‘no’ if someone tries to include us in such activities?



IN TEXT QUESTIONS 14.1

1. Define the following:
 - (i) Malware _____

 - (ii) Adware _____

 - (iii) Cybercrime _____



Notes

- (iv) Plagiarism _____

- 2. Give two differences between computer virus and anti-virus.
 - (i) _____
 - (ii) _____
- 3. What effects can malicious viruses have on your system if the following attack you?
 - (i) Trojan Horse _____
 - (ii) Scareware _____
 - (iii) Ransomware _____
- 4. List three methods by which computer viruses can spread.
 - (i) _____
 - (ii) _____
 - (iii) _____

14.3 SAFETY TIPS FOR CYBER SECURITY

“And what are those dos and don’ts you said you’ll tell me later?”

“So papa, here are the dos and don’ts for cyber security in Table 14.2”

Table 14.2: Safety Tips for Cyber Security

DOs	DON'Ts
Install an antivirus in your computer.	Do not open or respond to emails sent from unknown sources.
Update the antivirus regularly. from	Do not download any tool/application internet whose publisher is unknown.
Always buy licensed software for your computer.	Do not download any free game or application. Nothing is free in this world.
Enable the spam filter on antivirus.	Do not visit obscene websites. These are created by cybercriminals to take control of your computers.

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Notes

Enable email scanning on antivirus.	Do not keep any sensitive information like passwords, credit/debit card numbers on your computer.
Passwords should be changed regularly to maintain security.	Do not plug any USB drive (pen drive) without scanning it properly.
Always keep strong passwords with 8 or more character length. Password should be the combination of capital, small letters, digits with special symbols.	Do not use your PAN card, Voter id, driving license number as your username or password for any financial account.
Use the “Bcc” (Blind Carbon Copy) for large number of recipients. This protects the email addresses of the recipients by hiding them and makes your email easier to read.	Do not give your personal details of account number, credit card number, pin number etc. and become the victim of Phishing.
Always check the URL address begins online with “https” and not “http” while transacting online.	Do not use public Wi-Fi network for banking.
Setup account notification via SMS or email. This will help you keep an eye over your login attempts related to your account.	Do not get trapped in email scams like lottery emails, it should be avoided.

14.4 NETIQUETTES OF A RESPONSIBLE CITIZEN

“Papa, now I want to ask a question from you,” Tarunima said.

“From me?” asks the astonished Father.

“Papa, what are the responsibilities of a citizen?” asked Tarunima,

“It’s very simple. We have to perform our duties such as we have to take care of public property, we should pay taxes on time, give equal respect to all religions and cultures according to the constitutional remedies of India etc,” father responded.

“Well said Papa. Now you know, there are some responsibilities of a Netizen also.” Tarunima said. “Netizen! What’s that??” asked father. “If you are using internet means NET, it means you are a citizen of the Internet or in other words have become NETIZEN, who uses internet for its services. As a responsible citizen of internet you must follow some etiquettes while surfing. This is called Netiquettes.”

Digital Footprint

A digital footprint is a trail of data you create while using the Internet. In includes the websites you visit, emails you send, and information you submit to online services.

Netiquette - is a combination of the words network and etiquette, and is defined as a set of rules for acceptable online behaviour.



Fig. 14.1: Rules of Netiquettes

Netiquette rules are as follows:

1. **The Golden Rule**- Treat others as you would like to be treated. Avoid language that may not be understood by the recipient, for example, slang.
2. **No Flaming**- Flame is a personal insult communicated through the internet. Watch your posts or comments.
3. **Don't talk with people you don't know** - Do not arrange to meet anyone you meet online.
4. **Respect other people's privacy**–Respect other people's time and bandwidth.
5. **Don't spam**- It is an unsolicited email from unknown resources.
6. **Follow the TOS** – (Terms of service) Follow rules and policy of the sites.
7. **Use emoticons** – Use of emojis can help to convey feelings.
8. **Respect Copyright**–Don't violate copyright laws. Make sure your work is your own or properly cited.



Notes

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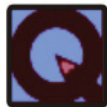
Notes

9. Do not capitalize everything– It looks like you are shouting.

10. Remember that you leave a digital footprint - So be careful what you put out there.

“Oh my goodness! We have to take care of so many things while surfing the internet.” Father said. “Yes papa. If we violate any rule then we can be a violating the Cyberlaw and can be punished,” Tarunima said. “One should be well informed about Cyberlaws of India, that is, Indian IT act.”

“I think internet is a very dangerous place for young boys, with all the obscene sites. It is also dangerous for young girls, what if someone traps them,” said father. “I understand that you are worried papa,” said Tarunima, “It’s not about age papa. It’s about the ability to make a decision to indulge or not to indulge in these activities. People of any age can do it if they do not have the skills to say ‘no’.” “Don’t worry papa, I will always think and study the authenticity of the site before I access it.” “I am so proud of you Tarunima!”



INTEXT QUESTIONS 14.2

1. In the table below, define:

Netiquette	
Digital Footprint	
TOS	

2. Give four ways by which you can protect yourself from a malware attack.

(i) _____

(ii) _____

(iii) _____

(iv) _____

3. Give three ways by which you will not contribute, to the spread of viruses.

(i) _____

(ii) _____

(iii) _____



Notes

14.5 CYBERLAWS IN INDIA

As more and more business is being conducted online, the government has drafted cyberlaws that help us seek legal recourse if someone cheats us. The Information Technology Act, 2000 is the primary source of cyberlaw in India. The Information Technology Act, 2000 (IT Act) came into force on 17 October 2000. The Act aims to provide legal recognition to electronic commerce. In addition it facilitates the filing of electronic records with the government. The IT Act also penalizes various cybercrimes and provides strict punishments. Some of the offences along with the punishments are given in Table 14.3:

Table 14.3: Offences and Punishments in Cyberlaws

Offences	Punishment
Damaging the Data or the Computer: Any person who deletes or causes disruption of any computer with the intention of damaging of the whole data of the computer system without the permission of the owner	Fine up to 1 crore to the affected person as a remedy
Hacking: Any person with intention causes wrongful loss or damage to public or any person commits hacking	Imprisonment up to three years, or with fine which may extend up to 2 lakh rupees, or with both.
Publishing of obscene information in electronic form: Any person who knowingly or intentionally publishes pornographic material in electronic form.	On first conviction, person shall be liable to imprisonment which may extend up to five years and fine up to rupees 1 lakh. On second conviction, imprisonment up to ten years and fine up to 2 lakh rupees.
Cyber Defamation: Any person who sends, by means of a computer resource or a communication device, any information that is grossly offensive, which causes annoyance, inconvenience, danger, obstruction, insult, injury, enmity, hatred and annoyance or mislead the addressee.	Imprisonment for a term which may extend to three years and with fine suited to the crime.

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Notes

We sometimes hear of such offences being committed. Let us see how the culprits were punished. In a case from Chennai, a boy started harassing a girl when she refused to marry him. The boy posted obscene, defamatory and annoying message in the message group, emailed those through a false email account opened by him in the name of the victim. Upon girl's and her family's complaint, police nabbed the accused. The accused was found guilty of offences under Section 469, 509 of Indian Penal Code and Section 67 of IT Act 2000 and was convicted with imprisonment for 2 years and to pay fine of Rs. 4000/- . While it is normal to like someone, it is not right to force attention on an unwilling person. Just as we have the right to express our feelings, the other person also has the right to express theirs. Don't you feel that this young person from Chennai went too far and finally landed in jail!

Recently, Mumbai police arrested a man for allegedly defrauding a city resident of Rs 94,000 on the pretext of giving him a job. Victim was looking for a job and had applied on a well-known job portal. After checking his details on the portal, accused called him up claiming to be representing a company looking for people and demanded a fee before the victim could be called in for an interview. After few weeks, accused stopped responding. On complaint at cybercrime police station, the police tracked down the accused and placed him under formal arrest under IT Act.

In view of such increase in cybercrimes, the Government of India has brought major amendments to ITA 2000 by the Information Technology Amendment Act, 2008 (ITAA 2008). The new version of Information Technology Act 2000 gives additional focus on Information Security. It has added several new sections on offences including cybercrime and data protection.

To tackle the issue of cybercrimes, CIDs (Criminal Investigation Departments) of various cities have opened up Cyber Crime Cells in different cities. The Information Technology Act of India states clearly that when a cybercrime is committed, it has a global jurisdiction and hence a complaint can be filed at any cyber cell. This means you can register a complaint even if the criminal is in another city!!

(Credits: <https://blog.ipleaders.in/how-to-register-cyber-crime-complaint-with-cyber-cell-of-police-online-complaint-procedure/>)

14.5.1 How to file Cyber Crime Complaint

Just two steps and a complaint can be filed.

Step 1 -Submit an application letter addressing the head of a cybercrime investigation cell when filing a complaint. One may need to provide contact details such as name, mailing address and telephone number along with it.

Step 2- Submit relevant documents along with the application to register a complaint.

For your reference Contact Information of Delhi Cyber Cell is given below, Delhi

<p>CBI Cyber Crime Cell: Superintendent of Police, Cyber Crime Investigation Cell Central Bureau of Investigation, 5th Floor, Block No.3, CGO Complex, Lodhi Road, New Delhi – 3 Contact Details: +91-11-4362203, 011-26851998 011-26515229, +91-11-4392424 Web site: http://cbi.nic.in/</p>	<p>Asst. Commissioner of Police, Cyber Crime Cell, EOW, Crime Branch, 2nd Floor, Police Training School, Malaviya Nagar, New Delhi-110 017 E-Mail: cbiccic@bol.net.in, dcp-eow-dl@nic.in</p>
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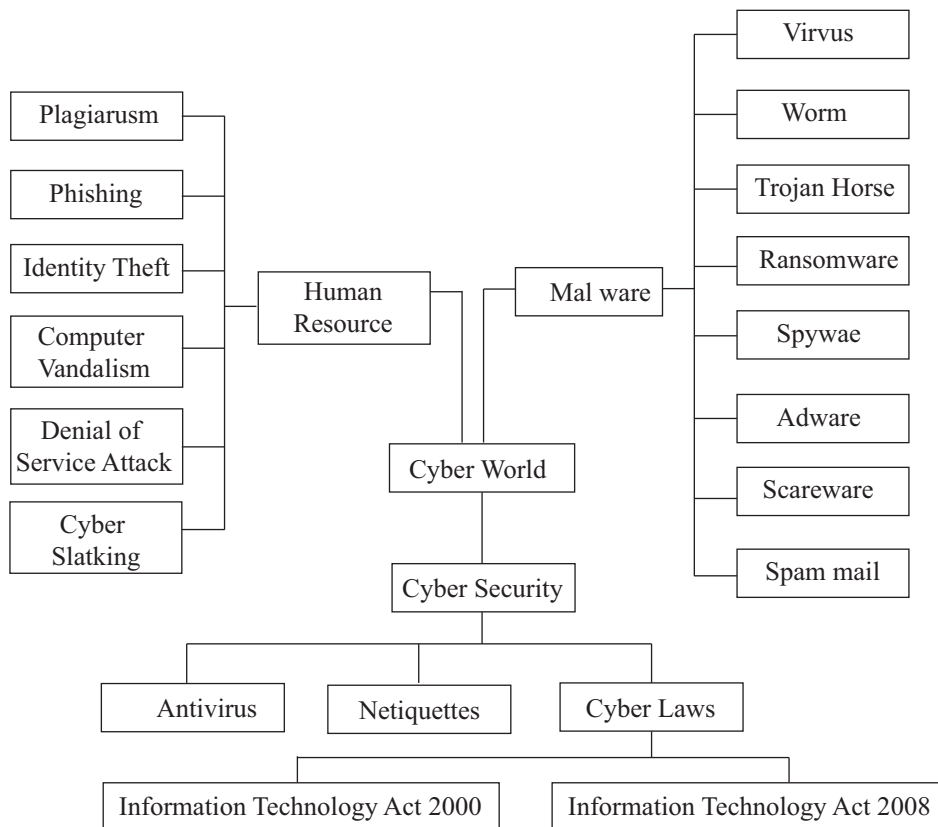


Notes

Similarly every city has its own cyber cells. It will be a good idea to find out the contact details for any emergency. Better safe than sorry!



WHAT YOU HAVE LEARNT



Going Digital



Notes



TERMINAL EXERCISE

- 1 Explain the term malware. What are the different kinds of malware that are commonly seen?
2. The term virus has been taken from medicine? Describe two ways in which the two viruses are similar.
3. Give three ways in which you can protect your computer system against viruses.
4. Write a notice for your employees explaining what spam is and the office non-spam policy giving reasons. Tell them two ways to avoid getting spammed.
5. Define plagiarism. Give two arguments against plagiarism.
6. Give two differences between phishing and identity theft. Suggest four ways of protecting yourself from such crimes.
7. Your class fellow Manish has just started his new online business of providing nursing facility to old age people in the city. He has given the facility of online bookings and payments. Write a letter to Manish informing him about five different netiquettes that he should observe while dealing with his clients
8. Name the law by which cyber crimes are controlled in India? Write a complaint to the cyber cell of your city about the cyber stalking in which you were victimized.



ANSWERS TO INTEXT QUESTIONS

14.1

- 1 (i) Malware is a short form of “malicious software” which is specifically designed to disrupt, damage, or gain authorized access to a computer system.
- (ii) Adware is a software that contains embedded advertisements. It is designed to display advertisements on your computer and redirect your search requests to advertising websites to collect marketing data about you.
- (iii) Cybercrime is defined as a crime in which a computer is the object of the crime (hacking, phishing, spamming) or is used as a tool to commit an offense.



Notes

- (iv) Plagiarism is presenting someone else’s work or ideas as your own, with or without their consent, by incorporating it into your work without full acknowledgement. All published and unpublished material, whether in manuscript, printed or electronic form.

Virus	Antivirus
<p>It is computer program/software which infects computer badly and damages the data.</p> <p>A virus can benefit the spreader of the virus or the programmer who uses it. A virus can be easily uploaded or copied on the web.</p>	<p>It is a computer program/software which eliminates viruses from computer.</p> <p>An antivirus is beneficial to the people who got infected by the virus. Antivirus software needs to be purchased.</p>

- 3. (i) A Trojan horse gives remote access of your computer to other users and allows them to install malicious software on it.
 - (ii) Scareware would pop up hoax virus infection warnings and would scare you to buy a fake antivirus or registry cleaner.
 - (iii) A ransomware would take control of your computer, hide or password protect all the files, and would ask you to pay money for unlocking such files.
4. Computer viruses can be spread by:
- Opening attachments in an email
 - Files stored on removable media such as floppy disk, pen drives and others
 - Downloading free software from the internet
 - Clicking on some pop-ups on web pages

14.2

- 1. (i) Netiquette- The correct or acceptable way of using net is called as netiquette.
- (ii) Digital footprint means and includes the information about a particular person that exists on the Internet as a result of their online activity.
- (iii) TOS- Terms of Service of a website, which a user has to adhere in order to use it.

Going Digital



Notes

2. (i) Update your software regularly.
 - (ii) Install anti-virus software on your computer.
 - (iii) Create Backups of your data periodically.
 - (iv) Update anti-virus software periodically.
3. (i) We should never click on email attachments from unknown resources without at least first scanning them for viruses.
 - (ii) We should never share user account, personal, financial, or other sensitive information on any Web page.
 - (iii) Many viruses work by attaching themselves to a drive and automatically installing themselves on any other media connected to the system. As a result, connecting any network drives, external hard disks, or even pen drives to a system can result in the automatic propagation of such threats.

Complete and Post the feedback form today

Feed back on Lessons

Lesson No.	Lesson Name	Content			Language		Illustrations		What You Have Learnt	
		Difficult	Interesting	Confusing	Simple	Complex	Useful	Not useful	Very helpful	Not helpful
9.										
10.										
11.										
12.										
13.										
14.										

Final fold and seal

Fourth fold

Third fold

Feed back on Questions

Dear Learners,
 You must have enjoyed going through your course books. It was our endeavor to make the study material relevant, interactive and interesting. Production of material is a two way process. Your feedback would help us improve the study material. Do take a few minutes of your time and fill-up the feedback form so that an interesting and useful study material can be made.
 Thank you
 Coordinators
 (Employability Skills)

Lesson No.	Lesson Name	Intext Questions		Terminal Questions		
		Useful	Not useful	Easy	Diff.	V. diff.
9.						
10.						
11.						
12.						
13.						
14.						

Second Fold



Yours suggestion

Did you consult any other book to study Employability Skills? Yes/No
If Yes, give reason for consulting it

Name : _____
Enrolment No: _____
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