



4

DIGITAL SKILLS



K-W-L ABOUT

I Know	I want to Know	I Learned

Fill the I know and I want to know columns by yourself or with the help of the facilitator before starting this unit.

1. BASICS OF COMPUTER

Objective

At the end of this lesson, you shall be able to

- Learn the various components of computer
- Describe applications of computer

INTRODUCTION

A computer is an electronic, digital device used to process data, converting the data into information that is useful to people/

users. A computer system consists of hardware and software components. Hardware is the physical equipment such as the case, storage drives, keyboards, monitors, cables, speakers, and printers.

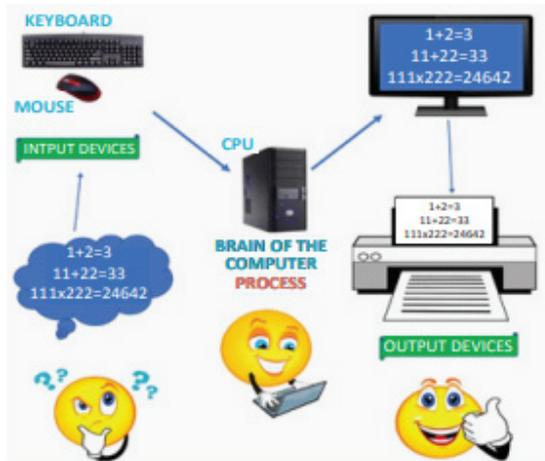
Software is the operating system and programs. The operating system instructs the computer how to operate. Programs or applications perform different functions.

BASICS OF COMPUTERS

Computer and internet have made communication faster and reduced



physical distances. They have improved human capabilities to do many tasks. There are many advantages in using computers and the internet today. Computers help to quickly search information, learn new things, communicate with people around the world and manage life better. Computer help us learn anything, anywhere.



COMPONENTS OF COMPUTER

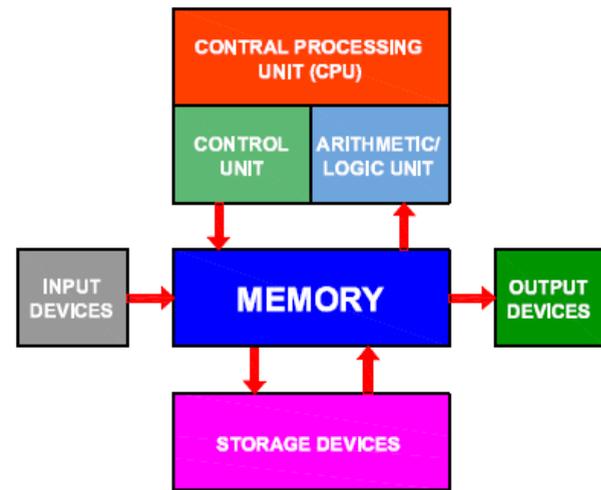
There are two types of computer devices. They are 1. Input devices and 2. Output devices.

Input devices- keyboard, mouse, digital camera, scanner, microphone, barcode reader, joystick.

Output devices- monitor, printer, speakers, headphones, projector.

Central Processing Unit (CPU)

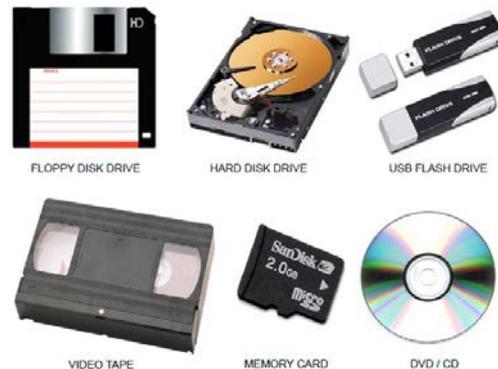
The computer CPU is responsible for handling all instructions it receives from hardware and software running on the computer. In the CPU, the primary components are the ALU (Arithmetic Logic Unit) that performs mathematical, logical, and decision operations and the CU (Control Unit) that directs all of the processor's operations.



Storage Devices

There are two types of storage devices,

1. **Primary storage devices-** Hard disk drive
2. **Secondary storage devices-** Floppy Disks, Hard Disks, CDs-Compact Disc, DVD's and USB flash drive.



Random-access Memory (RAM)

- Temporary storage for data and programs that are being accessed by the CPU
- Volatile memory, which means that the contents are erased when the computer is powered off
- More RAM means more capacity to hold and process large programs and files, as well as enhance system performance.

Processors & Memory - Data Representation



- Bit = 0 or 1
- 1 Byte = 8 bits
- 1 Kilobyte (KB) = 1024 Bytes
- 1 Megabyte (MB) = 1024 Kilobytes
- 1 Gigabyte (GB) = 1024 Megabytes
- 1 Terabyte (TB) = 1024 Gigabytes

Read-only Memory (ROM)

Basic instructions for booting the computer and loading the operating system is stored in ROM.

SUMMARY

A computer is an electronic, digital device used to process data, converting the data into information that is useful to people/users. It consists of hardware and software components. Hardware is the physical equipment such as the case, storage drives, keyboards, monitors, cables, speakers, and printers.

Software is the operating system and programs. The operating system instructs the computer how to operate.

ACTIVITY 1

Write down the various components of Computer.

1	
2	
3	
4	
5	
6	
7	
8	
9	
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2. EXPLORING A COMPUTER

Objective

At the end of this topic, you shall be able to:

- Applications of computer

Introduction about computer

A computer also has many uses and benefits. It can help us focus on how to use computers well. It will also inspire us to do things a lot faster, smarter and better. From learning about your trade to getting a job, a computer can be your best friend in today's world. It can help you know and grow to unimaginable heights.

Applications of computer

Word processing, Internet, Digital video or audio composition, Desktop publishing, Computers in medicine, Mathematical calculations, Banks, Travel, Telecommunication, Defence, E-learning, Classes and Examinations.



SUMMARY

Exploring the computer gives the real experience of digital world by searching information. It will also inspire us to do things a lot faster, smarter and better. The application of computers provides knowledge about different usage of computer.

ACTIVITY 1

- View and Identify the input and output devices of the computer
- Identify the various devices of the computer by referring.



Write the name of the devices

No.	Label	Name of the device
1	1	
2	4	
3	2	
4	3	

5	7	
6	5	
7	8	
8	12	
9	10	
10	11	
11	6	
12	9	

3. BASICS OF OPERATING SYSTEM

Objective

At the end of this topic, you shall be able to:

- Define operating system
- Discuss types of operating system

INTRODUCTION

A computer has multiple programmes that run in the background. These programmes do different tasks so that we, as users, get to experience and enjoy many of its benefits. When we open a programme like YouTube, the computer runs several software programmes in the background – different software programmes run together for sound, for colour display, for video display, for moving the mouse, for internet, etc.

A computer's director has a special name – Operating System (OS). This OS makes sure that different programmes run



at the same time and yet do not interfere with each other. The operating system is also responsible for security, ensuring that unauthorized users do not access the system.

The operation of a computer is controlled by a software known as the Operating System (OS). This software is as important to the running of a computer as its hardware. The operating system directs the input and output of data, keeps track of files, and controls the processing of computer programmes allocating computer resources to various functions.

The operating system also serves as an interface between the computer and the user. It helps the user give commands to the computer. For example, pressing on the play button indicates that you have given a command to the computer to play something. An OS helps the computer and user understand each other. Microsoft's Windows OS and Apple Inc.'s Mac OS are examples of operating systems for personal computers.



Early computers had no operating system. For this reason, they could perform only one task at a time, such as running

one programme or printing. Modern operating systems allow multitasking, in which many processes can be active at the same time.

TYPES OF OPERATING SYSTEM:

Operating Systems are classified into the following types depending on their processing capabilities.

1. Single User Operating Systems

An operating system allows only a single user to perform a task at a time. It is called a Single user and single Task operating system. MS-DOS is an example for a single user and single task Operating System.

2. Multi-user Operating Systems

It is used in computers and laptops that allow the same data and applications to be accessed by multiple users at the same time. The users can also communicate with each other. Windows, Linux and UNIX are examples for multi-user Operating Systems.

LIST OF OPERATING SYSTEM

- UNIX
- Microsoft Windows
- Linux
- iOS
- Android

SUMMARY

Operating system controls the behind-the-scenes activities of a computer. It manages a computer's memory, file systems, network

connections, and input/output devices, such as the keyboard, mouse, monitor, speakers, printer, and modem. Critically, the operating system also controls access to the central processing unit (CPU), which is the heart of the entire computer system

4. EXPLORING WINDOWS OPERATING SYSTEM

ACTIVITY 1

Draw a line between the operating system logo and the correct description.

A command-line operating system is an example of Open Source software development and Free Operating System	
A popular Operating System for mobile phone technology which is not linked with Apple products.	 iOS
Used with Apple computers and works well with cloud computing.	
Designed to be used for the Apple iPhone	 Mac OS
Is an Operating System that is very popular in universities, companies, big enterprises etc	UNIX
The most popular GUI Operating System for personal computers.	

ACTIVITY 2

Create a New Folder or File in Windows

a. Right-click on a blank space. Doing so opens a drop-down menu. Make sure

you don't right-click on a file or folder instead, as this will open the wrong drop-down menu.

- If you are in an existing folder (Documents), you can also click the Home tab on the top-left side of the File Explorer window and click New Folder in the toolbar that appears.
- If you are on a computer with a trackpad instead of a mouse, click the trackpad with two fingers to perform a right-click.
- Select New. This option is near the bottom of the drop-down menu and opens another pop-out menu.
- We can create New folder and save the following inside the folder
 - Open a New MS-Word document
 - Bitmap image
 - Open a New MS-Excel Worksheet
 - Open a New MS-PowerPoint Presentation
 - Open a New Text Document
 - Open a New Compressed (Zipped) Folder

5. EXPLORING MS WORD

Objectives

At the end of this lesson you shall be able to

- state about the basic word processing
- explain how to create, open, save and close the document

INTRODUCTION

Microsoft Word is a text processing application. It allows the user to configure the attributes of a document, such as layout and the styles of content, and to

add their content in a variety of ways and formats to produce documents.

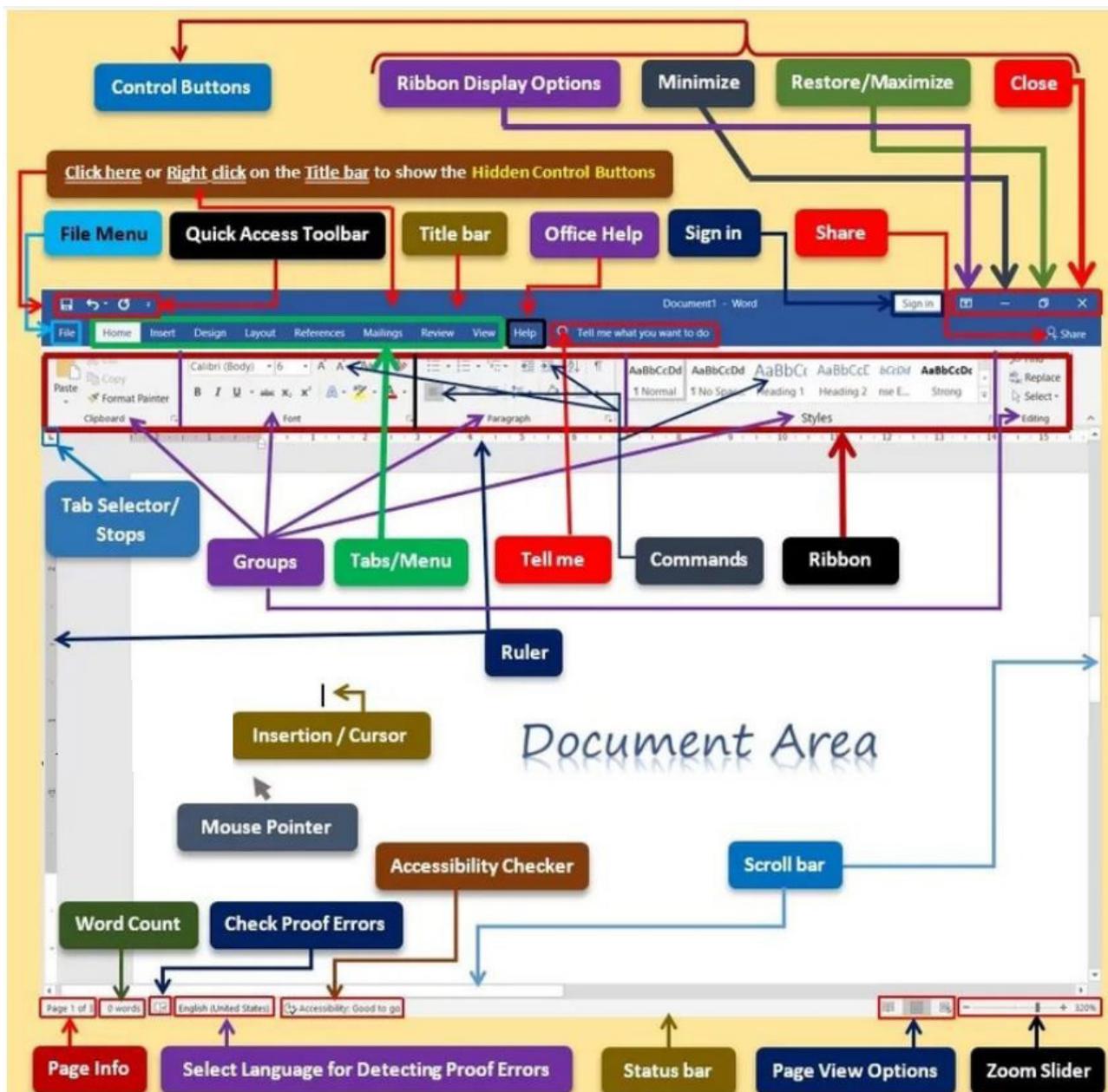
A word processing program is a software program that includes tools for entering, editing, and formatting text and graphics. Microsoft Word is a powerful word processing program that allows you to create and enhance a wide range of documents quickly and easily. The electronic files you create using Word are

called documents. One of the benefits of using Word is that document files can be stored on a hard disk, CD, flash drive, or other storage device, making them easy to transport, exchange, and revise.

Open a Document in Word

There are several ways to open a Word 2010 document that was previously saved as a file on disk.

The Elements of Word Screen





Choose the Open command from the File tab menu: Alternatively, you can use the keyboard shortcut Ctrl+O. Either way, the Open dialog box opens

Locate the document you want to open: The Open dialog box , you can examine various folders on your PC's hard drive, and on any computer network your PC is connected to, for files to open.

When you find the file, select it: The file appears highlighted in the dialog box.

Click the Open button.

Save a Document in Word

1. Click the File tab and select the Save as command: The Save As dialog box appears. You need to use the Save As dialog box when you first create a document and if you want to save a document with a new name or to a different location on disk.
2. Type a name for your document in the File Name text box: Word automatically selects the first line or first several words of your document as a filename and puts it in the Save dialog box. If that's okay, you can move to Step 4. Otherwise, type a name in the File Name box.
3. Choose a location for your file (Optional): In the Save As dialog box to choose a specific folder for your document.
4. Click the Save button.

Deleting Text

Deleting text is one of the basic skills of good editing. Word has many ways

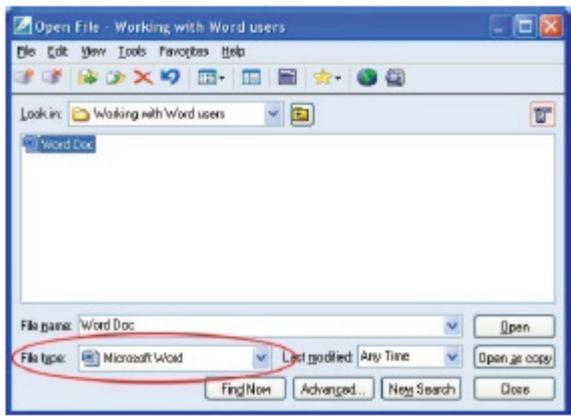
to delete text. The most basic deletion technique is to delete characters one at a time by pressing one of these two keys:

1. To delete text to the left of the insertion point, press the Backspace key on your keyboard.
2. To delete text to the right of the insertion point, press the Delete key on your keyboard.
3. Select the text you want to remove, then press the Delete key.
4. If you select text and start typing, the selected text will automatically be deleted and replaced with the new text.
5. **To delete a sentence:** Hold down the Ctrl key and click in the sentence to select it, and then press Delete or Backspace.
6. **To delete a paragraph:** Triple-click the paragraph to select it and then press Delete or Backspace.
7. **To delete the entire document:** Press Ctrl+A to select the entire document and then press Delete or Backspace.

Formatting MS-Word

Arranging words or creating different styles of word on MS-Word is called formatting. Formatting is used to make your document appear the way you want it to. For example, a leave letter format is different from formatting a resume. Well, there are many methods to create different formats on MS-word. You can make a word look bold, slant, underlined or colourful, if you need!





Adding text or typing in MS-Word

1. The insertion point is the blinking vertical line in the document. It indicates where one can enter text on the page. You may use the insertion point in a variety of ways.
2. Place the cursor where you want to add the text.
3. Start typing.
4. Add spaces: Press the spacebar to add spaces after a word or in between text.
5. New paragraph line: Press Enter on the keyboard to move the insertion point to the next paragraph line.
6. Manual placement: Once you begin typing, use the mouse to move the insertion point to a specific place in the document. Simply click the location in the text where you want to place it.
7. Arrow keys: You can also use the arrow keys on the keyboard to move the insertion point. The left and right arrow keys will move between adjacent characters on the same line. The up and down arrows will move between paragraph lines. Press Ctrl+Left or Ctrl+Right to quickly move between words.

Formatting specific text

1. Before you move or format text, select it. To do this, click and drag the mouse over the text, then release the mouse. A highlighted box will appear over the selected text.
2. Select an option to change the font, font size, font colour, or make the text bold, italics or underline.
3. When you select text or images in Word, a hover toolbar with command shortcuts will appear. If the toolbar does not appear at first, try hovering the mouse over the selection.

To select multiple lines of text

1. Move the mouse pointer to the left of any line so that it becomes a right slanted arrow.
2. Left click the mouse. The line will be selected.
3. To select multiple lines, click and drag the mouse up or down.
4. To select all of the text in the document, choose the Select command on the Home tab, then click Select All. Alternatively, you can press Ctrl+A on the keyboard.

SUMMARY

MS Word is a tool to record data and maintain report. The various options of Ms Word are explained in the lesson.



SELF- ASSESSMENT

List down the various functions in MS Word:

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6. EXPLORING EXCEL

Objective

At the end of this lesson, you shall be able to:

- identify the basics of Excel worksheet
- recognize the importance of Excel

INTRODUCTION

Microsoft Excel is an application used for creating and editing spreadsheets. Spreadsheets are commonly used for working with sets of data containing text and numbers and for generating graphs and charts.

A spreadsheet is an electronic document in which data is arranged in rows and columns. It is in the form of a grid and is used for calculations.

Features of a Spreadsheet

A spreadsheet provides flexibility, speed and accuracy. Many features and functions

are built into it making it easy to use. Microsoft Excel is widely used to make data and tables for official and personal use. Spreadsheets are used for a variety of tasks, such as:

- maintaining records
- analyzing data
- creating MIS (management information system) reports
- generating graphs (for pictorial representation of data)
- financial calculations
- budgeting.

Locating Microsoft Excel

1. Click Start
2. From the sub-menu point to Microsoft Excel
3. Microsoft Excel will open
4. Microsoft Excel worksheet has the following components:

Worksheet – a grid of horizontal rows and vertical columns. Worksheet is also called an array of cells.

Workbook– contains one or more worksheets.

Column – a vertical arrangement of cells. The columns are named by letters of the English alphabet.

Row – a horizontal arrangement of cells. The rows are named by numbers.

Cell Address – identifies location of the cell. It is a combination of column name and row number of the cell, such as A1 or B3, etc.

Cell – intersection of the rows and columns. It may contain text, number,



date or a formula. It is the fundamental element of a worksheet. This is where numbers or text are entered.

Formula Bar – located below the Ribbon. It displays the contents of the active cell. It can also be used to enter and edit data.

Ribbon – contains multiple tabs, each with several groups of commands. These tabs are used to perform most common tasks in Excel.

Functions commonly used in Microsoft Excel are:

creating a new document, formulae, font, bold, alignment, sheet tabs, cut, copy, paste, deleting column content, saving a new document and printing a document.

Saving a Workbook

It is important to save the workbook whenever a new project is started or when changes are made to an existing one. Saving early and often can prevent the work from being lost. Paying close attention to where the workbook is saved is important to find it easily when needed.

Ways to Save a Workbook

Save: While creating or editing a workbook, use the Save command to save changes. This command will be used most of the time. While saving a file, choose a file name and location the first time. After that, just click the Save command to save it with the same name and location.

Save As: Use this command to create a copy of a workbook while keeping the original. While using Save As, choose a different name and/or location for the copied version.

Steps to save the workbook

1. In the Quick Access bar, click the Save icon.
2. Click Save As.
3. Select Desktop as your location to save the file.
4. Type File name in the File name field box.
5. Type Homework.
6. Click Save.
7. Workbook is saved as “Homework”.
8. Click the Save icon to continue to save work anytime.
9. To close the file, click the File option from the Quick Access bar.
10. Select Close.
11. You can also close a workbook by clicking the close icon.

Printing a document

There may be times when a workbook has to be printed to view and share data offline. It is easy to preview and print a workbook from Excel using the Print pane.

Printing an Excel document

1. Click File from the menu bar. The shortcut is to press CTRL+P.
2. Click Print. Print pane will be displayed.
3. Click Copies drop down arrow to choose how many copies of the workbook to print.
4. See a preview of how the worksheets will look when printed.
5. Choose to print the active sheets, the entire workbook, or a selection of cells.





6. Choose portrait or landscape orientation.
7. Adjust the page margins, to help the data fit more comfortably on the page.
8. Choose how to scale your worksheets for the printed page. You can scale worksheets at their actual size, fit the entire worksheet on one page, fit all columns on one page, or fit all rows on another.
9. To print the workbook, click the Print icon.

SUMMARY

Microsoft Excel is widely used to make data and tables for official and personal use. Spreadsheets are used for a variety of tasks, such as:

- maintaining records
- analyzing data
- creating MIS (management information system) reports
- generating graphs (for pictorial representation of data)
- financial calculations
- budgeting.

SELF ASSESSMENT

How will you insert chart to your excel file?

7. EXPLORING POWERPOINT

Objective

At the end of this lesson, you shall be able to:

- Outline of powerpoint
- Discuss the features of MS - powerpoint
- recognize the importance of Powerpoint

INTRODUCTION

Microsoft PowerPoint is commonly used to create presentations using slides. Though often used to make simple, bullet-pointed presentations, it has a range of features that can allow a range of media in your presentation. Our guide to Presentations takes you through how to use PowerPoint effectively. It is also a great tool for creating posters, as the size of a slide can be changed to suit paper sizes and then the image options utilised to create posters without using image software.

PowerPoint is computer software created by Microsoft which allows the user to create slides with recordings, narrations, transitions and other features in order to present information. PowerPoint is a presentation program developed by Microsoft. It is included in the standard Office suite along with Microsoft Word and Excel. The software allows users to create anything from basic slide shows to complex presentations. PowerPoint is often used to create business presentations, but can also be used for educational or informal purposes.

The presentations are comprised of slides, which may contain text, images, and other media, such as audio clips





and movies. Sound effects and animated transitions can also be included to add extra appeal to the presentation. However, overusing sound effects and transitions will probably do more to annoy your audience than draw their attention.

Most PowerPoint presentations are created from a template, which includes a background color or image, a standard font, and a choice of several slide layouts. Changes to the template can be saved to a “master slide,” which stores the main slide theme used in the presentation. When changes are made to the master slide, such as choosing a new background image, the changes are propagated to all the other slides. This keeps a uniform look among all the slides in the presentation.

How to Make a PowerPoint Presentation (Step-by-Step)

1. Start a blank presentation.
2. Type text into your title slide.
3. Insert more slides.
4. Add content to slides.
5. Change the design.
6. Add animations & transitions (optional)
7. Save your PowerPoint presentation.
8. Print your presentation

Create a presentation

- Open PowerPoint
- In the left pane, select New.
- Select an option:
To create a presentation from scratch, select Blank Presentation.

To use a prepared design, select one of the templates.

- To see tips for using PowerPoint, select Take a Tour, and then select Create.

Add a slide

- In the thumbnails on the left pane, select the slide you want your new slide to follow.
- In the Home tab, in the Slides section, select New Slide.
- In the Slides section, select Layout, and then select the layout you want from the menu.

Add and format text

- Place the cursor inside a text box, and then type something.
- Select the text, and then select one or more options from the Font section of the Home tab, such as Font, Increase Font Size, Decrease Font Size, Bold, Italic, Underline, etc.
- To create bulleted or numbered lists, select the text, and then select Bullets or Numbering.

Add a picture, shape, and more

- Go to the Insert tab.
- To add a picture:
In the Images section, select Pictures.
In the Insert Picture From menu, select the source you want.
- Browse for the picture you want, select it, and then select Insert.

To add illustrations:

- In the Illustrations section, select Shapes, Icons, 3D Models, SmartArt, or Chart.





- In the dialog box that opens when you click one of the illustration types, select the item you want and follow the prompts to insert it.

SUMMARY

PowerPoint is a presentation program developed by Microsoft. It is included in the standard Office suite along with Microsoft Word and Excel. The software allows users to create anything from basic slide shows to complex presentations. PowerPoint is often used to create business presentations, but can also be used for educational or informal purposes.

SELF ASSESSMENT

How to use Animations and Transitions in Presentation?

8. INTERNET

Objective

At the end of this lesson, you shall be able to:

- Define computer network
- Name the types of network
- Learn the uses and benefits of the internet

INTRODUCTION

The Internet, sometimes simply called “Net”, is a worldwide system of computer networks. Global communication has become very easy now, thanks to a worldwide computer network that is called the Internet.



It is a network of networks in which users on any one computer can get information from many other computers. Computers communicate with each other through the internet and they form networks of connections. These networks help us share a lot of information.

In less than 20 years, the internet has expanded to link up around 210 different countries. The Internet has made the world into a Global village. The top uses of the Internet are: communication with people, social networking, research about new things, education purposes, online transactions, news updates, online booking of tickets, buying and selling things, job search, etc.

COMPUTER NETWORK

A computer network is an interconnection of various computer systems located at different places. In a computer network two or more computers are linked together



with a medium and data communication devices for the purpose of communicating data and sharing resources. The computer that provides resources to other computers on a network is known as a server. In the network the individual computers, which access shared network resources, are known as workstations or nodes.

Computer Networks may be classified on the basis of geographical area in three broad categories.

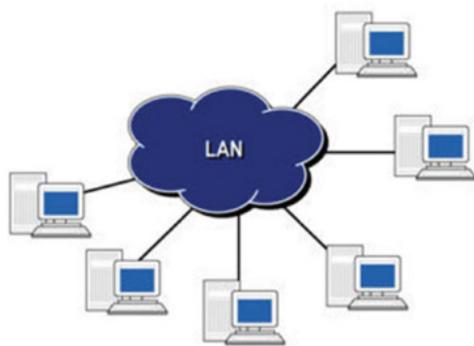
1. Local Area Network (LAN)
2. Wide Area Network (WAN)
3. Metropolitan Area Network (MAN)

A classification of computer networks can be done to distance as in the table.

Interprocessor Distance	Network Type
0 to 1 Km	Local Area Network (LAN)
1 Km to 10 Km	Metropolitan Area Network (MAN)
10 Km to 1000 Km	Wide Area Network (WAN)
Above 10000 Km	Internet

Local Area Network (LAN)

Networks used to interconnect computers in a single room, rooms within a building or buildings on one site are called Local Area Network (LAN).



Use of LAN

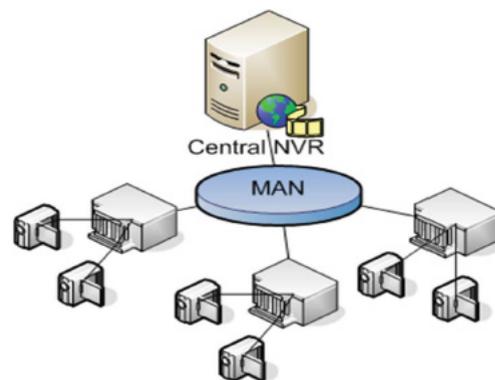
Followings are the major areas where LAN is normally used

- File transfers and Access
- Word and text processing
- Electronic message handling
- Remote database access
- Personal computing
- Digital voice transmission and storage

Metropolitan Area Network (MAN)

A Data network designed for a town or city.

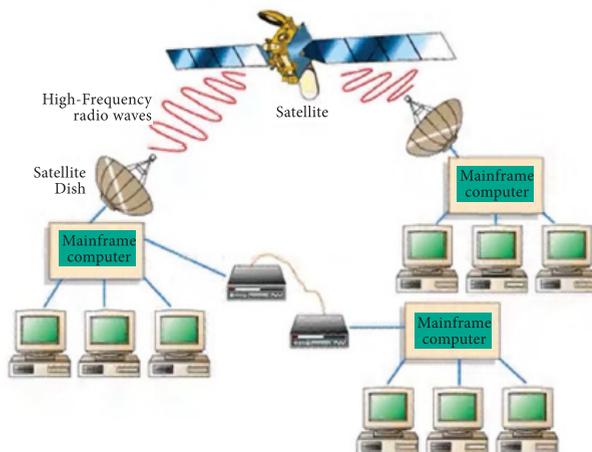
- The network size falls intermediate between LANs and WANs. A MAN typically covers an area of between 5 and 50 km range. Many MANs cover an area the size of a city, although in some cases MANs may be as small as a group of buildings.
- A MAN (like a WAN) is not generally owned by a single organization. The MAN, its communications links and equipment are generally owned by either a consortium of users or by a network service provider who sells the service to the users.
- A MAN often acts as a high speed network to allow sharing of regional resources. It is also frequently used to provide a shared connection to other networks using a link to a WAN.





Wide Area Network (WAN)

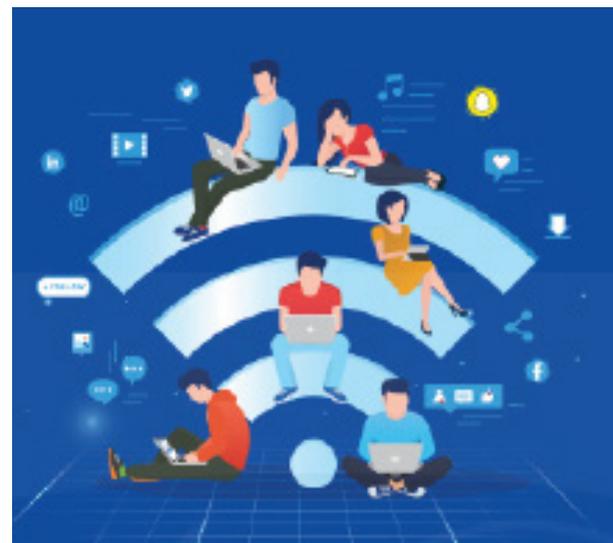
The term Wide Area Network is used to describe a computer network spanning a regional, national or global area. For example, for a large company the headquarters might be at Delhi and regional branches at Mumbai, Chennai, Bengaluru and Kolkata. Here regional centers are connected to headquarters through WAN. The distance between computers connected to WAN is larger. Therefore the transmission mediums used are normally telephone lines, microwaves and satellite links.



- An ISP is a company that provides Internet connectivity to individuals, businesses and organizations.

Wireless Internet Connection

To connect to the Internet using wireless technology, the computing device such as your laptop should have a WiFi or a wireless fidelity card. This WiFi Card connects to the access point (in a wireless mode), which is a wireless router. The router is then connected to a wired network provided by an Internet Service Provider or an ISP.



Setting up of wireless network

Requirements for an Internet Connection

To connect to the Internet, you need a computing device, a connection device and an Internet Service Provider (ISP).

- A computing device can be a laptop, desktop, a tablet or a mobile phone.
- A connection device such as a modem helps you connect to the Internet. A modem converts digital information into analog information and transmits over phone lines.

Bandwidth

Bandwidth is the amount of data that can be transmitted over a network in a certain amount of time. To understand bandwidth, let's take the example of a pipe. The amount of water flowing through a pipe depends on its thickness. Similarly, the amount of data that your network can receive or send depends on its bandwidth. Bandwidth is measured in Mbps (Megabytes per second), Kbps (Kilobytes per second), bps (bytes per second).





Types of Connections

You can use many types of technologies to connect to the Internet. Each technology supports a different bandwidth. The actual rate of transfer of data depends on the ISP's equipment, the type of Internet connection and the number of people using the same connection at one time.

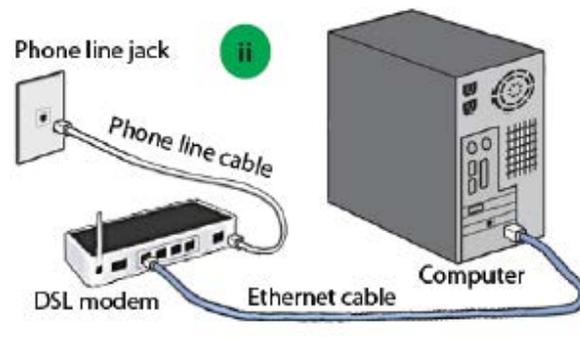
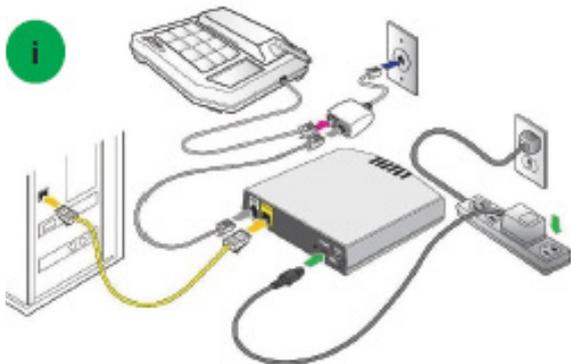
1. Dialup connection

Most Dial-up connections offered today allow data transfer rates up to 56.6 Kbps.

2. DSL

If you use a DSL connection, you are always connected to the Internet. The data transfer rate of DSL

Internet connection is 384 Kbps to 8 Mbps.

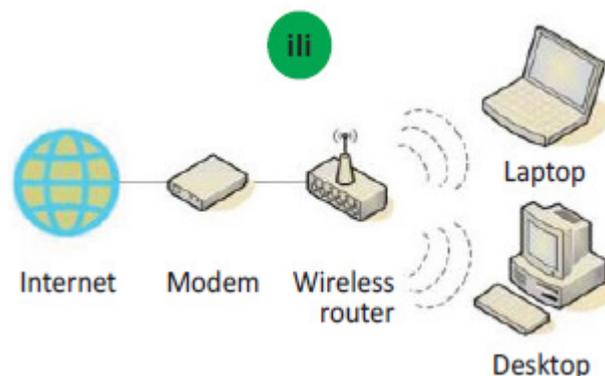


3. Cable connection

You can get high-speed Internet connection from the cable TV provider. This connection supports data transfer rates of 4 Mbps.

4. Wireless connection

You can connect to the Internet by using wireless technology which further connects to a wired connection such as a cable modem. The data transfer rates of wireless Internet connections can range from 11 Mbps to 45 Mbps.



Internet Browser

There are various Internet browsers available. Internet browser is a software which helps you access web pages from various websites. Various Internet browsers are: Google Chrome, Mozilla Firefox, Safari, Opera and Internet Explorer.

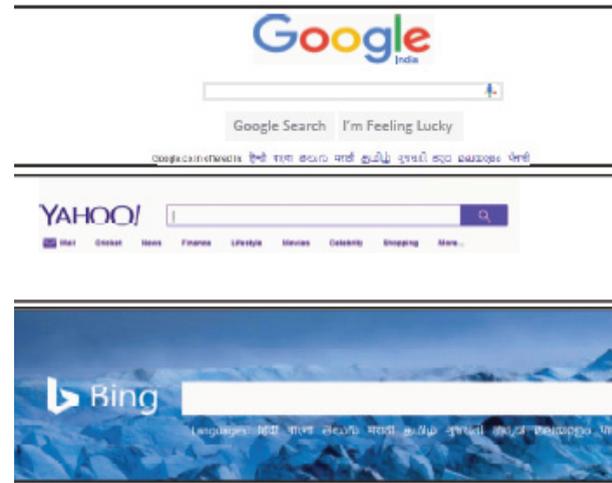




Searching information on the internet

The internet is a wonderful tool that has lots of benefits and can make your life easy. The internet has millions of websites and webpages. You can search for almost anything – from learning new things to getting the latest news, to new movies and tips for doing something you don't know. To search the internet effectively you need a search engine.

topic on which you want to find information, a search engine will scan through thousands of websites and webpages on the internet and collect, organize and display the most relevant information. Some examples of popular search engines are: Yahoo, Google and Bing.



Address bar

Every website on the internet has an address which is unique. For example, the address for the Facebook site is www.facebook.com. Here, www stands for World Wide Web. Most websites have this at the beginning.

How to search when the website address is known?

We know that every website on the internet has a unique address. If you know the exact address of the website that you are looking for, the following steps can be used to access that website:

1. Open the browser on your device and type the name of the website in the address space provided.
2. Click on the web page and once it opens, you can read through it to find the information that you need.



Search Engine

A search engine is a software programme that is designed to search for information on the World Wide Web. Once you type the





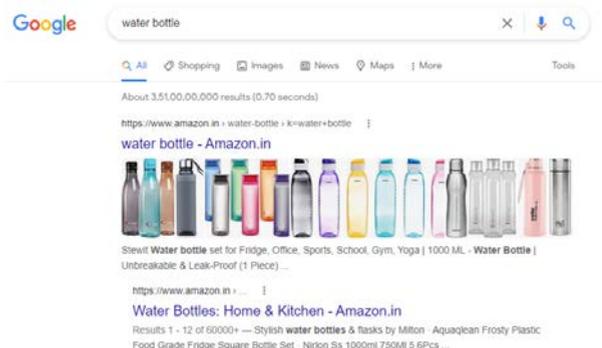
How to search when the website address is not known?

Suppose now you want to search the internet and don't know the exact website. What do you do? Well, there is a trick to finding exactly what you need from among millions of web pages and websites on the Internet. This trick is knowing the keywords. Keywords are words that help us find what we are looking for on the Internet.

1. Open the browser.
2. In the search box, type the keywords.

For example, if you are looking to purchase a Kashmiri shawl in a large market in Delhi, you will use "Kashmiri Shawl" as key words along with "Delhi" to get better search results.

3. Click and choose any link from the options given to get more information on what you are searching for.



SUMMARY

Internet is a network of networks in which users on any one computer can get information from many other computers. Computers communicate with each other through the internet and they form networks of connections.

Computer Networks may be classified on the basis of geographical area in three broad categories.

1. Local Area Network (LAN)
2. Wide Area Network (WAN)
3. Metropolitan Area Network (MAN)

A search engine is a software programme that is designed to search for information on the World Wide Web. Some examples of popular search engines are: Yahoo, Google and Bing.

SELF – ASSESSMENT

List out the applications of Internet in our day-to-day Life.

9. BEST PRACTICES TO FOLLOW ON THE INTERNET

Objective

At the end of this lesson, you shall be able to:

- identify good practices on the internet
- recognize how to spot fake news
- use the internet facility securely.





INTRODUCTION

It is important to follow safe ways to browse the internet. Careful online transactions, username and password, using protective software are some safe ways to use the internet.

Ways to protect your computer

There are many guidelines you should follow to protect your computer.

1. Implement user identification

An effective way to prevent unauthorized individuals from accessing your computer is by setting up accounts for authorized users of the computer.

2. Username and password

You can also increase security and limit unauthorized access to your computer by setting up a username and password.

3. Keep passwords secure

Some guidelines to keep your password secure are:

- Be careful while typing your password to prevent anyone else from seeing it.
- Do not share your password with others.
- Do not write the password and leave it on your computer or desk.
- If you think that the password has been compromised, change it immediately.

4. Lock your computer

When a computer is locked, it immediately hides the content of the

screen and does not allow any operation until the computer is unlocked with the correct username and password combination. For example, in Windows, you can lock your computer by pressing CTRL+ALT+DEL, and then clicking the Lock this computer option.

5. Protective Software

You can protect your computer from viruses and spyware by installing antivirus and antispyware software.

6. Online transactions

When you give your credit card details on a secure site, the merchant site will send the information via the Internet using a web payment software to the merchant's bank. The merchant's bank will send the information to the credit card issuing bank via the credit card network for authentication.

Securing online transactions

The actions that you can take to secure online transactions are:

1. **Strong Passwords** are a combination of upper and lower case letters, numbers and special characters and it must be created for all accounts.
2. **Antispyware:** Spyware are small programs that get installed on your computer and transmit your personal data to hackers. Antispyware deletes such programs installed on your computer and can prevent them from getting installed.





3. **Clear browsing history:** Personal information can be stored in browser history, cache memory and cookies. Delete this content regularly to prevent hackers from getting your information.
4. **Avoid sharing personal information:** Give personal information especially bank account or credit card details in online forms only on secure sites.
5. **Use secure site only:** A website is secure if it has https as its prefix and a locked padlock symbol.
6. **Configure security components:** Windows Control Panel provides many utilities such as Firewall, Malware protection, automatic security related updation and Internet settings which provide protection against security threats.
7. **Disable active content:** You can use browser settings to disable active content which are small programs that get installed in your computer while browsing and cause a security threat.

Securing Emails and Instant Messages

Emails and Instant Messages (IM) can be used to send you files containing harmful software. To ensure email and IM security:

- be cautious when opening e-mail and in messages with attachments.
- do not respond to unknown commercial mails.
- protect yourself from fake sites that look authentic and try to get your information.

- limit chat activity to people whom you know.
- report abuse to your Internet Service Provider (ISP).

Protecting against Online Predators

Online predators assume fake identities to lure children into inappropriate relationships and target adults to financially exploit them. You can take the following measures to protect yourself.

1. Know the signs

Online predators tend to get intimate very quickly. You need to ensure that you and your family members can detect such behavior to avoid contact with potential online predators.

2. Cautious of gifts

Online predators usually attract their targets with gifts or other tempting offers.

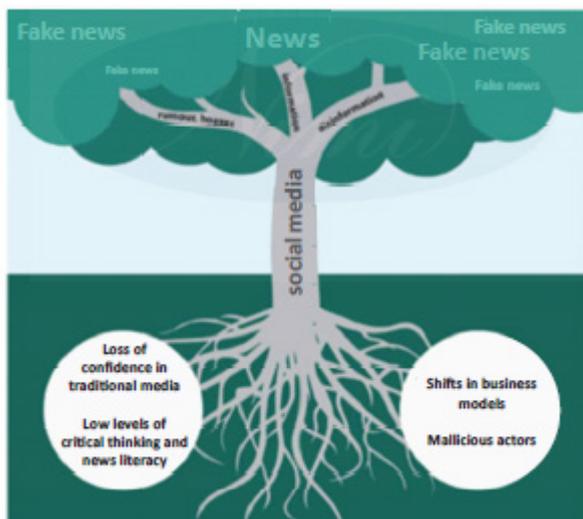
3. Educate your family

Educate your family members on appropriate chat room behavior to avoid being targeted by online predators. The screen names must not give away their actual name, age, gender, or contact information because this information can be misused.

4. Block inappropriate sites

You can enable your browser's Content Advisor feature to control the type of websites that your family members can visit while browsing the Internet.





Why should we check if the news is real or fake?

Fake news refers to false news that has no basis, but is presented as being factually accurate. Fake news is written and published usually with the intent to mislead in order to damage a person/group/company's name.

SUMMARY

The various best practices to follow on the internet are explained in this lesson. Careful online transactions, username and password, using protective software are some safe ways to use the internet.

SELF-ASSESSMENT

1. Ramesh is looking for a job online. He comes across a company called Youthful

which manufactures sports equipment. He really likes the company and finds a vacancy exactly matching his interest and qualifications. He sends his resume and cover letter to the HR department at Youthful.

2. One week later, Ramesh receives a call for an interview. He is very excited. In order to prepare for the interview, Ramesh does a search for the company online. However, he finds that there is an article on a social media site about the CEO of the company resigning and selling the company. He does a further search but does not find any such information on this matter. Ramesh gets scared and does not attend the interview.

Do you think what Ramesh did was correct?

What would you have done if you were in Ramesh's position?



What are the ways in which you can find out if a news item is true or fake?

10. INTERNET SAFETY

Objective

At the end of this lesson, you shall be able to:

- recognize the importance of internet safety
- identify ways to be safe on the internet
- use the internet safely.

INTRODUCTION

The Internet has made our lives easy. We can communicate via emails, shop online, make reservations, etc., through the internet. Safety on the internet is very important. Email passwords and other passwords should not be disclosed to anyone. While accessing emails and making online transactions, etc., on the computer in browsing centers or personal devices, the account has to be properly logged out.



The internet is a wonderful tool that has lots of benefits. It can make your

life easy. Unfortunately, the features that make it easy for people to use, can also be misused by people intending to cheat. However, you should not let fear stop you from using the internet. Here are a few simple steps that you can follow to keep your personal information safe.

1. Safeguard your personal computer/mobile

Antivirus software will help remove or prevent viruses from causing harm along with other forms of dangerous programs.

2. Safeguard your Usernames and Passwords

You need usernames and passwords to register on most websites. It may be your email account, Facebook, banking, shopping, online courses or any other online transactions. Your username is your unique identity, just like your real name. Your password is the secret code or key that helps ONLY you to access your online accounts.

Choose a password that is easy to remember and not easy for someone else to guess. The best type of passwords mix letters and numbers. This is known as a strong password. A strong password has more than 8 characters (the longer, the better), numbers and symbols, upper and lowercase alphabets or letters. For example, Moon&star901@we; Qwerty6378*wr#; #@375dofguard.

Tips for creating a strong password

- Never use personal information such as your name, birthday, user name, or email address. This type of information is often publicly available,



which makes it easier for someone to guess your password.

- Use a longer password. Your password should be at least six characters long, although for extra security it should be even longer.
- Don't use the same password for all accounts. If someone discovers your password for one account, all of your other accounts will be in danger.
- Never to give your password to anybody.
- Change your passwords regularly.

3. Safeguard your email account

To protect your emails, follow these tips:

- Don't open an email from someone you have never heard of. Delete it immediately.
- If you open it by accident, don't click on any links.
- Never reply to a SPAM email.
- You can put a block on unwanted SPAM email on your email account. This will also block most unwanted emails.
- Don't tell your password or any personal information to anyone or even on any website. No legitimate company will ever ask you for your password.

4. Safeguard yourself from false information

Just like in the real world, the Internet is full of good and bad information. Good information comes from verified sources and standard websites such as BBC News, WebMD, government

portals, etc. Some sites often offer something for "free" and tell you to click on a link to win lots of money or valuables. Never open such sites or click on these links which offer such promises. They are false and may contain viruses. Similarly, many sites offer unscientific and incorrect information, especially about health, science, religion and technology. Ensure to check the website and verify with your instructor/someone else who knows the Internet well, before downloading or believing such information

5. Safeguard yourself while shopping on the Internet

One of the benefits of the Internet is the ability to shop from a wide range of stores and buy items on sale. Many times, you may get things on the Internet websites that are much cheaper than in actual stores.

Follow these tips to protect yourself when shopping online.

- Visit sites that have a good reputation as 'trusted brands'.
- Follow the security advice carefully on websites that you trust.
- Make sure that you are on a secure site when you need to give credit or debit card details.
- Do not ever give your credit or debit card details on the phone if someone calls claiming to help you with online shopping. One of the best ways to identify safe websites is to check for the lock symbol in the address bar. This is most commonly seen with certain





types of websites, like online stores and banking sites. This means the website is safe to enter your personal information.



SUMMARY

- Online security is a key aspect when spoken about internet and communication.
- Data security is ensured with the help of keys steps as discussed in this lesson

SELF ASSESSMENT

Is the various methods used for online security sufficient? comment.

11. MOBILE APPLICATIONS

Objective

At the end of this lesson, you shall be able to:

- explore the advantages of a mobile phone
- identify how to learn using a mobile phone
- use a mobile phone.

INTRODUCTION

If a young person is seen with a mobile phone, the most common words they get to hear are ‘why are you wasting time on your phone’, isn’t it? Many people today see the mobile phone as a tool that is meant for distraction or entertainment. Mobile phones are used to send and receive several messages, play games, talk to others, browse on social media, click pictures and watch videos. While it is true that mobile is a big source of entertainment, if used properly, they can have many advantages too.

As a trainee, you can use it for your benefit. A mobile phone can help you learn many new things, be updated with the latest technology and also help you pass your exams! If you manage your time well and learn to use the right kinds of apps and features on your phone, you can be on a life-long learning journey.

So, the next time your elders or parents say, stop wasting time you can show them the different ways in which you can learn using the mobile and make them proud.

1. Learning using mobiles is called M-Learning.
2. The most popular thing that people learn using mobile phones is languages. There are more than 300 apps to help you learn English!
3. You can learn many, many things through apps – From yoga, cooking, poems, dieting, stitching and carpentry. There are free apps to help you learn almost anything you want.





ACTIVITY 1

1. Ranjith's father recently bought a mobile phone. It is a touch screen smart phone, with 3G Internet. Ranjith's father cannot read and write English very well. He is also not comfortable using mobile phones. In fact, Ranjith's father thinks a mobile phone can be used only for making calls and sending/receiving SMS. Help Ranjith explain the benefits of a smartphone to his father. Below are some hints to get you started.

A smartphone can be used for

- making simple calculations using Calculator
- taking pictures
- reading news on the internet.

- What type of subjects, apps or websites would you suggest to Ranjith?
- Here are some hints to get you started. Fill up the blanks and suggest new topics for Ranjith.

Subjects/ Topics	Name of Apps	Name of websites
English	Hello English	
Typing	Typing Master	
Translate		
Writing Resume		
Time Management		
Online Payment	BHIM UPI	
Railway booking		www.irctc.com

A mobile application, most commonly referred to as an app, is a type of application software designed to run on a mobile device, such as a smartphone or tablet computer. Apps are generally small, individual software units with limited functions. Mobile Apps can be free or paid. You can download apps from the play store or app store.

ACTIVITY 2

2. Ranjith, just like you, studies in an ITI. He has promised his father that he will use the mobile phone for only one hour in the day. Ranjith does not want to waste the entire one hour on watching YouTube videos, using Facebook or messaging on Whatsapp. He wants to make good use of 30 minutes to learn something useful for his career and life.



Here are a wide range of things you can use the mobile phone for:

- internet search – search anything you want by typing keywords



- google maps – to find route from one place to another and find out traffic information
- recorder – record important audio (lectures, conversations, etc.)
- clock – to set alarm and reminders
- connecting to friends and family
- listening to music
- organizing time using calendar
- learning new topics and skills.

There are several applications to order food, watch videos and TV shows online, pay bills, scan documents, book tickets for travel, movies, shop and even order services like electrician, carpenter, plumber, beautician etc., to our homes.

One of the most important benefits of a mobile phone is learning. Many people do not use a mobile phone for learning purposes. But education institutions and universities (especially abroad) are encouraging trainees to learn using different apps and websites. Learning using mobile phones is a very unique and new way of Learning.

Simple Mobile Applications: Mobile phones have become very important and are everywhere. If you observe carefully, you will notice that mobile phones are used like computers. For example, a computer was used to send emails, calculate numbers, create videos, edit photos, search for information online, etc. Modern smartphones have many new features that make them as effective as a computer.

1. One of the best options is to use a payment app (short form for

application), such as BHIM UPI, Paytm, Google Pay, etc. In most of the shops today, shopkeepers display a black square image. You can scan this image and make the payment using an app on your phone. The best part is, you can even make a payment of 1 rupee using this app. This kind of application is known as a UPI app.



2. Read to understand how to use a UPI app.



Bharat Interface for Money (BHIM) is a payment app that lets you make simple, easy and quick transactions using Unified Payments Interface (UPI). You can make direct bank payments to anyone on UPI using their UPI ID or scanning their QR with the BHIM app. You can also request money through the app from a UPI ID.

Developed by National Payments Corporation of India (NPCI), BHIM was conceived and launched on 30th December 2016 to simplify banking through digital banking.



3. How to access BHIM (first time users)

- i. Open the Play Store on your Android phone. It is the icon in the app drawer or on the home screen.
- ii. Type QR code reader into the search box and tap the search button. This displays the BHIM app in the Play store.
- iii. Tap Install.
- iv. BHIM app will now be installed on your Android. When the app finishes installing, the “Install” button will say “Open,” and you’ll have a new icon in the app drawer. Click Open.
- v. This opens the app, which will ask you to choose a language. Here, we choose English.

SUMMARY

The various mobile applications are explained in this lesson.

- internet search – search anything you want by typing keywords
- google maps – to find route from one place to another and find out traffic information
- recorder – record important audio (lectures, conversations, etc.)
- clock – to set alarm and reminders

- connecting to friends and family
- listening to music
- organizing time using calendar
- learning new topics and skills.
- identify mobile applications and their use
- scan and use a QR code
- transfer funds online using BHIM UPI

12. EXPLORING POPULAR SITES FOR LEARNING AND CAREER GROWTH

At the end of this lesson, you shall be able to:

- identify popular sites for learning and career growth
- explore popular job search sites, learning portals.
- Learn Google input tool and translation

INTRODUCTION

One can have a good career by acquiring knowledge, skills and attitude. The various sites for developing your career is explained

1. Looking for jobs online

If you are looking for jobs, there are many websites that provide this information. Some examples of the common ones are provided below:

- a. www.naukri.com
- b. www.monster.com
- c. www.timesjob.com
- d. www.sheroes.com
- e. LinkedIn jobs: <https://www.linkedin.com/jobs>



2. Self-Employment

Self-Employment means working for oneself as a freelancer or the owner of a business rather than for an employer. Today, many people are turning towards self-employment as a source of income for self and their families.

Many people also use the Internet to help learn a new skill. In India, today the government also provides a lot of support for people who want to run their own business. The largest government agency that helps small entrepreneurs is the Ministry of MSME (Ministry of Micro, Small and Medium Enterprise). <https://msme.gov.in>

3. Job Search Hackathon

A job search hackathon is a group activity aimed to help you learn about different ways to find a job, online and offline. Here trainees take on 3 unique roles of 'searcher', 'documenter' and a 'caller', so that they can discover a number of job opportunities together. This activity is done in groups. This activity will help you

Learn

- how to look for a job online
- call the company and speak to the HR/concerned person
- fix an appointment for interview or exposure visit
- go for an exposure visit or interview.

Create a group of 3 people. Assign the following roles to each group member - 'searcher', 'documenter' and 'caller'.

Searcher: A searcher leads the online job searching process starting from google search to using websites like LinkedIn and different job portals

Documenter: A documenter is one who collects all the information from the searcher and documents it in the format provided.

Caller: A caller needs to call the shortlisted companies and extract as much information as possible about job vacancies and exposure visits.

1. Create an Excel sheet with the following columns
2. Document the details on an Excel/google doc in this format:

Company Name	Address/ Location	Contact person & Designation	Contact number & Email	Job role/ Salary/ Job type	Remarks



GOOGLE INPUT TOOL

Google IME, also known as Google Input Tools, is a set of input method edited by Google for 22 languages, including Amharic, Arabic, Bengali, Chinese, Greek, Gujarati, Hindi, Japanese, Kannada, Malayalam, Marathi, Nepali, Persian, Punjabi, Russian, Sanskrit, Serbian, Tamil, Telugu, Tigrinya, and Urdu. It is a virtual keyboard that allows users to type in their local language text directly in any application without the hassle of copying and pasting.

GOOGLE TRANSLATION

Google Translate is a multilingual neural machine translation service developed by Google to translate text, documents and websites from one language into another. It offers a website interface, a mobile app for Android and iOS, and an API that helps developers build browser extensions and software applications.

SUMMARY

Learning is a continuous process to advance in your career. The popular sites for career development were listed out in this lesson.

13. MOBILE PHONE

Objective

At the end of this topic, you shall be able to:

- meaning of mobile phone
- pros of mobile phone
- cons of mobile phone

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INTRODUCTION

Mobile telephone, also called mobile phone, portable device for connecting to a telecommunications network in order to transmit and receive voice, video or other data.

There are various pros and cons of Mobile Phone, which are given below.

Mobile phone - Pros :

- Call and Text.
- Stay Connected with your Family and Friends.
- Latest News Updates.
- Take Photos and Videos.
- Find Directions and Search Places.
- Play Games.
- Portable Music Library.
- Research Anything Anytime.



Mobile phone - Cons :

- Constantly Distracting
- Socially Disruptive
- Battery Power Keeps Running Out
- The Workday Never Finishes
- Photos and Video Mean No Privacy
- Constant Expense
- Spam





SUMMARY

Mobile phone has become a necessity post covid era. It helps to conduct online meetings and classes.

SELF- ASSESSMENT:

Mobile phone is good or evil. comment.

14. SOCIAL MEDIA

Objective

At the end of this topic, you shall be able to:

- You should be able to discuss the pros & cons Social media

INTRODUCTION

Social media are interactive technologies and digital channels that facilitate the creation and sharing of information, ideas, interests, and other forms of expression through virtual communities and networks. These social interactions are made through the use of the Internet.

Social media pros

- staying connected with family and friends worldwide via email, text, Facebook, etc.
- quick access to information and research

- banking and bill pay at our fingertips
- online learning, job skills, content discovery (YouTube)
- involvement in civic engagement (fundraising, social awareness, provides a voice)
- great marketing tools
- opportunities for remote employment

Social media cons

- **Online vs Reality.** Social media itself is not the problem. It is the way people use it in place of actual communication and in-person socializing. “Friends” on social media may not actually be friends, and may even be strangers.
- **Increased usage.** The more time spent on social media can lead to cyber bullying, social anxiety, depression, and exposure to content that is not age appropriate.
- **Social Media is addicting.** When you’re playing a game or accomplishing a task, you seek to do it as well as you can. Once you succeed, your brain will give you a dose of dopamine and other happiness hormones, making you happy. The same mechanism functions when you post a picture to Instagram or Facebook. Once you see all the notifications for likes and positive comments popping up on your screen, you’ll subconsciously register it as a reward. But that’s not all, social media is full of mood-modifying experiences.
- **Fear of Missing Out.** FOMO has become a common theme, and often leads to continual checking of social media sites. The idea that you might





miss out on something if you're not online can affect your mental health.

- **Self-image issues.** Social media sites provide tools that allow people to earn others' approval for their appearance and the possibility to compare themselves to others. It can be associated with **body image concerns**. The "selfieholics" and people who spend most of their time posting and scrolling are the ones most vulnerable to this. In fact, most college girls who use Facebook at least five times

a day are likely to link their self-worth to their looks. That doesn't mean that the main problem is social media; it only provides a medium for it, which further elevates the problem. It also promotes the same sort of behavior to others.

SUMMARY

The Pros & Cons of social media are discussed in this lesson

ASSESSMENT

I. Choose the Best Answer

- 1 byte = _____
 A. 2 bits B. 4 bits
 C. 8 bits D. 16 bits
- CPU stands for _____
 A. Central Programming Unit
 B. Central Processing Unit
 C. Central Planning Unit
 D. Central Progress Unit
- CPU consists of _____
 A. Control unit and ALU
 B. Storage device and ALU
 C. Input and output devices
 D. Input device and control unit
- For short distance, which network type should be used?
 A. LAN B. WAN
 C. MAN D. CAN



- In excel, the intersection of a row and column is called a
 A. Cell B. Label
 C. Square D. worksheet
- Computer network that spans a regional, national or global area is called ____
 A. LAN B. MAN
 C. WAN D. CAN
- In MS excel, collection of worksheet is known as _____
 A. Worksheet
 B. Workbook
 C. Excel book
 D. Sheet book
- In MS excel, to insert a formula in a cell, we must begin the entry with an operator
 A. = B. @ C. # D. *



9. Spreadsheets are saved with extension
A. .xls B. .doc C. .pdf D. .mp3
10. The expansion of LAN is
A. Local Area Name
B. Local Area Network
C. Logical Area Network
D. Legal Area Network
11. The expansion of RAM is
A. Read Octet Machine
B. Random Access Memory
C. Read Access Memory
D. Random Access Machine
12. The expansion of ROM is
A. Read Octet Machine
B. Read Only Memory
C. Random Only Memory
D. Rewrite Octet Machine
13. The expansion of WAN is
A. Wide Area Name
B. Web Assigned Name
C. Wide Area Network
D. Web Aided Network
14. Write a shortcut key for the “copy” command.
A. Ctrl + C B. Ctrl + V
C. Ctrl + X D. Ctrl + A
15. Which one is a search engine?
A. Flickr B. Hotmail
C. Facebook D. Google
16. Which one is an input device?
A. Speaker B. Joystick
C. Monitor D. Printer
17. Which one is an output device?
A. Printer B. Mouse
C. Keyboard D. Scanner
18. Which one is not a storage device?
A. Printer B. Video tape
C. USB flash drive D. Memory
19. _____ is the presentation program
A. U_torrent B. Mozilla firefox
C. MS powerpoint D. Slide panel
20. MS powerpoint is software of
A. Google B. Apple
C. Android D. microsoft
21. Which is the right term for a presentation page?
A. Chart B. Slides
C. Clipport D. image
22. _____ technology is used for communications over large distances wirelessly
A. Mobile communication
B. Land communication
C. Communication
D. All the above
23. Mobile communication technology used in 2021 is _____
A. 4 G B. 3 G
C. 5 G D. Both A and C

II. Answer the Following

1. What do you understand about computers?
2. List out the input and output devices.
3. Write about CPU.
4. What is a storage device?

5. What is RAM and its characteristics?
6. What is ROM and its characteristics?
7. Differentiate - RAM and ROM.
8. What is an operating system?
9. List out the types of operating system.
10. What is a hard disk?
11. What do you understand about MS word?
12. What is a procedure to open a new word document?
13. What is Excel? List out its features.
14. What is a spreadsheet?
15. What is commonly used with Microsoft excel?
16. What do you understand about powerpoint? List out its features.
17. Differentiate - MS word and MS excel.
18. What is the Internet?
19. Define - LAN, WAN, MAN.
20. What is an ISP?
21. What is a search engine?

22. What is internet safety?
23. What are mobile applications?
24. What is a mobile phone?
25. List out the mobile phone pros and cons.

III. Answer the Following

1. Define Computer and its parts.
2. What is the application of computers?
3. Define operating system and its types.
4. Describe storage features on windows.
5. What are the elements of MS word?
6. Brief and explain about Microsoft Excel components.
7. Define the internet. Mention their types.
8. What is an Internet Browser? Mention their types.
9. Define Mobile application. How to use mobile phones in our day to day life?
10. Mention the types of popular online job sites.