COMPUTER SCIENCE

FOR CLASS – VIII

L9Z8D7

ਸਮੱਗਰ ਸਿੱਖਿਆ ਅਭਿਆਨ

ਪੜ੍ਹੋ ਸਾਰੇ ਵਧੋ ਸਾਰੇ

ਸਿੱਖਿਆ ਅਤੇ ਭਲਾਈ ਵਿਭਾਗ, ਪੰਜਾਬ ਦਾ ਸਾਂਝਾ ਉਪਰਾਲਾ

Punjab School Education Board

Sahibzada Ajit Singh Nagar

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ਇਹ ਪੁਸਤਕ ਵਿਕਰੀ ਲਈ ਨਹੀਂ ਹੈ।

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FOREWORD

The Punjab Curriculum Framework (PCF 2013) which is based on National Curriculum Framework (NCF) 2005 recommends that the child's knowledge must be connected to their life outside the school. It indicates a departure from the legacy of bookish learning and ensures that learning is shifted from rote methods to activity based learning and also provides an opportunity for the holistic development of the students.

Over the years, Computer Science as a discipline has evolved and emerged as a driving force for socio-economic activities. Computer technologies are widely used in diverse areas of modern life such as education, business, health, transport and all other sectors also. With the advent of computer and communication technologies, there has been a paradigm shift in teaching at the school level. The role and relevance of this discipline is in focus because the expectations from the school pass-outs have grown to meet the challenges of the contemporary world. Today, we are living in an interconnected world where computer-based applications influence the way we learn, communicate, commute or even socialise in day to day life.

Keeping in view these requirements, Punjab School Education Board has introduced Computer Science as a compulsory subject from class 6th to 12th as per guidelines of Punjab Government. Every effort has been made to include each requisite information according to level of class 8th in this book. I hope it will be useful for students and teachers.

This book focuses on the fundamental concepts and problem-solving skills while opening a window to the emerging and advanced areas of computer science. The newly developed syllabus has dealt with the dual challenge of reducing curricular load as well as introducing this ever evolving discipline.

Punjab School Education Board welcomes and look forward to feedback and suggestions for the improvement of its subsequent editions.

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Punjab School Education Board

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CHAPTER - 1

TYPING TUTOR (PUNJABI)

OBJECTIVES OF THIS CHAPTER

1.1 Touch typing
1.2 Different techniques for typing in punjabi
1.3 Keymaps of commonly used punjabi fonts
1.4 Numeric key pad
1.5 Important Keys on Key-board
1.6 Tips to improve typing speed
1.7 Proper Posture while typing
1.8 Suggestions for Repetitive Stress Injuries/Discomfort during continuous typing

INTRODUCTION

In this chapter, we will learn to expertise our typing skills in Punjabi. We will also learn how to use keyboard properly and position of fingers on keyboard. Typing Tutor is a program for learning touch typing.

1.1 TOUCH TYPING

Touch typing is a technique by which we can learn typing with all fingers, step by step, without having to look down at the keyboard. If all the time, we keep on looking for right keys on keyboard, it will slow down our typing speed a lot. As shown in figure below, the keyboard is divided in two parts: one for the left hand and one for the right hand.

Fig 1.1: Keyboard divided into two parts for typing: left and right

1.2 DIFFERENT TECHNIQUES FOR TYPING IN PUNJABI

As we know that Punjabi is a regional language of Punjab. On our Computer Systems or Mobile Phones, we can type our text in Punjabi or any other regional languages too. So, we should also know about various techniques of how to type in our Mother Tongue "Punjabi".

Generally, we use two types of fonts for typing in Punjabi – Phonetic Fonts and Unicode Fonts.

- **Phonetic fonts** are the fonts that have the Regional Language (such as Punjabi) characters mapped phonetically on an English keyboard. Hence, we might type 'k' to write 'ਕ' and 'g' to write 'ਗ'. Such fonts include AnmolLipi, AmritLipi etc. Phonetic fonts are non-Unicode fonts.
- **Unicode font** is a font that covers a large portion of the Unicode (Universal Code) character set to support multiple written languages. Since Unicode character set is so big, 120,737 characters in Unicode 8.0, we do not have any true Unicode font that covers the entire Unicode character set. But we do have some fonts that cover enough Unicode characters to support most commonly used European, Arabic and Asian languages. Those such fonts can be considered as Unicode fonts. Arial Unicode MS, Nirmala UI, Raavi etc. are the examples of Unicode fonts.

We may think typing with non-Unicode fonts that are mapped phonetically might be a great idea; however, what we type is really not Punjabi but English in disguise. Only the characters look like Punjabi. To type discernible (detectable) Punjabi is impossible with non-Unicode fonts. Images below show how the text typed with non-Unicode fonts is still English.

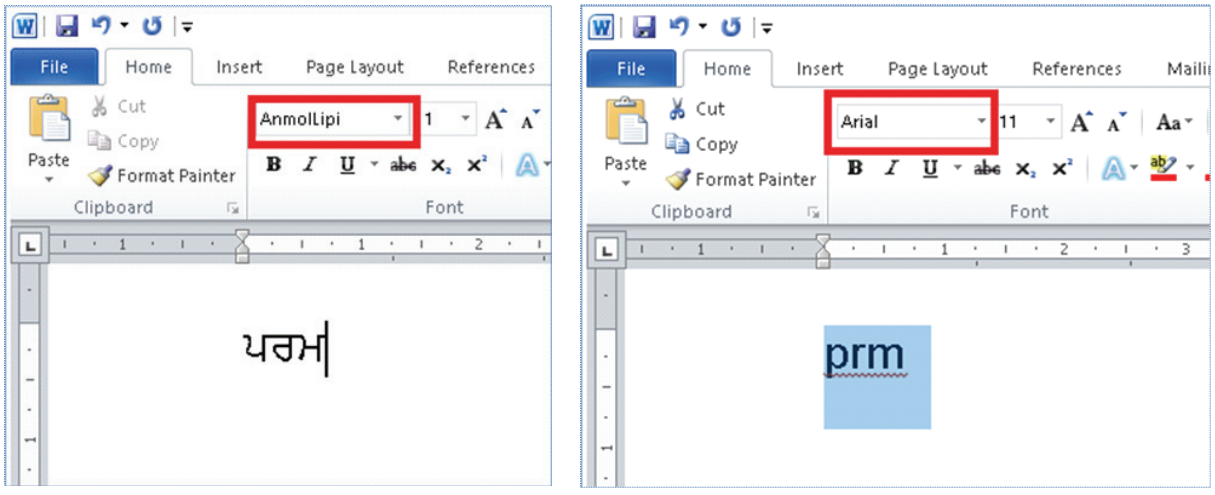


Fig 1.2 : Typing Examples for using Phonetic Fonts

In the fig. 1.2, AnmolLipi font has been used to type 'ਪਰਮ'. AnmolLipi font is a non-Unicode font that has a phonetic map; hence, we can't type real Punjabi with it. If we select the text and change the font to Arial, we will see that we really typed 'prm'. So, it only looked like 'ਪਰਮ' but was really 'prm'. If we copy and paste this in our web browser's search box, we will have pasted 'prm'.

Not all non-Unicode fonts are phonetic fonts. Some font families such as Asses, Joy etc; are non-Unicode fonts that do not have a phonetic mapping. They share their own unique keyboard mapping.

Unicode fonts are not inherently phonetic. A Unicode font is a font that covers a large portion of the Unicode character set to support multiple written languages. For typing in Punjabi, Raavi Unicode font is the commonly used.

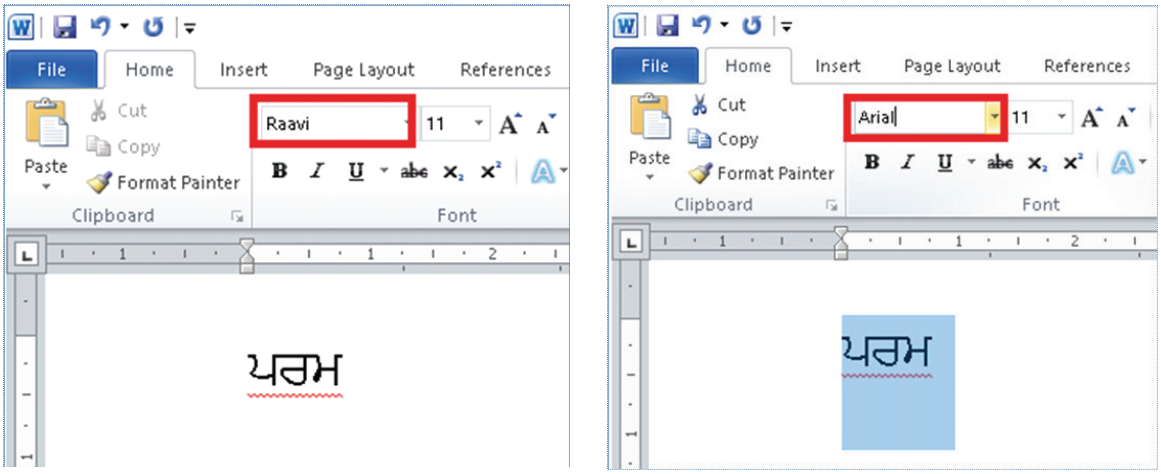


Fig 1.2 : Typing Examples for using Unicode Fonts

In the above example, we will see that typing 'ਪਰਮ' with Unicode fonts results in real Punjabi. If you type 'ਪਰਮ' with Raavi Unicode font, then select it and change the font to Arial, the font will change back to Raavi. Why? Because Arial does not have any Punjabi characters. It is an English font. However, if we select the text and change the font to Arial Unicode MS, the font will change because Arial Unicode MS contains the characters for Punjabi. If we Copy & Paste the text written using unicode Font 'ਪਰਮ' in the web Browser's search engine box, we will have pasted 'ਪਰਮ'.

Gurmukhi Keyboard Mapper : There are several types of non-Unicode fonts and they have different key maps for typing characters. Using various tools or utilities, we can type our text in Punjabi (Gurmukhi) Unicode font Raavi usingthe key-map of non-Unicode fonts such as Asees, Joy, AnmolLipi etc.G-Lipi-CA (GurmukhiLipi Conversion Application) is such a Keyboard Mapper utility that helps us to type in Unicode font - Raavi by using the Keymaps of Asses, Joy and AnmolLipi fonts. This tool is developed by the Punjabi Department of Punjabi University Patiala. Apart from office work, it has become very easy to write in Punjabi anywhere on the internet including Facebook with the help of this Keyboard Mapper tool. This tool can be downloaded from its official site http://gurmukhifontconverter.com/glipica.html

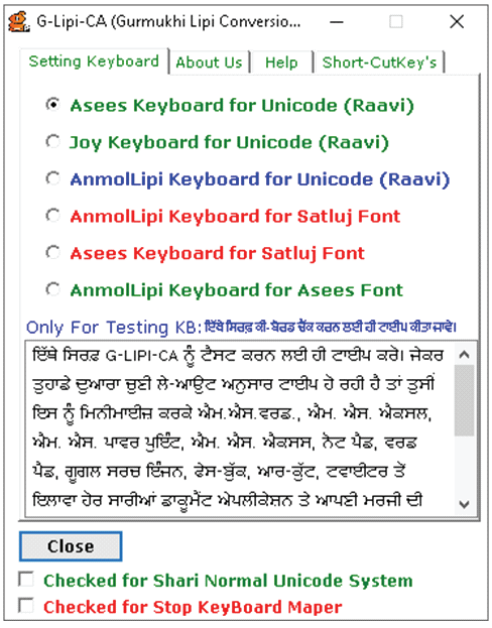


Fig 1.3 : G-Lipi-CA

1.3 KEYMAPS OF COMMONLY USED PUNJABI FONTS

Different fonts can have different key-maps. Following figures shows the key maps of Punjabi Unicode Font – Raavi and Phonetic Fonts – AnmolLipi

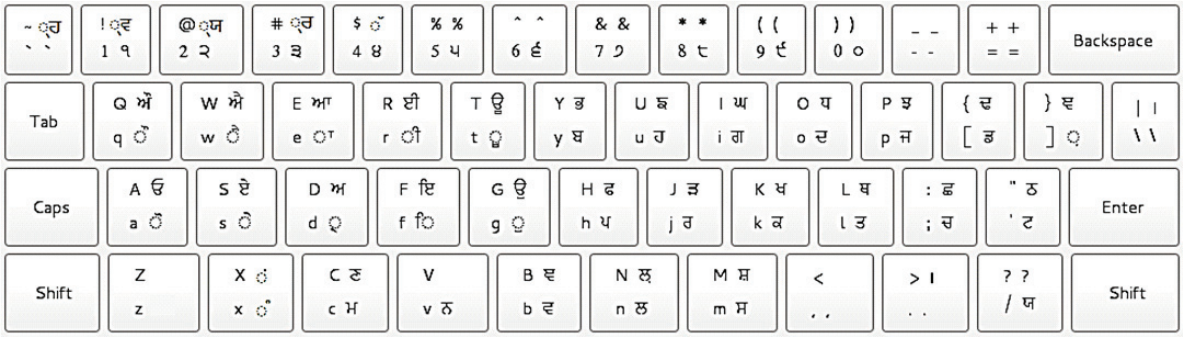


Fig 1.4 : Key-Map of Unicode Font Raavi

Fig 1.5 : Key-Map of Phonetic Font AnmolLipi

These key maps assist us to type in Punjabi either using Raavi Unicode or using AnmolLipi fonts. If we want to be prepared for typing tests for the various posts of Punjab Govt. then they should go for practice using the Unicode font Raavi because as per the guidelines issued by Punjab Govt., it is mandatory, otherwise if we just want to learn how to type in Punjabi easily, then we should go for AnmolLipi font.

1.4 NUMERIC KEY PAD

Numeric Key Pad is present on right side of the keyboard. It provides an impressive and fast method to work with numbers. This keypad is a square of keys rather than a line. We have to use only one hand (Right Hand) to work with its keys. Each finger manages the keys of one vertical line. The fingers that are used for working on these keys should be as below:

- Index Finger is used for 1, 4 and 7 keys
- Middle Finger is used for 2, 5 and 8 keys
- Ring Finger is used for 3, 6 and 9 keys

- Little Finger is used for Enter, "+" and "-" keys
- Thumb is used for 0 key

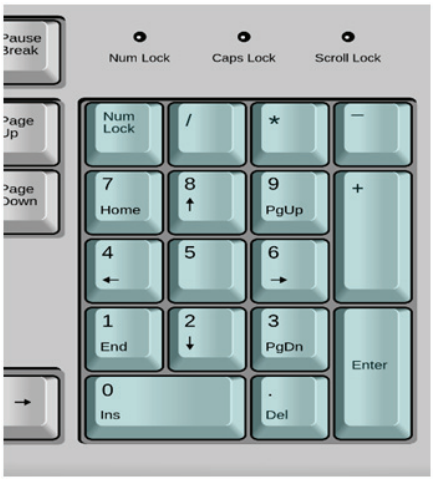


Fig 1.9 Numeric key Pad

Note : To use Number Pad, **Numlock** should be kept ON. External USB numeric keypads are also available in the market.

1.5 IMPORTANT KEYS ON KEY-BOARD

- **Spacebar :** To put a space in between letter pairs we use spacebar key. We use our dominant right thumb for the spacebar.
- **Enter key :** It is used to move down to a new line. Use our right little finger for the Enter key.
- **Backspace key :** Deletes one character to the left of the blinking cursor. Use our right little finger for the Backspace key.
- **Shift key :** It is present on both the sides of key board. It is mainly used to write capital letters. If we want to write a capital letter with left hand, press shift button with fourth finger of right hand and similarly press shift button with fourth finger of left hand to type capital letter with right hand.
- **Caps lock key** : Press caps lock key if we want to type complete word, line or paragraph in Capital Letters. Use our left little finger for the Caps Lock key.

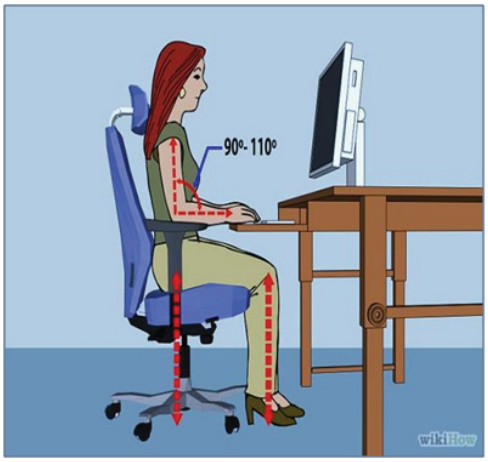
1.6 TIPS TO IMPROVE TYPING SPEED

1. Our hand/finger's position should always be in home position. We must start from and return to this position. We should reach for other keys from home position.
2. We should focus on accuracy not speed. Speed will come with time and practice.
3. Don't look at the keyboard.
4. Be steady, even pace and strive for accuracy.
5. As we tap each key, we should say its letter to ourselves.

1.7 PROPER POSTURE

While typing we must know about the proper posture. So follow the steps written below:

1. We should sit up straight, directly in front of keyboard.
2. Our feet must be flat on floor.
3. Monitor should be at our eye level.
4. Our eyes should be on copy or monitor while typing.
5. Our fingers must be curved and upright over home keys.
6. We should strike each key with a quick snap and then return to home position Keys.



1.8 SUGGESTIONS FOR REPETITIVE STRESS INJURIES/ DISCOMFORT DURING CONTINUOUS TYPING

1. Position yourself properly at your computer. Your screen should be 2 feet away from you and the top of your document should be at your eye level.
2. Your chair is at the perfect height if you can sit at your computer with your knees bent at right angles and your feet flat on the floor.
3. Set up your keyboard so that it is flat or slightly elevated. Do not have your keyboard slanted downward.
4. Keep your wrists straight and elbows in a 90 degree angle while typing. Your wrists should not rest on the table while typing.
5. Rest your wrists when you are not typing.
6. Take frequent short breaks rather than one long break.
7. Stretch your wrists before you start to work and during breaks, and strengthen your wrists with exercise.
8. Exercise regularly. Overall body conditioning seems to help guard against repetitive motion injuries.

Points To Remember

1. Touch typing is a technique by which we can learn typing with all fingers
2. The keyboard is divided in two parts: one for the left hand and one for the right hand.
3. There are many fonts which are available for typing in Punjabi, for example: AnmolLipi, Raavi (Unicode Font), Asees, Joy etc.
4. AnmolLipi font is one of the easiest Punjabi Fonts to learn typing in Punjabi.
5. Fingers of both the hands are placed on the line starting with A, also called **Home Row.**

6. Numeric Key Pad is present on right side of the keyboard. It provides an impressive and fast method to work with numbers.
7. To use Number Pad, **Numlock** should be kept ON.
8. To put a space in between letter pairs we use spacebar key.
9. Backspace key deletes one character to the left of the blinking cursor
10. Our hand/finger's position should always be in home position. We must start from and return to this position. We should reach for other keys from home position.
11. We should focus on accuracy not speed. Speed will come with time and practice.
12. Our eyes should be on copy or monitor while typing.

1. Multiple Choice Questions :

I. _____ font can be used to type in Punjabi.

a) AnmolLipi b) Raavi

c) Joy d) All of the Above

II. What is the full form of UNICODE ?

a) Union code b) Unified code

c) Universal code d) None of these

III. Which of the following is the unicode font for typing in Punjabi ?

a) AnmolLipi b) Raavi

c) Asses d) All of the above

IV. Which of the following is a phonetic font for typing in Punjabi ?

a) AnmolLipi b) Raavi

c) Asses d) All of the above

V. To use number pad, _____ should be kept ON

a) Num lock b) Caps Lock

c) Scroll lock d) None of These

2. Write True or False

I. For typing, keyboard is divided in two parts: one for the left hand and one for the right hand.

II. Touch typing is a technique by which we can learn typing with all fingers while looking at keyboard.

III. AnmolLipi font helps us typing in Punjabi.

IV. We use our little finger for the spacebar.

V. Shift key is used to move down to a new line.

3. Short Answer Type Questions

I. What is Touch typing?

II. What are the different types of fonts used for typing in Punjabi ?

III. How to type in Punjabi language?

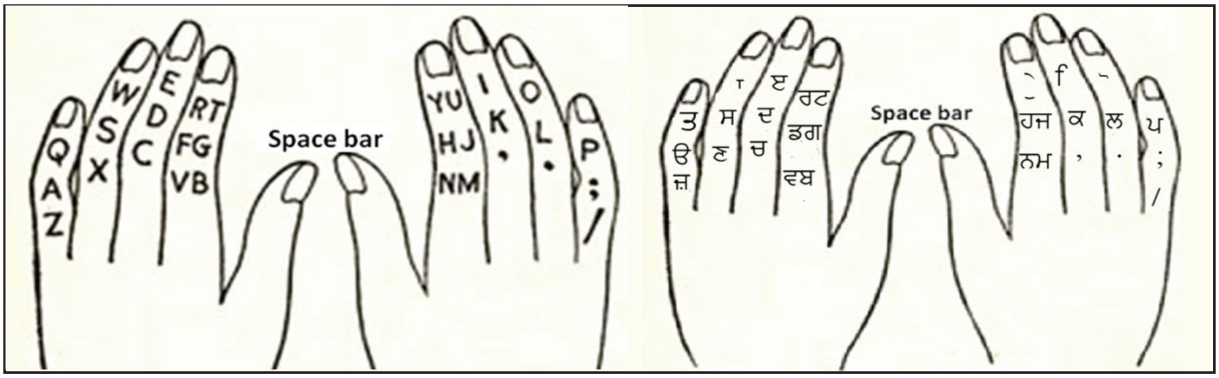
IV. Name any three fonts to type in Punjabi Language?

4. Long Answer Type Questions

I. How can we improve typing speed?

II. What are the important things that should be taken care for the proper posture during typing ?

Activity



HOME ROW EXERCISE - I

ੳਸਦਡਗ	;ਲਕਜਹ	ੳਸਦਡਗ	;ਲਕਜਹ	ੳਸਦਡਗ	;ਲਕਜਹ	ੳਸਦਡਗ	;ਲਕਜਹ
ੳਸਦਡਗ	;ਲਕਜਹ	ੳਸਦਡਗ	;ਲਕਜਹ	ੳਸਦਡਗ	;ਲਕਜਹ	ੳਸਦਡਗ	;ਲਕਜਹ
ੳਸਦਡਗ	;ਲਕਜਹ	ੳਸਦਡਗ	;ਲਕਜਹ	ੳਸਦਡਗ	;ਲਕਜਹ	ੳਸਦਡਗ	;ਲਕਜਹ
ੳਸਦਡਗ	;ਲਕਜਹ	ੳਸਦਡਗ	;ਲਕਜਹ	ੳਸਦਡਗ	;ਲਕਜਹ	ੳਸਦਡਗ	;ਲਕਜਹ
ੳਸਦਡਗ	;ਲਕਜਹ	ੳਸਦਡਗ	;ਲਕਜਹ	ੳਸਦਡਗ	;ਲਕਜਹ	ੳਸਦਡਗ	;ਲਕਜਹ

HOME ROW EXERCISE - II

ਅਸ਼ਧਢਘ	;ਲਖਝ੍ਹ	ਅਸ਼ਧਢਘ	;ਲਖਝ੍ਹ	ਅਸ਼ਧਢਘ	;ਲਖਝ੍ਹ	ਅਸ਼ਧਢਘ	;ਲਖਝ੍ਹ
ਅਸ਼ਧਢਘ	;ਲਖਝ੍ਹ	ਅਸ਼ਧਢਘ	;ਲਖਝ੍ਹ	ਅਸ਼ਧਢਘ	;ਲਖਝ੍ਹ	ਅਸ਼ਧਢਘ	;ਲਖਝ੍ਹ
ਅਸ਼ਧਢਘ	;ਲਖਝ੍ਹ	ਅਸ਼ਧਢਘ	;ਲਖਝ੍ਹ	ਅਸ਼ਧਢਘ	;ਲਖਝ੍ਹ	ਅਸ਼ਧਢਘ	;ਲਖਝ੍ਹ
ਅਸ਼ਧਢਘ	;ਲਖਝ੍ਹ	ਅਸ਼ਧਢਘ	;ਲਖਝ੍ਹ	ਅਸ਼ਧਢਘ	;ਲਖਝ੍ਹ	ਅਸ਼ਧਢਘ	;ਲਖਝ੍ਹ
ਅਸ਼ਧਢਘ	;ਲਖਝ੍ਹ	ਅਸ਼ਧਢਘ	;ਲਖਝ੍ਹ	ਅਸ਼ਧਢਘ	;ਲਖਝ੍ਹ	ਅਸ਼ਧਢਘ	;ਲਖਝ੍ਹ

SECOND ROW EXERCISE-III

ਤ ਾ ਇ ਰ ਟ	ਪ ੋ ਿ ੁ ੇ	ਤ ਾ ਇ ਰ ਟ	ਪ ੋ ਿ ੁ ੇ	ਤ ਾ ਇ ਰ ਟ	ਪ ੋ ਿ ੁ ੇ
ਤ ਾ ਇ ਰ ਟ	ਪ ੋ ਿ ੁ ੇ	ਤ ਾ ਇ ਰ ਟ	ਪ ੋ ਿ ੁ ੇ	ਤ ਾ ਇ ਰ ਟ	ਪ ੋ ਿ ੁ ੇ
ਤ ਾ ਇ ਰ ਟ	ਪ ੋ ਿ ੁ ੇ	ਤ ਾ ਇ ਰ ਟ	ਪ ੋ ਿ ੁ ੇ	ਤ ਾ ਇ ਰ ਟ	ਪ ੋ ਿ ੁ ੇ
ਤ ਾ ਇ ਰ ਟ	ਪ ੋ ਿ ੁ ੇ	ਤ ਾ ਇ ਰ ਟ	ਪ ੋ ਿ ੁ ੇ	ਤ ਾ ਇ ਰ ਟ	ਪ ੋ ਿ ੁ ੇ
ਤ ਾ ਇ ਰ ਟ	ਪ ੋ ਿ ੁ ੇ	ਤ ਾ ਇ ਰ ਟ	ਪ ੋ ਿ ੁ ੇ	ਤ ਾ ਇ ਰ ਟ	ਪ ੋ ਿ ੁ ੇ

SECOND ROW EXERCISE-IV

ਥ ੰ ੳ ੍ ਠ	ਫ ੌ ੀ ੂ ਂ ੈ	ਥ ੰ ੳ ੍ ਠ	ਫ ੌ ੀ ੂ ਂ ੈ	ਥ ੰ ੳ ੍ ਠ	ਫ ੌ ੀ ੂ ਂ ੈ
ਥ ੰ ੳ ੍ ਠ	ਫ ੌ ੀ ੂ ਂ ੈ	ਥ ੰ ੳ ੍ ਠ	ਫ ੌ ੀ ੂ ਂ ੈ	ਥ ੰ ੳ ੍ ਠ	ਫ ੌ ੀ ੂ ਂ ੈ
ਥ ੰ ੳ ੍ ਠ	ਫ ੌ ੀ ੂ ਂ ੈ	ਥ ੰ ੳ ੍ ਠ	ਫ ੌ ੀ ੂ ਂ ੈ	ਥ ੰ ੳ ੍ ਠ	ਫ ੌ ੀ ੂ ਂ ੈ
ਥ ੰ ੳ ੍ ਠ	ਫ ੌ ੀ ੂ ਂ ੈ	ਥ ੰ ੳ ੍ ਠ	ਫ ੌ ੀ ੂ ਂ ੈ	ਥ ੰ ੳ ੍ ਠ	ਫ ੌ ੀ ੂ ਂ ੈ
ਥ ੰ ੳ ੍ ਠ	ਫ ੌ ੀ ੂ ਂ ੈ	ਥ ੰ ੳ ੍ ਠ	ਫ ੌ ੀ ੂ ਂ ੈ	ਥ ੰ ੳ ੍ ਠ	ਫ ੌ ੀ ੂ ਂ ੈ

HOME ROW AND SECOND ROW EXERCISE-V

ੳ ਾ ੲ ਰ ਤ ਡ ੳ	; ੋ ਿ ੁ ਂ ਪ ਜ ;	ੳ ਾ ੲ ਰ ਤ ਡ ੳ	; ੋ ਿ ੁ ਂ ਪ ਜ ;
ੳ ਾ ੲ ਰ ਤ ਡ ੳ	; ੋ ਿ ੁ ਂ ਪ ਜ ;	ੳ ਾ ੲ ਰ ਤ ਡ ੳ	; ੋ ਿ ੁ ਂ ਪ ਜ ;
ੳ ਾ ੲ ਰ ਤ ਡ ੳ	; ੋ ਿ ੁ ਂ ਪ ਜ ;	ੳ ਾ ੲ ਰ ਤ ਡ ੳ	; ੋ ਿ ੁ ਂ ਪ ਜ ;
ੳ ਾ ੲ ਰ ਤ ਡ ੳ	; ੋ ਿ ੁ ਂ ਪ ਜ ;	ੳ ਾ ੲ ਰ ਤ ਡ ੳ	; ੋ ਿ ੁ ਂ ਪ ਜ ;
ੳ ਾ ੲ ਰ ਤ ਡ ੳ	; ੋ ਿ ੁ ਂ ਪ ਜ ;	ੳ ਾ ੲ ਰ ਤ ਡ ੳ	; ੋ ਿ ੁ ਂ ਪ ਜ ;

HOME ROW AND SECOND ROW EXERCISE-VI

ਦਸਿਹ	ਧਰਿਕਸ	ੌ ਲਦਇਸਟ	ਅਪਪਲਇ	ਘਰੳਦਇ	ਢੳਲਲਸ	ਖੋਦੳਕ
੍ੳਲਿਸ	ਝੳੁਦਇਦ	ਧਇੳਦ	ੂਸੁੳਲ	ਸ਼ੳਲਇਸ	ਢਲਿਇਦ	ਲ਼ਇਗੳਲ
ਲ਼ਇੳਸਇ	ਲ਼ੳਕਇਸ	ਅਗਲਿਇ	ੀਸਲਇਸ	ਅਹਇੳਦ	ਲ਼ੳਰਕਸ	ਸਇਸ
ਢੋਰਕਸ	ੑਇਦਗਇ	ਸ਼ਕਲਿਲ	੍ ੁ ਂ ਪਇਇ	ਘਰੳਸਸ	ੰ ੋ ੁ ਂ ਲਦ	ਅਲਪਨਿਇ
ਝੳਦਇਦ	ਲ਼ਕਿਇਦ	ੳਤੁਪਿ	ਥੁੳਲਿ	ਝੋਕਇਸ	ਅਸਕਇਦ	ੰੳਲਕਸ
ਢਦਿਦਲਇ	ਸ਼ੳਦਦਲਇ	ਧਇੳਦ	ਢਲਿਇਦ	ਲ਼ੳਕਇਸ	ਲ਼ਇੳਸਣ	ਲ਼ਇਗੳਲ

HOME/SECOND/THIRD ROWEXERCISE -VII

ੳ ਜ਼ ਣ ਚ ਵ ਡ	ਲ ਕ ਮ ਨ ਬ ਜ	ਅ ਗ਼ ਯ ਛ ੜ ਢ	ਲ਼ ਖੰ ੱ ਭ ਝ
ੳ ਜ਼ ਣ ਚ ਵ ਡ	ਲ ਕ ਮ ਨ ਬ ਜ	ਅ ਗ਼ ਯ ਛ ੜ ਢ	ਲ਼ ਖੰ ੱ ਭ ਝ
ੳ ਜ਼ ਣ ਚ ਵ ਡ	ਲ ਕ ਮ ਨ ਬ ਜ	ਅ ਗ਼ ਯ ਛ ੜ ਢ	ਲ਼ ਖੰ ੱ ਭ ਝ
ੳ ਜ਼ ਣ ਚ ਵ ਡ	ਲ ਕ ਮ ਨ ਬ ਜ	ਅ ਗ਼ ਯ ਛ ੜ ਢ	ਲ਼ ਖੰ ੱ ਭ ਝ
ੳ ਜ਼ ਣ ਚ ਵ ਡ	ਲ ਕ ਮ ਨ ਬ ਜ	ਅ ਗ਼ ਯ ਛ ੜ ਢ	ਲ਼ ਖੰ ੱ ਭ ਝ

FOURTH ROW EXERCISE-VIII

ੱ 1 2 3 4 5	0 9 8 7 6 7	ੱ ! ੍ # 4 %	ਖ਼ ਫ਼ * ( )
ੱ 1 2 3 4 5	0 9 8 7 6 7	ੱ ! ੍ # 4 %	ਖ਼ ਫ਼ * ( )
ੱ 1 2 3 4 5	0 9 8 7 6 7	ੱ ! ੍ # 4 %	ਖ਼ ਫ਼ * ( )
ੱ 1 2 3 4 5	0 9 8 7 6 7	ੱ ! ੍ # 4 %	ਖ਼ ਫ਼ * ( )
ੱ 1 2 3 4 5	0 9 8 7 6 7	ੱ ! ੍ # 4 %	ਖ਼ ਫ਼ * ( )

EXERCISE - IX

ਸਾਇੰਸ	ਲੇਖਕ	ਘਰ	ਛੱਤ	ਇਨਾਮ
ਕੰਪਿਊਟਰ	ਕਿਤਾਬ	ਸਕੂਲ	ਅਧਿਆਪਕ	ਪੈਂਸਿਲ
ਰਸਤਾ	ਜਹਾਜ਼	ਪੰਨ੍ਹਾ	ਮੁਰੰਮਤ	ਜ਼ਿਲ੍ਹਾ
ਸੁਨਾਮ	ਮੋਹਾਲੀ	ਚੰਡੀਗੜ੍ਹ	ਇੰਡੀਆ	ਹਿਮਾਲਿਆ
ਭੂਗੋਲ	ਇਤਿਹਾਸ	ਗਣਿਤ	ਵਿਕਾਸ	ਪੰਜਾਬੀ
ਹਿੰਦੀ	ਪ੍ਰਧਾਨ	ਮੰਤਰੀ	ਮੁੱਖ	ਰੋਜ਼ਗਾਰ
ਯੂਨੀਵਰਸਿਟੀ	ਸੀ.ਪੀ.ਯੂ.	ਮਾਊਸ	ਕੀਅਬੋਰਡ	ਮੋਨੀਟਰ
ਮੈਮਰੀ	ਜੈਨਰੇਸ਼ਨ	ਪ੍ਰੈਜ਼ਨਟੇਸ਼ਨ	ਐਕਸਲ	ਸਪ੍ਰੈਡਸ਼ੀਟ
ਪ੍ਰੋਸੈਸਰ	ਓਪਰੇਟਿੰਗ	ਸਿਸਟਮ	ਵਿੰਡੋ	ਸ਼ਹਿਦ
ਰਾਜਨੀਤੀ	ਅਮੇਰੀਕਾ	ਡਾਟਾ	ਖੁਸ਼ੀ	ਮੱਖਣ
ਰੰਗਾ	ਉੱਠ	ਅੱਖ	ਸਾਂਹ	ਖਿਡਾਰੀ
ਪ੍ਰਿੰਸੀਪਲ	ਪ੍ਰੀਖਿਆ	ਵਿਭਾਗ	ਦਫ਼ਤਰ	ਨਿਰਦੇਸ਼
ਵਿਲੱਖਣ	ਵਿਸ਼ੇਸ਼	ਪੰਜਾਬ	ਸੰਗਰੂਰ	ਅਭਿਆਸ

EXERCISE - X

ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ ਪਟਿਆਲਾ ਦੇ ਵਾਈਸ ਚਾਂਸਲਰ ਡਾ. ਜਸਪਾਲ ਸਿੰਘ ਦੇ ਦਿਸ਼ਾ ਨਿਰਦੇਸ਼ਾਂ ਅਤੇ ਪੰਜਾਬੀ ਵਿਭਾਗ ਦੇ ਮੁਖੀ ਪ੍ਰੋ. ਲਖਵੀਰ ਸਿੰਘ, ਪ੍ਰੋ. ਬਲਦੇਵ ਸਿੰਘ ਚੀਮਾ, ਡਾ. ਦੇਵਿੰਦਰ ਸਿੰਘ ਦੀ ਅਗਵਾਈ ਵਿੱਚ ਚਲਦਿਆਂ ਡਾ. ਰਾਜਵਿੰਦਰ ਸਿੰਘ ਅਤੇ ਸ. ਚਰਨਜੀਵ ਸਿੰਘ ਨੇ **ਜੀ-ਲਿਪੀਕਾ** ਨਾਮ ਦਾ ਅਜਿਹਾ ਸਾਫ਼ਟਵੇਅਰ ਤਿਆਰ ਕੀਤਾ ਹੈ ਜਿਸ ਰਾਹੀਂ ਦਫ਼ਤਰੀ ਕੰਮਕਾਜ ਤੋਂ ਇਲਾਵਾ ਫੇਸਬੁੱਕ ਸਮੇਤ ਇੰਟਰਨੈੱਟ ਤੇ ਹੋਰ ਕਿਤੇ ਵੀ ਪੰਜਾਬੀ ਵਿੱਚ ਲਿਖਣਾ ਬਹੁਤ ਸੌਖਾ ਹੋ ਗਿਆ ਹੈ। ਇੱਥੋਂ ਤੱਕ ਕਿ ਤੁਸੀ ਆਪਣੀ ਈ-ਮੇਲ ਵੀ ਆਪਣੇ ਕਿਸੇ ਮਿੱਤਰ ਜਾਂ ਕੰਮ ਦੇ ਸਥਾਨ ਤੇ ਪੰਜਾਬੀ ਵਿੱਚ ਭੇਜ ਸਕਦੇ ਹੋ। ਕਿਉਂਕਿ ਇਹ ਸਾਫ਼ਟਵੇਅਰ ਤੁਹਾਨੂੰ ਪੰਜਾਬੀ ਯੂਨੀਕੋਡ ਫੌਂਟ (ਰਾਵੀ) ਵਿੱਚ ਕੰਮ ਕਰਨ ਦੀ ਸਹੂਲਤ ਉਪਲਬਧ ਕਰਵਾਉਂਦਾ ਹੈ।

CHAPTER - 2

INTERNET FUNDAMENTALS

OBJECTIVES OF THIS CHAPTER

2.1 What is Internet?
2.2 History of Internet
2.3 Requirement for Internet
2.4 Facilities provided by internet
2.5 Internet Connections
2.6 Modem and Its Types
2.7 Internet Service Providers (ISP)
2.8 Services provided by Internet
2.9 Tools and Skills required for using Internet
2.10 Web Browsing

INTRODUCTION

Today the use of internet has increased tremendously. Before learning about methods of using internet, let us learn what is internet and how it came into existence.

In 1986 National Science Foundation has prepared its network named NSF. Through this network, scientists shared the use of a super computer. (Super computer is a larger and powerful computer which is used for scientific purposes.)

In 1990, the Defence Department stopped working and it merged into NSF net. There after, it was connected to many other networks. It resulted in internet being used today.

2.1 WHAT IS INTERNET?

Internet is one of the best technologies gifted to mankind in the present scenario. It has brought the entire world at our fingertips. Let us learn what is internet and how it came into existence.

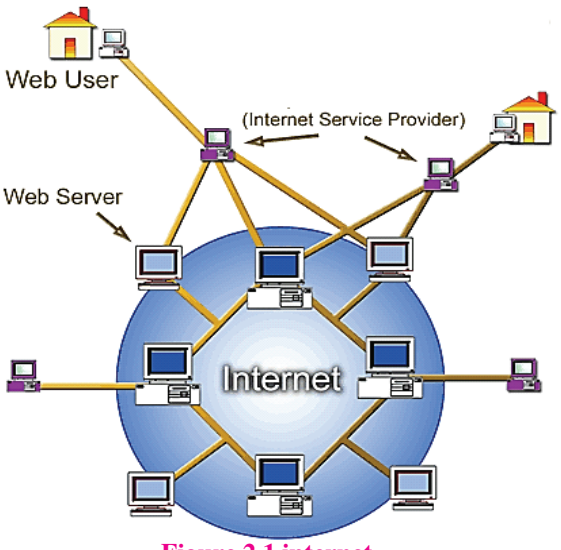


Figure 2.1 internet

The name 'Internet' itself suggests its meaning. It stands for **International Network of computers.** A network is an interconnection between two or more computers. The Internet is a **"network of networks"** that consists of millions of computers spread across the world. Internet allows us to share the information worldwide, just with a mouse click.

2.2 HISTORY OF INTERNET

In 1969, when man walked on the moon; the U.S. defence department set **an Advanced Research project Agency (ARPA)** for further research. They designed a network of four computers to exchange and share their data. This network was called **ARPANET (Advanced Research Project Agency Network)**. Later, many universities were allowed to join this network and share the information. This was the beginning of 'Networking of computers' which grew bigger day by day and gave birth to INTERNET- the technology which has changed our life. Earlier, Internet was used by engineers, scientists and computer experts for research purpose. Gradually, the network was made accessible to private agencies and general public. People started using it for sending messages and files between the computers. The most interesting thing about Internet is that no single agency controls or maintains the Internet.

In India, internet services started on 15th August 1995 through government owned VSNL. Private internet service providers like Airtel, Reliance, Sify, Tata etc. have also been allowed to provide internet services

2.3 REQUIREMENTS FOR INTERNET

For using internet, we require both Hardware and Software resources which are given below:

Hardware Requirements:

- A personal computer with a speed of 800 MHz or more
- RAM of about 128 MB
- Telephone line ISDN (Integrated Services Digital Network) Connection
- Modem to link Internet
- NIC-Network Interface Card

Software Requirements:

- Operating System: e.g. Windows XP, Windows 7, Windows 8, Linux etc.
- Web Browser: e.g.Internet Explorer, Mozilla Firefox, Google Chrome etc.
- TCP/IP protocols (rule)

2.4 FACILITES PROVIDED BY INTERNET

Network is a group of two or more computers linked together through **network.** If two or more networks are joined together then they form **inter-network. Internet** is a inter-network of whole world. Thousands of networks are joined with internet. Internet provides us many facilities. Some of them are given following:

Fig 2.2 Uses of Internet

- **News and Information :** Internet provides the facility to read different newspapers online and get the information regarding various topics of our interest such as politics, sports, education etc. It also keeps us updated with current events.
- **Art and Entertainment :** Internet allows us to download and purchase various software for art and entertainment such as games, songs, movies, puzzles, jokes, stories etc.
- **On-Line Shopping :** We can purchase various items like books, clothes, gift items etc. from different e-shops around the world without actually going there.
- **Mailing Letters :** Electronic mail is the most popular feature of the Internet. It allows us to send and receive messages. We can also attach pictures, videos, audio files to our email and send it to anyone.
- **Health and Fitness :** We can have an all-time doctor at our service to provide health and fitness information. We can also search for remedies and precautions for different diseases.
- **Tourism and Travel :** Internet provides facility for online booking of hotels, railway tickets, air tickets etc. all over the world and round the clock.
- **Chatting :** Internet allows us to exchange text messages with another person anywhere in the world.
- **Banking Operations :** Now all Banking operations can be done right from our home using Internet / e-banking services.
- **Video Conferencing :** Through video conferencing, we can communicate with the other person visually. To do video conferencing, both the persons need to have web cameras.

2.5 INTERNET CONNECTIONS

In today's era, there are numerous ways to connect laptops, desktops, mobile phones and tablets with the Internet. When determining which type of Internet connection is right for us, it's

important to understand the distinction between each connection. Some of the most widely used Internet connections are listed below:

Types of Internet Connections:

Any one of the following basic connections is used for using internet.

- Dial-up Connection
- Broadband
- Wireless
- DSL (Digital Subscriber Line)
- ISDN (Integrated Services Digital Network)

Through dial up, a computer communicate with other computer. These connections can be established with telephone line or cellular device. This connection is used by the users who use internet occasionally.

Broadband connection joins computer to the lines of telephone or transmission institute. It is always used with high speed. Business centers, Universities and other high demand users have a permanent internet connection.

Small businessmen or personal users have personal lines of DSL (Digital subscriber line) for permanent connection. This facility is costlier than dialup connection.

2.6 MODEM & ITS TYPES

Full Form of MODEM is Modulator-Demodulator. A modem is a device that enables a computer to transmit data over telephone or cable lines. Computer information is stored digitally, whereas information transmitted over telephone lines is transmitted in the form of analog waves. A modem converts between these two forms i.e. by converting the digital data used by your computer into an analog signal used on phone lines and then converting it back once received on the other end.

Fig 2.3 Modem

Speed of modem is variable. Slow modem takes more time to send or receive message. It takes more time to copy files from Internet.If both the computers of transmission have different speeds of modem, then transmission will be according to the slow speed modem. So use only fast speed modem. Generally a modem with 28.8kbps speed is used. Surfing needs modem speed not less than 56 kbps.

Types of Modem : Modem is of two types: External and Internal which are explained below:

i. External Modem is linked to computer externally with cables.

Fig 2.4 External Modem

ii. Internal Modem is fitted inside the computer. Cable or telephone wire goes to modem through plug. Now-a-days wireless modems are available which work like a mobile phone.

Fig 2.5 Internal Modem

2.6 INTERNET SERVICE PROVIDERS(ISP)

Internet Service Provider (ISP) refers to a company that provides Internet services, including personal and business access to the Internet. For a monthly fee, the service provider usually provides a software package, username, password and access phone number for e.g. Airtel, Vodafone, BSNL. Equipped with a modem, you can then log on to the Internet and browse the World Wide Web and USENET, and send and receive e-mail. For broadband access, you typically receive the broadband modem hardware or pay a monthly fee for this equipment that is added to your ISP account billing.

In addition to serving individuals, ISPs also serve large companies, providing a direct connection from the company's networks to the Internet. ISPs may also be called IAPs (Internet Access Providers).

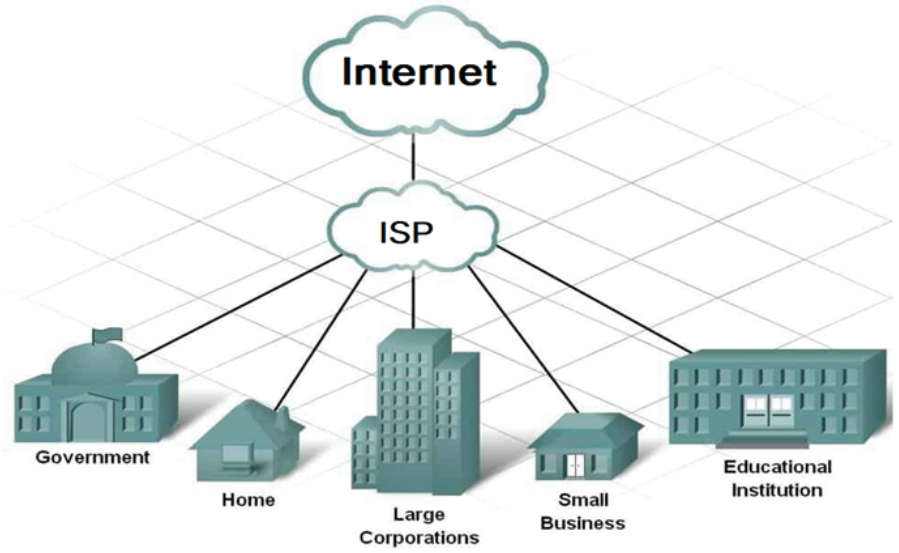


Fig 2.6 Internet Service Provider

2.7 SERVICES PROVIDED BY INTERNET

In today's technological world, there are plenty of services that are provided by the Internet. The list contains email, which enables you to keep in contact with friends, family, and employers. There are also search engines that allow you to search for information that is provided by professionals and individuals alike. Other services include sites like Facebook and MySpace that allow you to interact socially with people from all over the world. Most businesses today are connected to the Internet so you can also pay bills, do banking, and shop online. Some of the main services are described below.

I. **World Wide Web :** The World Wide Web (WWW) and the Internet work together but they are the different things. The Internet is a global network of networks while the World Wide Web (www) is collection of information which is accessed via the Internet. We can access the information stored on the www by using the web browsers such as Internet Explorer, Mozilla Firefox etc.

WWW consists of all the public web sites connected to the Internet. The websites are identified by short, unique, global identifiers called URLs **(Uniform Resource Locator).** World Wide Web consists of a large number of websites or sites. It includes e-mail, newsgroup, mailing list, news groups etc.A website is a collection of inter-linked web-pages. We can obtain information from these web-pages. Accessing information stored on the World Wide Web is called Web Surfing.

II. **Electronic Mail :** Electronic mail is more commonly known as email.We can send and receive messages with the help of e-mail to any part of the world. Text, video, audio and other files can also be sent and received through it.Today, email is considered as the most popular service offered on the Internet. Email has become the preferred method of communication for sending, receiving and storing electronic messages.

The U.S. Postal Service handles around 200 billion pieces of mail each year. Email service on the Internet handles around 247 billion emails every day.

Fig 2.7 E-Mail

Advantages of E-Mail : E-mail has following advantages:

- **Cost :** Cost given for use of internet is the only money given. User need not to give money for postal stamps. It is cheaper than fax. The e-mail does not need such costs. Cost of long message is equal to that of short message. Also cost of sending message to very far off distant locations is same as that for sending message to our own city.
- **Speed :** Its speed is greater than postal transmission. E-mail message can reach its destination within no time. We can correspond any times in a day.
- **Convenience :** Computer user can type the message in his computer and send e-mail at any time of his convenience. It saves paper, postal cost and any other problem.

III. E-Commerce : The ability to do business without the usual constraints of time or distance make e-commerce one of the most important services provided by the Internet. With the single click of a mouse, online customers can purchase almost anything day or night from the comfort of their own home.

Fig 2.8 E-Commerce

IV. Social Networking Sites : The Social networking websites function like an online community of internet users. In social Networking websites, every user has a profile,

which contains information about them. A user can also invite other people to join these websites. Some of the popular social networking sites are: Facebook, twitter etc.

Fig 2.9 Social Networking Sites

V. Video Conferencing : It involves the use of video cameras connected to two or more computers. Images and sounds are then sent through the Internet where users not only hear each other but can also have a face to face conversation.

Fig 2.10 Video Conferencing

VI. Chatting : A chat is an online conversation over the Internet in which we can instantly send text based messages back and forth to one another. Thus, Chatting means – word talk. It is similar to telephonic conversation. The only difference is that we use only words in chatting. If we are linked through internet then we will type message in computer or mobile,instead of speaking in telephone. Now voice chatting is also possible using internet. In voice chat we can speak and listen.

VII. Web Searching : Number of web pages are not fixed on website. Web pages are unlimited on the World Wide Web. These web pages go on increasing with the creation of new websites. Big companies save their web pages in their database.Search enginesare used to find information on the web. It is a powerful program. Desired information can be found by typing appropriate words in the search engine. After searching the information on the web, search engine shows a list of websites related to that word on the screen.

Methods of searching : Let us learn about fundamentals of searching. First of all type a few words in the text box of search engine. In advance search you have to set word match, complete phrase match or insert key-word match.

Following things should be kept in mind while searching in a right way:

- Use (+) sign for that word which should be present in search result.
- Use (-) sign for the word which should not be present in search result
- Use quote marks ('.')to show phrase

From the example given below, it is clear that we are finding cookie recipe site of North India and it should not contain information about rice i.e. cookie + recipe – rice.

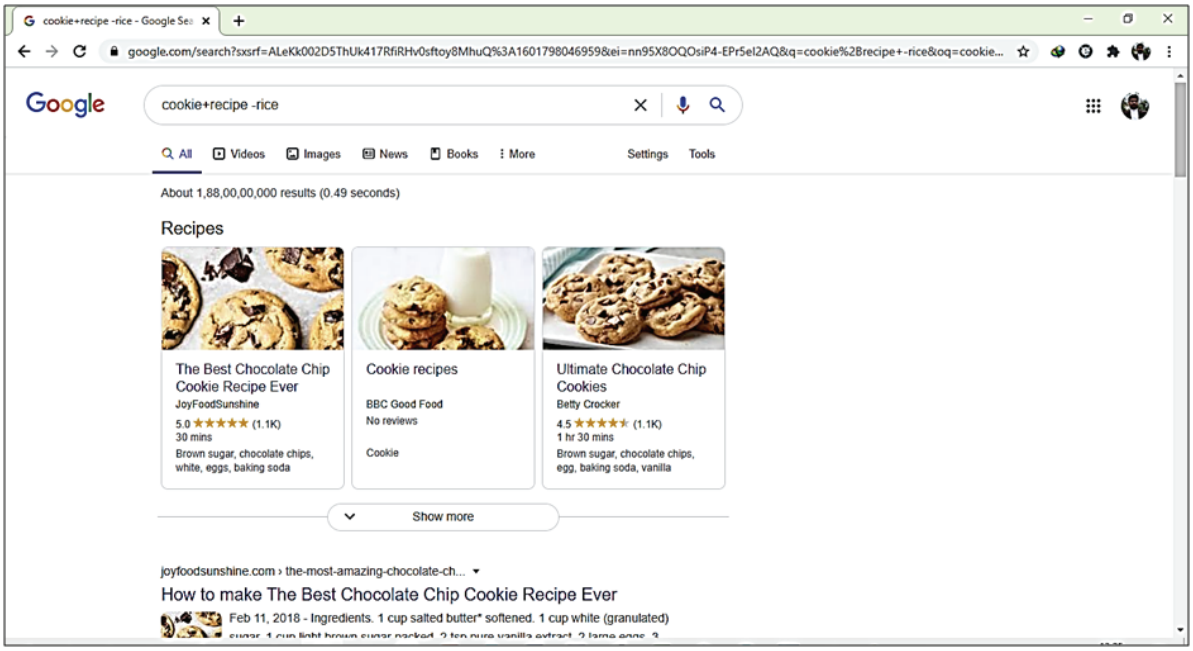


Fig 2.11 Web Searching

2.8 TOOLS AND SKILLS REQUIRED FOR USING INTERNET

We should have complete knowledge of computer in order to take full advantage of internet. Different tools are used for different purposes which depend on our requirements. Following are some of the important tools:

- E-mail program
- Web Browser
- News Reader
- FTP software

Although, software for internet has been greatly improved yet the internet user need basic computer skills of using it. User should know how to start or close a program, how to copy a file, he should know something more than menu, icon, print, type and editing. Knowledge of all these things is called basic computer skills for using Internet.

2.9 WEB BROWSING

It is the Searching process on the web. Moving from page to page or website to website in search of information is known as **Web Browsing.** To browse the information, we can take the

help of any search engine such as Google, Bing etc. We can view required information with the help of Browsers & Search engines.

Fig 2.12 Web Browsing

Points To Remember

1. The Internet is a "network of networks" that consists of millions of computers spread across the world.
2. E-mail is a facility on Internet to send and receive messages to any part of the world.
3. Internet explorer is one of the most popular and widely used web browser developed by Microsoft.
4. Each Web page has a unique address called Uniform Resource Locator.
5. World Wide Web (www) is collection of information which is accessed via the Internet.
6. Moving from page to page, website to website in search of information is known as Web Browsing.

1. Multiple Choice Questions:

I. International Networks of computers is known as _____

a) ARPANET
b) INTERNET
c) INTERANET
d) ETHERNET

II. WWW stands for _____.

a) World Wide Web
b) World Web Wide
c) Wide World Web
d) Web World Wide

III. A _____ is an online conversation over the Internet.

a) E-commerce b) Chatting

c) WWW d) None of these

IV. _____ is the fastest way of sending mails.

a) Telegram b) Letters

c) ISP d) E-mail

V. _____ is a device that connects a computer with telephone line.

a) Modem b) Telephone Wire

c) Mouse d) Mobile

2. Full Forms:

I. WWW II. E mail

III. MODEM IV. ISP

V. URL VI. DSL

3. Very Short Answer Type Questions:

I. What is Internet?

II. Give some examples of Internet Service providers.

III. What do you mean by the term E-Commerce?

IV. What is Web Browsing?

4. Long Answer Type Questions

I. What is MODEM? Also explain its types and speed.

II. Explain the facilities provided by the Internet.

III. What is E-mail? Write the advantages of using email.

IV. Write a note on World Wide Web.

V. What are the main services provided by Internet? Explain briefly.

Lab Activity

- Make a group of 5 to 8 students. Go to the lab and find out different components being used for internet.
- Search for any topic like car, mobile, computer, motorcycle etc using search engine.
- **Do as the following:**

a) Open **www.google.com** in any web browser

b) Search for "fonts of Punjabi"

c) Click on the appropriate link and download fonts in the computer system

INTRODUCTION TO INFORMATION TECHNOLOGY

CHAPTER - 3

OBJECTIVES OF THIS CHAPTER

3.1 Information Technology
3.2 Web Sites
3.3 Searching
3.4 Web Surfing
3.5 Difference Between On-Line and Off-Line
3.6 Downloading
3.7 Net Banking
3.8 On-Line Shopping
3.9 How to view online result
3.10 Mobile Technology

INTRODUCTION

Now-a-days many companies are in the field of Information Technology. These companies are earning a lot because of good standards and their in creative and competitive marketing policies. This is possible only if proper information is received at a proper time and these companies are working on basis of this information these days. It is known as era of information technology.

Information technology is related to computer hardware and software. The technology which is used for processing, storing and exchange of information is called information technology. Information technology plays an important role in the development of a country. It is changing the life style, learning, playing and working styles of people.

We are introducing new social programs, scientific discoveries and business devices due to development of computer information technology. New tools of communication to collect knowledge and information are being framed.

3.1 WHAT IS INFORMATION TECHNOLOGY?

It includes all the technologies used to store, change or use information about business data, voices, discussions, photographs, movies, multimedia presentation etc.

Information technology is an advantageous field which includes both telephone and computer technology.

3.1.1 Need of Information Technology

In our daily life all bills and payments of most of the Govt. and private firms are printed with the help of computer. ATM facility of banks is also very useful but it is possible only due to proper use of computer.

Information technology is used to perform many tasks as mentioned below:

i. **For Business and Industry :** Information technology is used in business and industry for following purposes:

- **Office Automation :** Information technology helps to perform routine office work and to increase productivity in the business and industry.
- **Management Information System :** Information technology helps the manager to take quick decision in the business and industry.

ii. **At home :** Information technology is used to perform following tasks at home:

- **Communication :** Instead of sending letters, we can communicate with email and chatting.
- **Education :** Student use internet for their study. There are various types of educational software which help students to do their study at homes.
- **Entertainment :** The older means of entertainment are replaced by computer and internet. Traditional tapes and cassettes have been replaced by audio-video CD's/DVD's.

iii. **For Training :** In schools,Information Technology is used to provideeasy and effectiveknowledge to students by teachers. Effective multimedia presentation contents are proving very helpful in this regard. Information technology is also helpful in the field of science and medicine.

3.2 WEB SITES

A collection of one or more web pages grouped under the same domain name is called Web Site.

The pages of a website can usually be accessed from a simple Uniform Resource Locator (URL) called the web address. Each website has its own unique web address which can be reached through an internet connection. For example web address of Punjab School Education Board is **www.pseb.ac.in.** The opening page of a website is usually called homepage which contains hyperlinks to other pages on the same or other website(s) A company or an individual tells us how to get their Web site by giving us the web address of their home page. From the home page, we can get to all the other pages on their site.

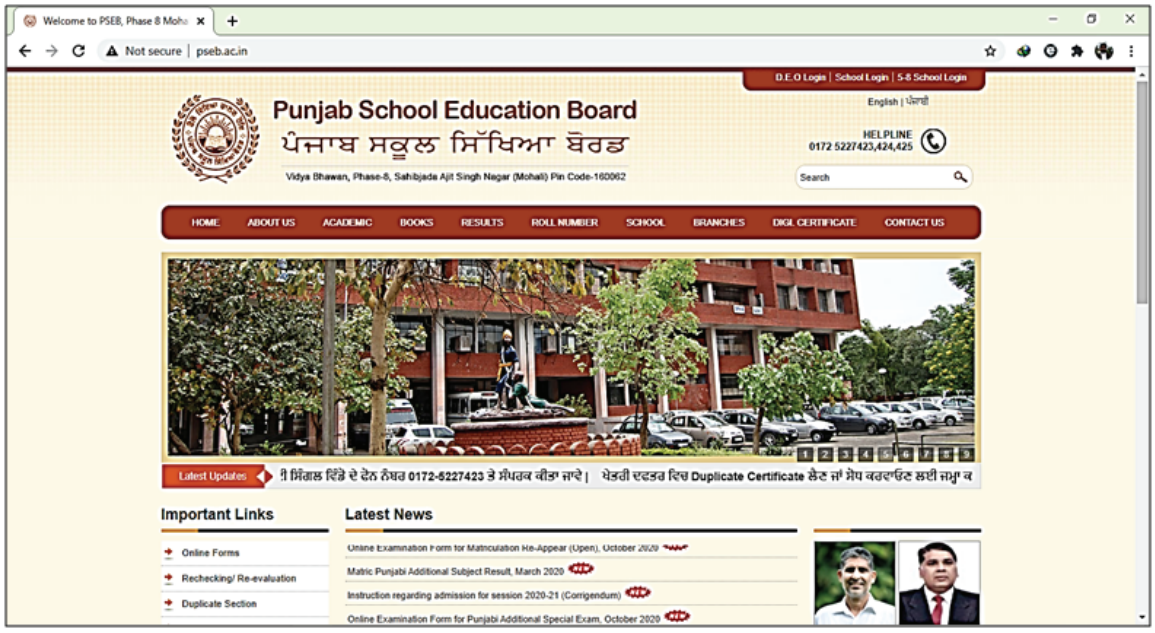


Fig 3.1 Web Site

3.3 SEARCHING

In English search means:"Try to find something". Web search is the act of looking for webpages. The system that collects webpages together for required information/topics at one place is called a web search engine.

When we ask a web search engine such as Google or Bing find webpages related to a topic, we will get back a list of hyperlinks related webpages. This list may have a hundred or more links. They are often divided up into a number of Search Engine Results Pages (SERPs). From SERP, we decide which link we should try and see if it's referenced page had what we're looking for.

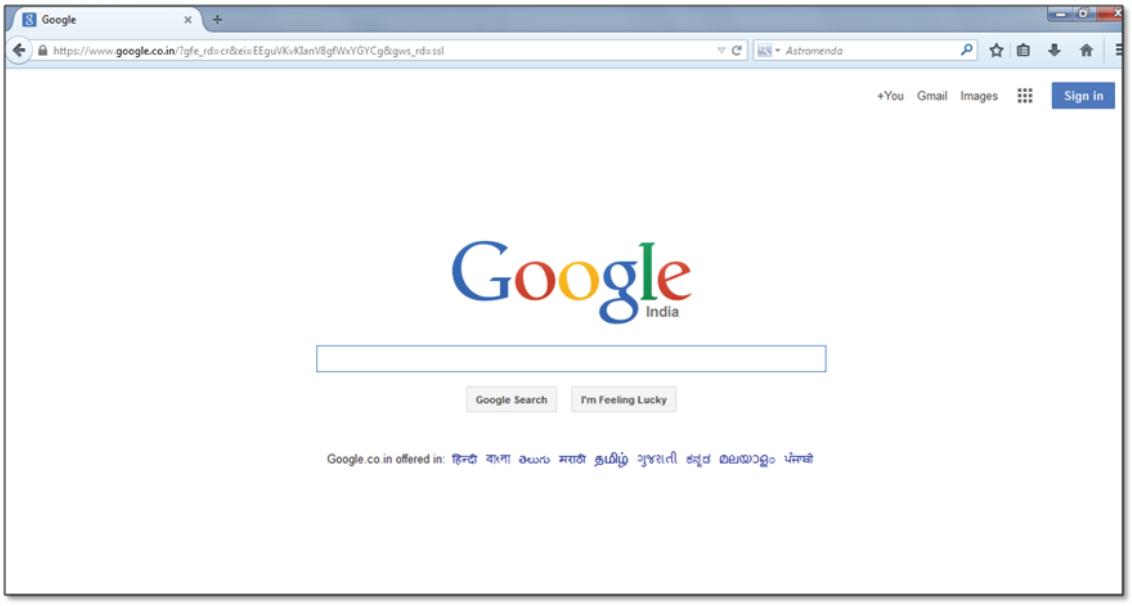


Fig 3.2 Searching

3.4 WEB SURFING

Web surfing means to move from place to place (one website to another website) on the Internet to search for the topics of interest. The term also has another meaning -- spending time on the Internet.

Web surfing has become a favourite pastime for many Internet users. Just as in "TV channel surfing," where one clicks the remote to go from channel to channel, the hyperlinks on Web pages make it easy to go from one page to another.

3.5 DIFFERENCE BETWEEN OFFLINE AND ONLINE

The terms "online" and "offline" have specific meanings in regard to computer technology and telecommunications. The general definition of "online" simply indicates a state of connectivity, while "offline" indicates a disconnected state. Working online means that we are working on files and/or programs that open from external sources, like a server or website. Working offline means that we are working on something on our computer.

Fig 3.3 Online and Offline

Online = connected / having access to a network or Internet

Offline = not connected / not having access to a network or Internet

3.6 DOWNLOADING

Downloading means our computer is receiving data from the Internet. Every time we use the Internet, we are downloading data. For example, each time we visit a webpage, our computer downloads the HTML and CSS codes, images, and any other relevant data. Only after downloading web page data, a web browser can display it properly on the monitor screen. When ever we click on "Download" link of a file, our web browser will start downloading that specific file.

Examples of downloading include opening a web page, receiving email, downloading music files, watching online videos etc.

Fig 3.4 Downloading

3.7 WHAT IS NET BANKING?

A system of banking in which customers can view their account details, pay bills, and transfer money to others by means of the Internet, is known as Net Banking.

Internet banking is also called **Online Banking**. Internet banking uses the Internet to conduct banking activities, for example: transferring funds to others, paying bills, viewing our own account balances etc. Banks that provide the facility of Net Banking are also known as Virtual Bank or Cyber Banks or Web Banks.

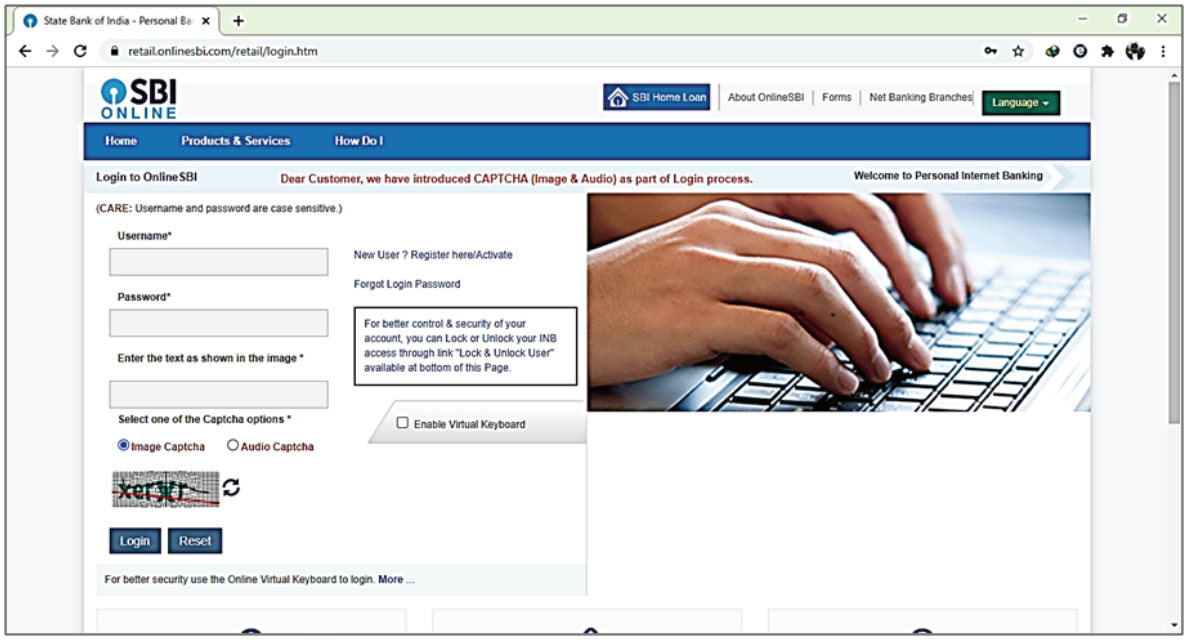


Fig 3.5 Net Banking

3.8 WHAT IS "ON LINE SHOPPING"?

Online Shopping or Online Retailing is a form of electronic commerce which allows consumers to directly buy goods or services from a seller over the Internet using a web browser.

We can purchase products from almost anywhere if the vendor makes his products available through the Internet. We can pay the bill of our shopping by using a credit/debit card or net banking etc. The good thing is that purchasing things online is very easy. The advantage for online shopping is that we can purchase items from home and the items will be delivered at home.

Fig 3.6 Online Shopping

Do we have plenty of time to go to the store and look up and down for the items we like? Most people say NO, time is precious. So, on line shopping is considered as a time saving activity.

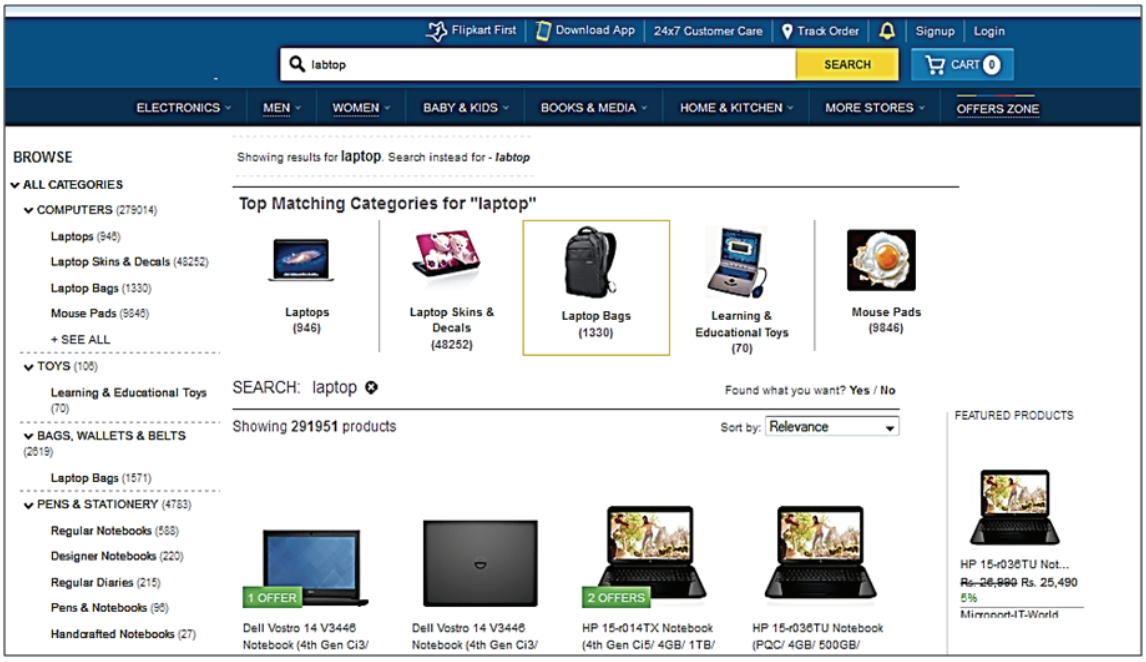


Fig 3.7 Online Shopping Website

3.9 HOW TO VIEW ONLINE –RESULT?

In earlier days, we have to wait for the result gazette (Manual document of result published by board or universities) to see the results. But with the help of Information Technology, we can view the results online. For example: if we want to view the results of classes under Punjab School Education Board then we can perform the following steps:

- Open any web browser, such as - Internet Explorer, Mozilla Firefox etc.
- In the address bar, type website address of Punjab School Education Board, i.e. **www.pseb.ac.in**
- Click on "Result" Link. It will open a web page showing links for various results

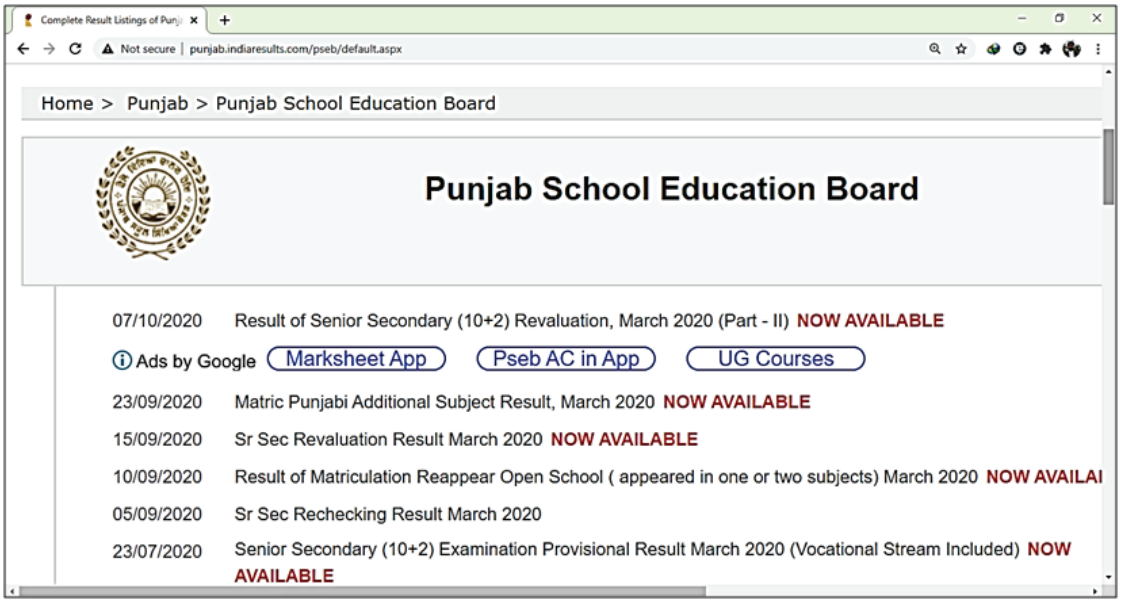


Fig 3.8 Viewing online results

- Click on the Result link that we want to see.
- Fill our exam details, such as roll no, name etc.
- Click on “Find Results” button.

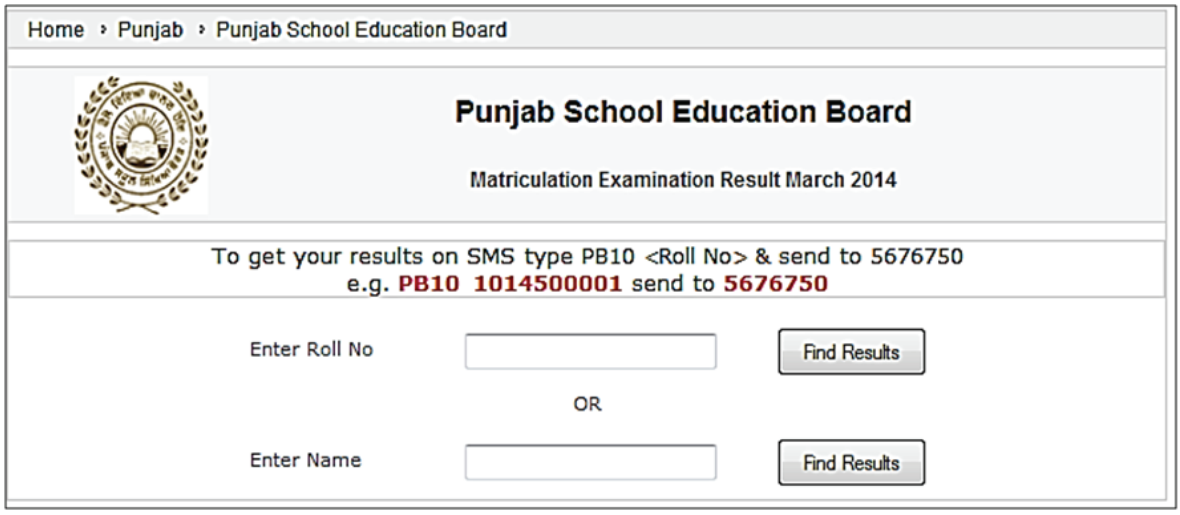


Fig 3.9 Viewing online Result

- Now, the result will be displayed on our screen. We can also take the print of our result.

3.10 MOBILE TECHNOLOGY

The meaning of mobile technology is clear from its name itself - a technology that is portable.

Fig 3.10 Mobile Technology

Mobile technology is rapidly changing the face of communication in the most remote areas of the world. Today, out of the seven billion people in the world, approximately six billion are cell phone subscribers. In response, companies, governments, and NGOS alike have realized the potential of this tool in addressing today's most pressing global challenges. Here are some important uses of Mobile Technology.

1. Education
2. Surveys and Polling
3. Banking
4. Data Analysis

Points To Remember

1. A collection of one or more web pages grouped under the same domain name is called Web Site.
2. Web search is the act of looking for webpages.
3. Web surfing means to move from place to place (one website to another website) on the Internet to search for the topics of interest.
4. "Online" simply indicates a state of connectivity, while "Offline" indicates a disconnected state.
5. Downloading means our computer is receiving data from the Internet.
6. A system of banking in which customers can view their account details, pay bills, and transfer money to others by means of the Internet, is known as Net Banking.
7. Online Shopping or Online Retailing is a form of electronic commerce which allows consumers to directly buy goods or services from a seller over the Internet using a web browser.
8. The meaning of mobile technology is clear from its name itself - a technology that is portable.

1. Multiple Choice Questions:

i. _____ means our computer is receiving data from the Internet.

a) Uploading b) Downloading
c) Surfing d) None of these

ii. The first opening page of a website is usually called _____.

a) Home Page b) Web Page
c) Main Page d) None of these

iii. _____indicates a state of connectivity.

a) Offline b) Online
c) Inline d) None of these

iv. _____ means to move from place to place (one website to another website) on the Internet to search for the topics of interest.

a) Web Searching b) Downloading
c) Web Surfing d) All of these

v. _____is a form of electronic commerce which allows consumers to directly buy goods or services from a seller over the Internet using a web browser.

a) Net Banking b) E-Mail

c) Online Shopping d) Mobile

2. Write True or False:

I. The result of any board or university can be seen online.

II. Offline means we are connected with the Internet.

III. A website has only a single web page.

IV. Web search is the act of looking for webpages.

V. Each website has its own unique website address.

3. Fill in the Blanks:

I. A collection of one or more pages grouped under some domain is called _____.

II. _____ means not connected with Internet.

III. _____ technology is providing us new tools of communication to collect knowledge and information.

IV. Banks that provide the facility of Net Banking are also known as _____ .

V. We can buy goods from home using _____ .

4. Short Answer Type Questions

I. What is Information Technology?

II. What is Website?

III. What is searching?

IV. What do you mean by online and offline?

5. Long Answer Type Questions

I. Explain the Need of Information Technology.

II. Write the steps to view online result.

III. Write a note on Mobile Technology

IV. Explain about on-line shopping?

V. What is Net Banking? Explain?

MICROSOFT POWERPOINT (PART–I)

CHAPTER - 4

OBJECTIVES OF THIS CHAPTER

4.1 Introduction to PowerPoint
- 4.1.1 What is Presentation?
- 4.1.2 What is Slide?

4.2 How to Start PowerPoint?

4.3 Components of PowerPoint Window

4.4 How to Create Photo-Album Presentation?

4.5 How to Play Presentation for audience?

4.6 Saving and Exiting Presentation

4.1 INTRODUCTION

Microsoft PowerPoint is a professional presentation software. It is one of the major components of Microsoft Office suite.It was developed by Robert Gaskins and Dennis Austin for the American computer software company Forethought, Inc. Initially, it was named Presenter.

PowerPoint is very easy-to-use presentation graphics software. It allows us to create very impressive and professional looking electronic slide-shows. Presentations developed in the PowerPoint can be displayed on the computer Screen or through a projector that is plugged into the computer. A PowerPoint presentation is a good way to convey our ideas or information to a large audience.Before proceeding in this chapter, we must know to get in touch with some of the basic concepts related to PowerPoint, which are given below:

4.1.1 What is Presentation?

A presentation is the process of presenting a topic to an audience.The aim of presentation is to make subject matter easy to understand by inserting pictures, text, graphs, charts, animation etc. We can insert animation effects, audio and video clips in our slides to make our presentation effective.A presentation may consist of one or more slides.

4.1.2 What is Slide?

A slide is a single page of presentation. It is just like a 35mm film based slide. A slide can be considered as a work-area in PowerPoint where we put contents for creating presentation. We

can put many types of contents such as Textboxes, Shapes, Clipart, WordArt, Tables, and SmartArt etc. on the slides. A presentation may have one or more slides.

4.2 HOW TO OPEN POWERPOINT?

PowerPoint can be opened in many ways. Following are some of the common methods to open PowerPoint in the Windows Environment:

a. Using START button

b. Using RUN command

c. Using ICON from Desktop

Following discussion explains how to use these methods:

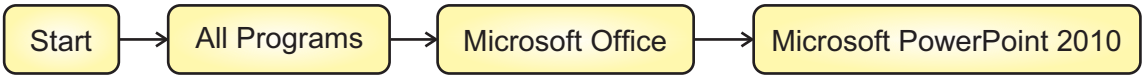
a. Steps to Open PowerPoint Using START button:

i. Click on **Start** button

ii. Click on **All Programs**

iii. Click on **Microsoft Office** folder

iv. Click on **Microsoft PowerPoint 2010**



b. Steps to Open PowerPoint Using RUN box:

i. Open the RUN box by pressing **Window Key + R**

ii. Type **powerpoint**

iii. Click on **OK** button or Press **Enter** key from keyboard

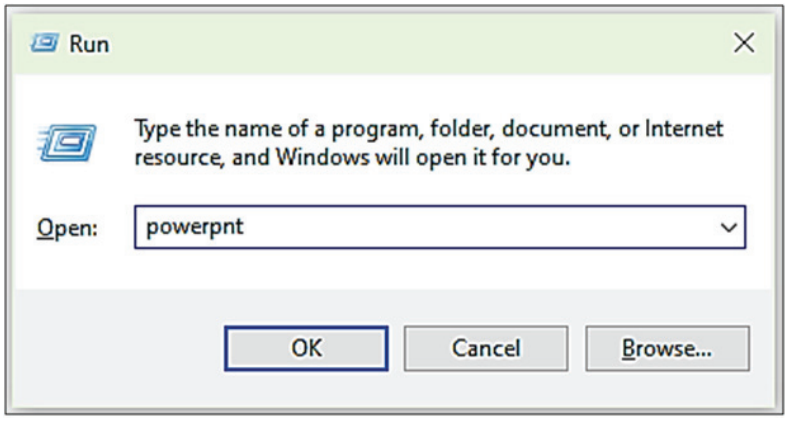


Fig 4.1: Run Box to Open PowerPoint

c. Steps to Open PowerPoint Using Icon on Desktop:

If PowerPoint icon exists on the desktop then double click on it to Open PowerPoint.

4.3 COMPONENTS OF POWERPOINT WINDOW:

After Opening Microsoft PowerPoint 2010, following window will appear on the Desktop. This window contains many components that are similar to other Microsoft Office programs. Each component serves a special purpose. It is important to familiarize with these components as it makes learning and using PowerPoint easier.

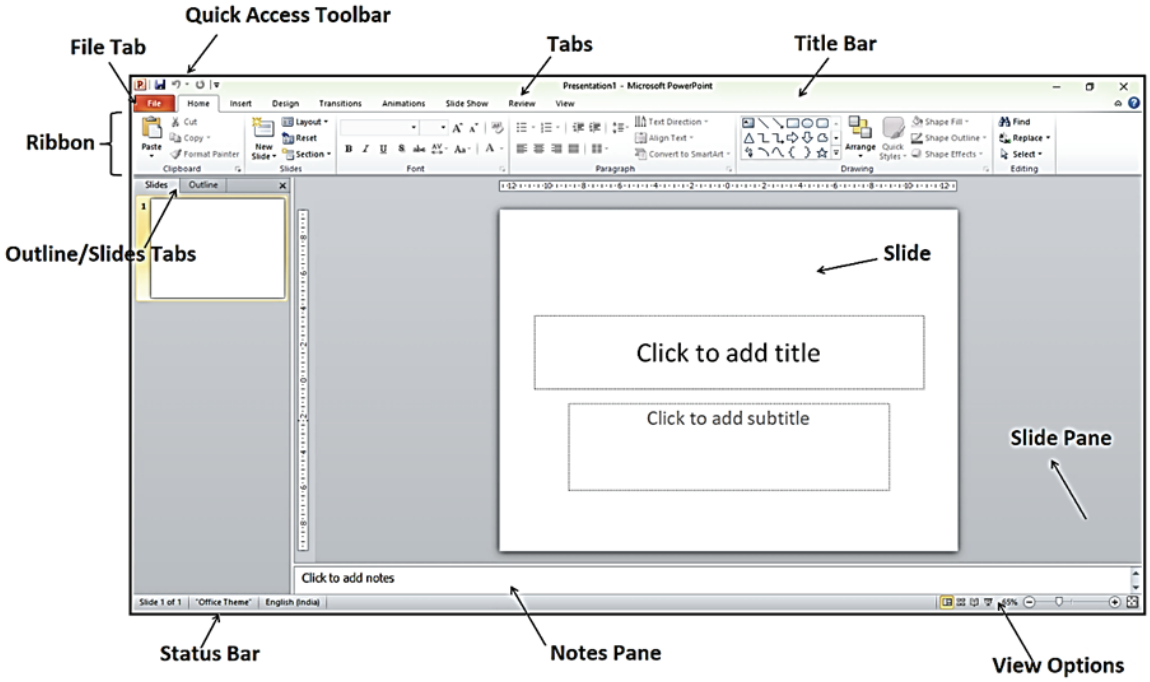
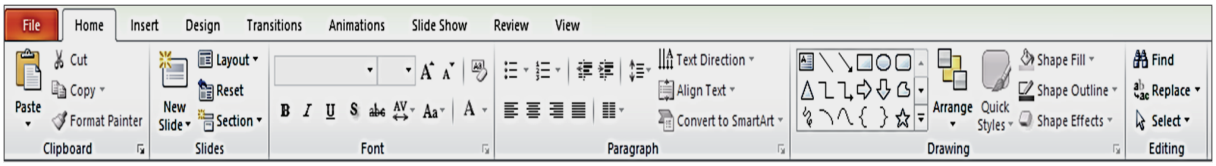


Fig 4.2: Showing Parts of power point Window

A brief introduction of the PowerPoint Window components is given below:

- **Title Bar :** It is the top most bar of the PowerPoint window. It shows the name of currently opened presentation along with the software name, i.e. PowerPoint. It has three buttons named: minimize, maximize/restore and close buttons at the right side.

- **Quick Access Toolbar :** It is present at the left side of the Title bar. It contains buttons for commonly-used commands.
- **Ribbon and Tabs :** Ribbon is located on the top of the PowerPoint window just below the Title bar. There are eight standard tabs in the PowerPoint. These are: Home, Insert, Design, Transitions, Animations, Slide Show, Review and View. Each Tab is divided into groups of related commands that are displayed on the Ribbon, For Example: Home tab ribbon is divided into Clipboard, Slides, Font, Paragraph, Drawing, and Editing groups.



- **Outline/Slides Tabs :** Outline tab displays the presentation text in the form of an outline. This tab enables us to move slides and text by dragging selected contents. Slide Tab displays the slides of our presentation as small thumbnails. This view also allows easy navigation through slides.
- **Slide Pane :** It contains the current slide in our presentation. We can use the vertical scroll bar to view other slides in the presentation.
- **Notes Pane :** It is located below the slide pane. This pane is used to type reference notes about the contents of slide.
- **Status Bar :** It is located at the bottom of the PowerPoint window.It shows messages and information about the view, such as the Slide Number and the Current Theme Template used etc.

- **View Options :** It is located at the right side of the Status Bar. It contains buttons that allow the ability to switch between PowerPoint views. There are four view buttons: Normal View, Slide Sorter View, Reading View and Slide Show View. This area also contains the Zoom feature.The Zoom control allows us to zoom-in for a closer look at slide contents. The zoom control consists of a slider that we can slide towards left or right to zoom in or out.We can also click on the + and - buttons to increase or decrease the zoom factor.

4.4 HOW TO CREATE PHOTO-ALBUM PRESENTATION

We can also create photo-album presentation in the PowerPoint. PowerPoint allows us to import a set of pictures to create a presentation of photos. With the photo album feature,we can select, rearrange, adjust, and add text to our pictures. By default, one picture will appear on each slide, but we can adjust the slide layout to include multiple images if we want.

To create a photo album:

i. Click on the **Insert** tab

ii. In the **Images** group, Click the **Photo Album** option, then select **New Photo Album.**

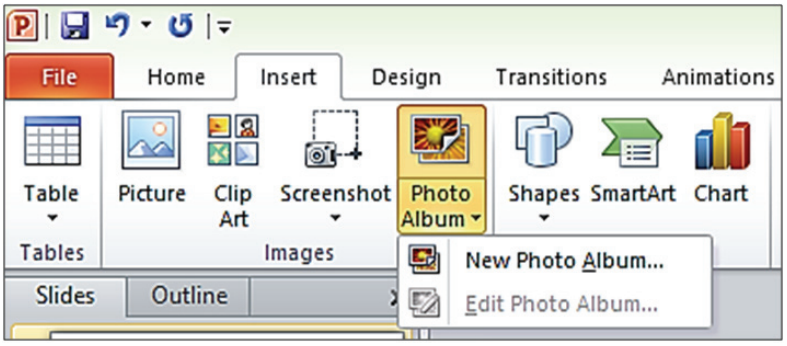


Fig 4.3: New Photo Album

iii. The **Photo Album** dialog box appears, as shown in the following figure:

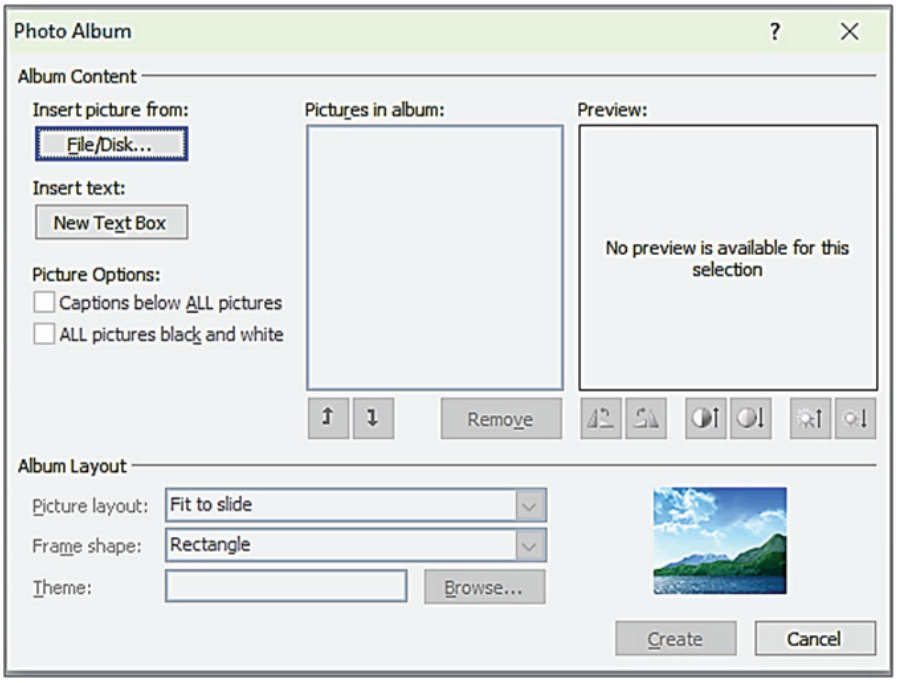


Fig 4.4: Photo Album Dialog Box

iv. Click on the **File/Disk...** button. It will open the Insert New Pictures dialog box as shown below. Select the desired image file(s). After the selection of pictures, Click the Insert button to go back to Photo Album dialog box.

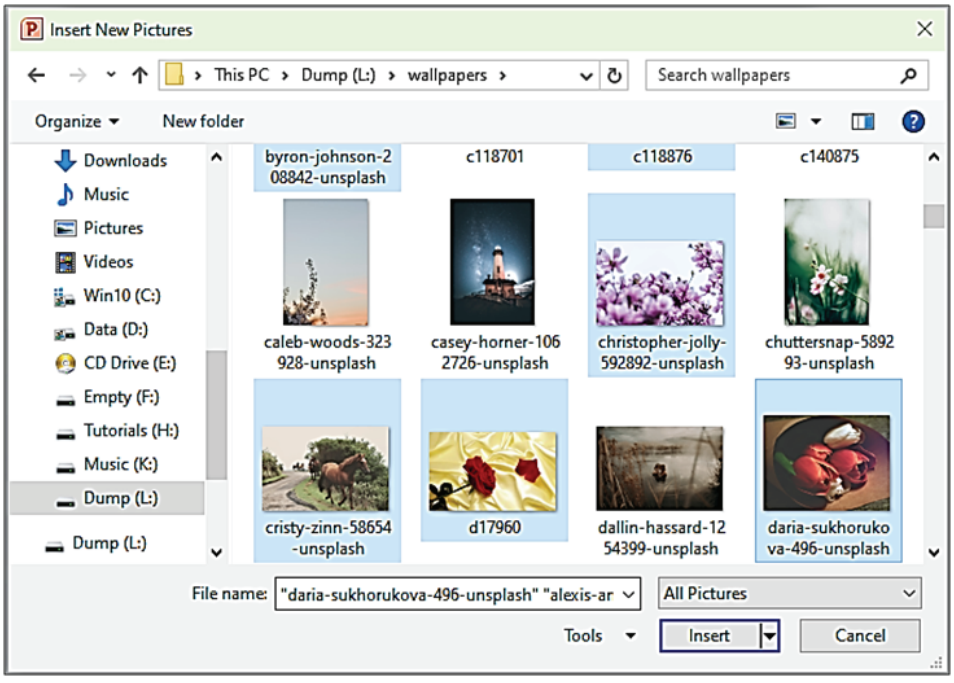


Fig 4.5: Insert New Pictures Dialog Box

Important Tip for Picture Selection : To select all images in the folder, click on any image and then press Ctrl + A. Doing so will select all the images in the current folder.

We can also use Shift + Click to select adjacent images in the folder. To select multiple non-adjacent images, press and hold the Ctrl key while clicking the desired images.

v. The **Photo Album** dialog box provides several options for adjusting rotation, brightness & contrast, changing the layout of pictures, rearranging or removing pictures as shown in the picture below. Change these settings as required and then click on **Create** button to insert pictures into the photo album.

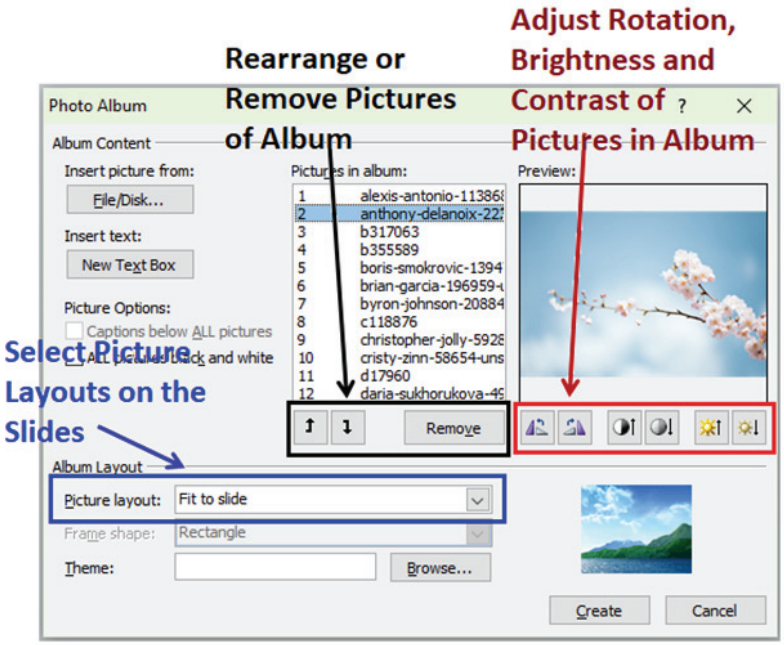


Fig 4.6 Settings for Photo Album

vi. Now, a separate **New Presentation** will be created for the photo-album. By default, it will include a **Title Page** and **One Picture per Slide.**

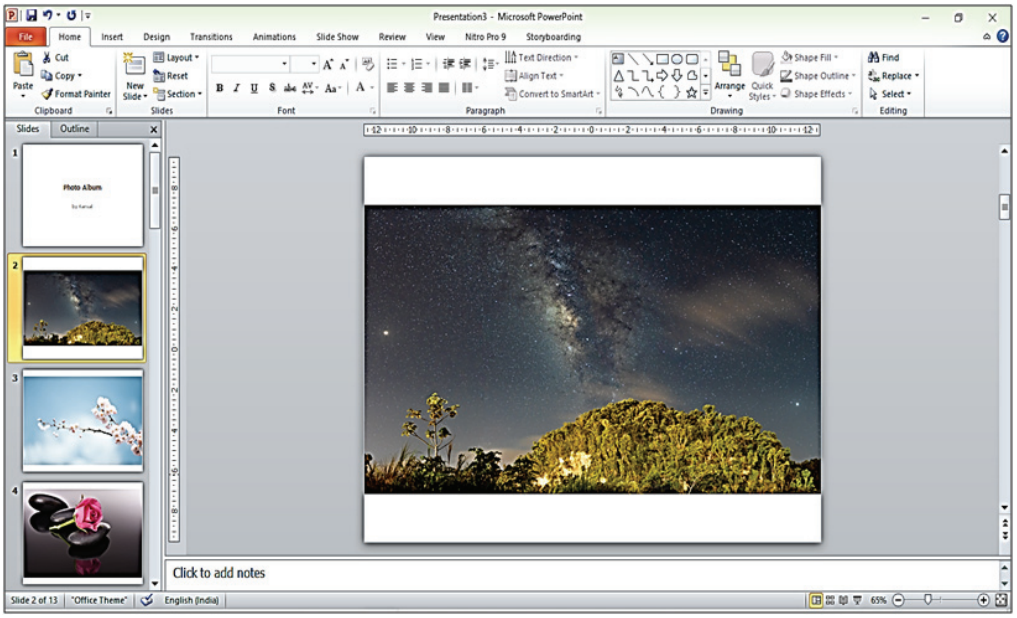


Fig 4.7: Photo-Album Presentation

4.5 HOW TO PLAY PRESENTATION FOR AUDIENCE?

Once our presentation is prepared, we need to learn how to present it to our audience. PowerPoint offers several tools and features that can help make our presentation smooth, engaging, and professional. Now, we will learn about how to present our Presentation (Photo Album Presentation created under Heading 4.4) to audience.

PowerPoint provides many ways to play our presentation for audience. We can play our presentation either from the very first slide of the presentation or from the current slide of the presentation. Following discussion explains how to play presentation on the Monitor Screen or Projector connected to our computer system:

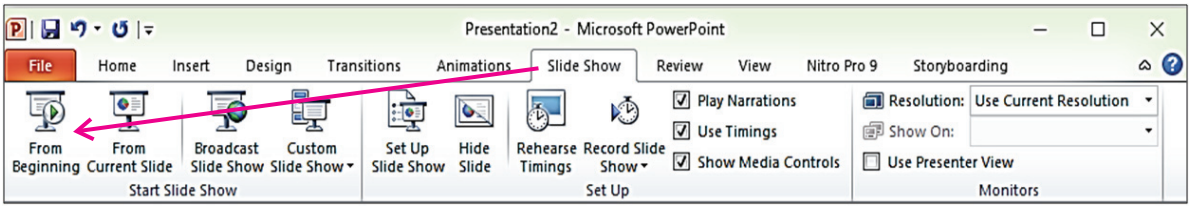
4.5.1 How to Play Presentation from the Very First Slide

To play the presentation from the very first slide, use any of the following method:

- Press **F5** shortcut key

OR

- Click on the **Slide Show tab** → Click on **From Beginning** (in the Start Slide Show group)



4.5.2 How to Play Presentation from the Current Slide

To play the presentation from the current slide, use any of the following method:

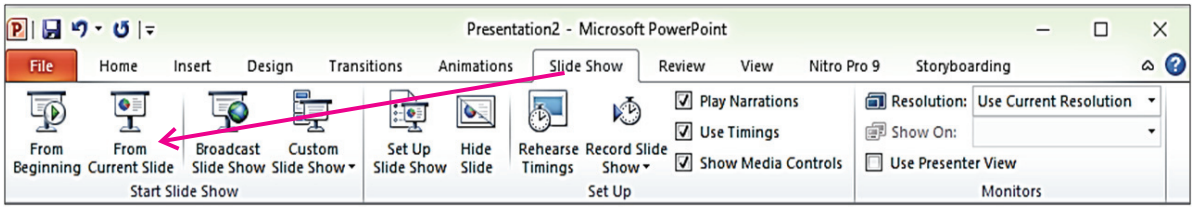
- Press **Shift + F5** shortcut key

OR

- Using **Slid Show** view option available at the Status Bar

OR

- Click on the Slide Show tab → Click on From Current Slide (in the Start Slide Show group)



4.6 SAVING AND EXITING PRESENTATION

After creating any presentation, we have to save it permanently on the secondary memory so that we can get access to the presentation as and when required. After saving or presenting the presentation to audience, we can close power point to release the main memory that is occupied by the presentation. Following discussion shows how to save and close presentation in Microsoft PowerPoint.

i. **Saving Presentation File :** There are many ways to save the presentation in PowerPoint. We can choose any one of them to save our presentation. Some of the common ways to save the presentation are given below:

- By clicking on the **File** tab → **Save** option

OR

- Using Save button in the Quick Access Toolbar

OR

- Using shortcut key Ctrl + S

In Microsoft PowerPoint 2010, presentation file is saved with the .pptx extension

ii. **Closing PowerPoint :** PowerPoint can be closed in many ways. Anyone method can be used to close PowerPoint. Some of the common ways to close the PowerPoint are given below:

- Click on File tab → Exit option

OR

- Click on Close button (CROSS) present on the right side of the Title Bar

OR

- Press Alt+F4 shortcut Key to close the PowerPoint

Points To Remember

1. Microsoft PowerPoint is one of the major components of Microsoft Office suite.
2. PowerPoint is very easy-to-use presentation graphics software.
3. A presentation is the process of presenting a topic to an audience.
4. A slide is a single page of presentation.
5. If PowerPoint icon exists on the desktop then double click on it to Open PowerPoint.
6. **Slide Pane** contains the current slide in our presentation.
7. PowerPoint allows us to import a set of pictures to create a presentation of photos.
8. To play the presentation from the very first slide, F5 shortcut key can be used.
9. To play the presentation from the current slide, Shift+F5 shortcut key can be used.
10. In Microsoft PowerPoint 2010, presentation file is saved with the .pptx extension.
11. Ctrl + S shortcut key can be used to save presentation in PowerPoint
12. Alt + F4 shortcut key can be used to close PowerPoint

1. Fill in the Blanks:

I. _____ is a presentation graphics software

a) PowerPoint b) Word

c) Excel d) Paint

II. A _____ is the process of presenting a topic to an audience

a) Word Processor b) Slide

c) Presentation d) Transition

III. A _____ is a single page of presentation.

a) Slide b) Document

c) Sheet d) None of these

IV. _____ contains the current slide in our presentation.

a) Outline Pane b) Content Pane

c) Ribbon d) Slide Pane

2. Very Short Answer Type Questions

I. How to Open PowerPoint?

II. What is the Shortcut Key to Save the Presentation in PowerPoint?

III. What is the Shortcut Key to Close PowerPoint?

IV. What is the Shortcut Key to Start Slide Show from the first Slide?

V. What is the file extension of presentation file in PowerPoint?

VI. Which term/word is used to Open PowerPoint using RUN box?

3. Short Answer Type Questions

I. What is PowerPoint?

II. Write a short note on Presentation.

III. What is a Slide?

IV. Write the main Components of PowerPoint Window.

V. How will you play presentation for the audience in PowerPoint?

VI. Write about Slide Pane and Notes Pane in PowerPoint.

4. Long Answer Type Questions

I. Explain any three components of PowerPoint Window.

II. How will you create Photo Album presentation in PowerPoint?

Lab Activity

I. Create a photo-Album presentation in PowerPoint with at least five pictures.

II. Run the slide show for the presentation of Photo Album

III. Save presentation with your name

CHAPTER - 5

MICROSOFT POWERPOINT (PART-II)

OBJECTIVES OF THIS CHAPTER

5.1 Introduction

5.2 How to Create a New Blank Presentation?

- 5.2.1 Adding Text to Slides
- 5.2.2 Formatting Text of a Slide

5.3 Inserting New Slide

- 5.3.1 How to Change the Slide Layout?

5.4 How to Change the Appearance of Slides?

- 5.4.1 Working with Themes
- 5.4.2 Changing Background Styles
- 5.4.3 Format Background

5.5 Adding Contents to a Slide (WordArt, ClipArt, Tables, SmartArt, Pictures, Movie/ Video etc.)

5.6 Slideview option in PowerPoint

5.1 INTRODUCTION

In the previous Chapter, we have learnt about basics of PowerPoint with the creation of photo-album presentation. In this chapter, we will learn how to create a new blank presentation using some more advanced features of PowerPoint. In slides, we can insert clipart, WordArt, tables, pictures and videos along with text to make our presentation more effective. In this chapter, we will also learn about how to insert new slides, how to change their layouts, different methods to change the appearance of slides, working with views in PowerPoint etc.

5.2 HOW TO CREATE A NEW BLANK PRESENTATION?

In the previous chapter, we created a photo-album presentation in which almost all the process is automatic and there is nothing much to do manually. Now, we will learn how to create a presentation in which process of making presentation is defined by user. Many options are available in Microsoft PowerPoint when we are creating a new Presentation. Following figure

shows these options when we create a new presentation by clicking on the **File** tab → **New** option in PowerPoint Window:

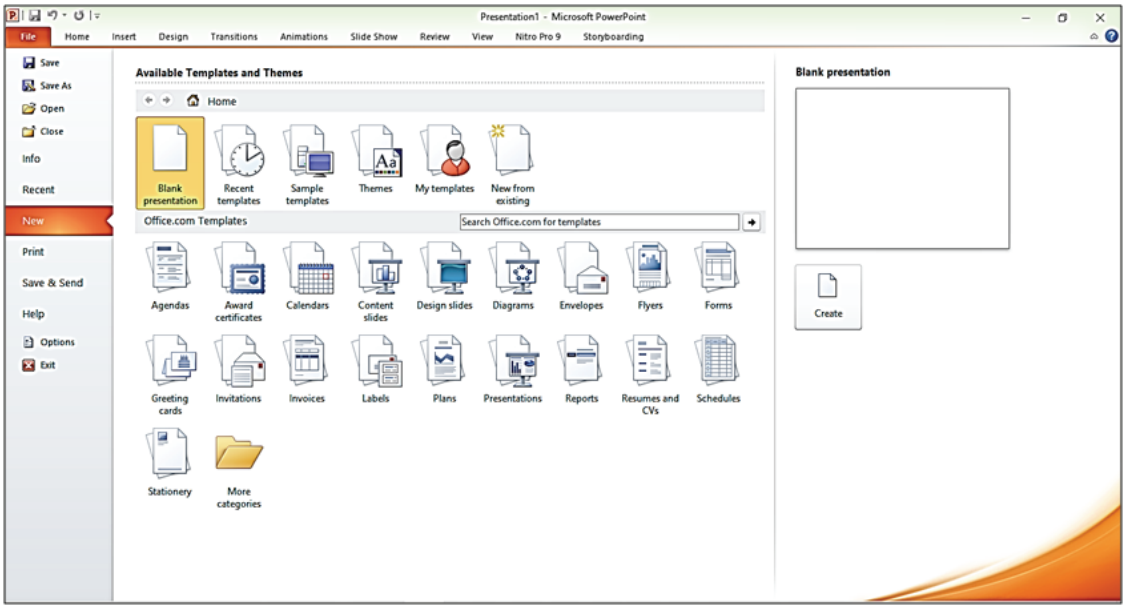


Fig 5.1 Creation of Blank Presentation

Whenever we start PowerPoint, it will automatically create a New Blank presentation for us with a Single Slide (having Title Slide Layout) in it. But, if we, ourselves, want to create a New Blank Presentation, then we can create it by using the following steps:

1. Click on **File** tab
2. Click on **New** Option
3. Click on **Blank Presentation**
4. Click on **Create** button

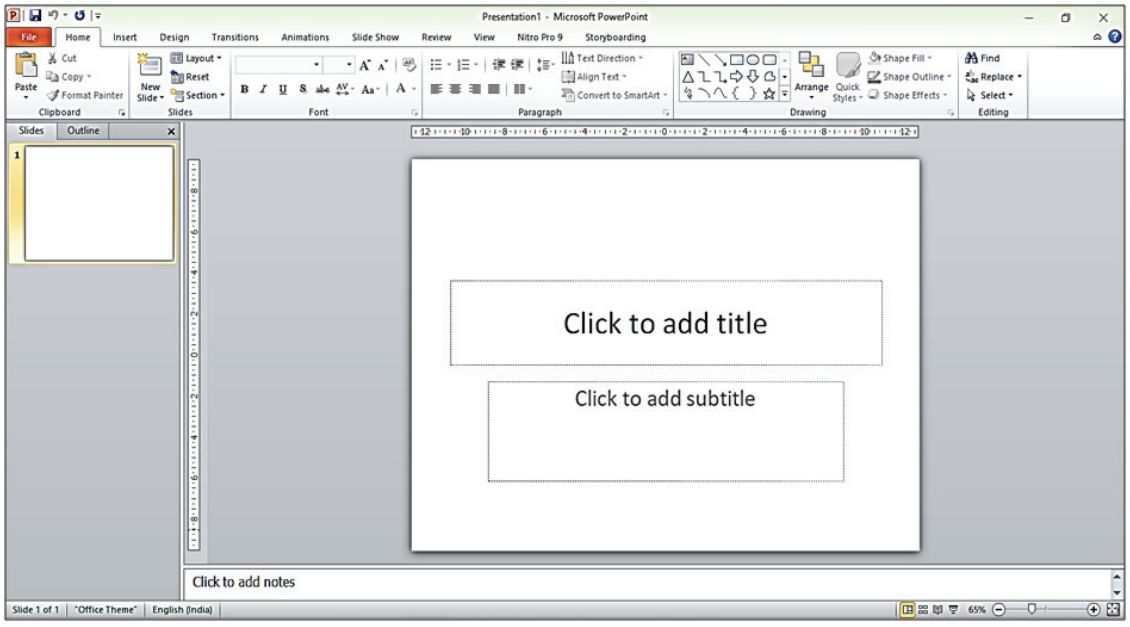


Fig 5.2 Blank Presentation

We can also create a blank presentation by just pressing the **Ctrl + N shortcut key.** Following window will appear whenever we create a new blank presentation in Microsoft PowerPoint 2010:

5.2.1 Adding Text to Slides

In the Blank Presentation, a slide with white background andtwo placeholders - one for the ***Title*** and other for the ***Subtitle*** will appear as shown below. **Placeholders** are the dotted-line containers on slide layouts that hold contents such as: titles, subtitles, tables, charts, SmartArt graphics, pictures, clip art, videos, and sounds.

Fig 5.3: Slide with Title and Subtitle

To add text in either of these placeholders, we have to click in it. Now, a blinking cursor will appear in the placeholder to type text in it. After typing text in the placeholder, just click outside the textbox so that blinking cursor disappears from the Textbox.

If we need to add text to a slide outside of the normal text placeholders, we can add a text box on the slide. To do this, perform the following steps:

- Click on **Insert** tab
- Click on **Text Box** option in the Text group.
- Now, draw the textbox on the slide by dragging the mouse.
- A blinking cursor will automatically appear in the box to start typing.

We can also move, resize and rotate these textboxes. To **move** it at some other location on the slide, just click at its border and drag it to some new location on the slide. To **resize** a text box, click and drag on any of the handles that appear at corners and halfway along each edge. To **rotate** a text box, click on the green rotate handle at the top of the box and drag it in left or right direction.

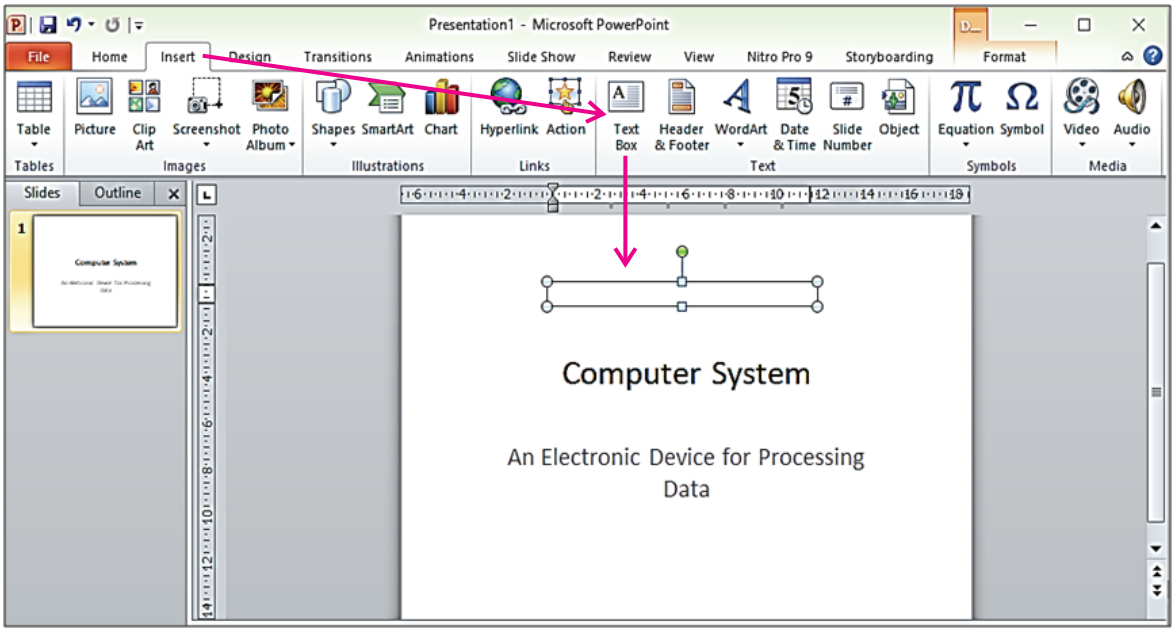


Fig 5.4: Inserting Textbox

5.2.2 Formatting Text of a Slide

We can also format text added to placeholder/textboxes in the similar way as we do it in Microsoft Word. We can apply standard text formatting using the **Font and paragraph** groups on the **Home** tab.

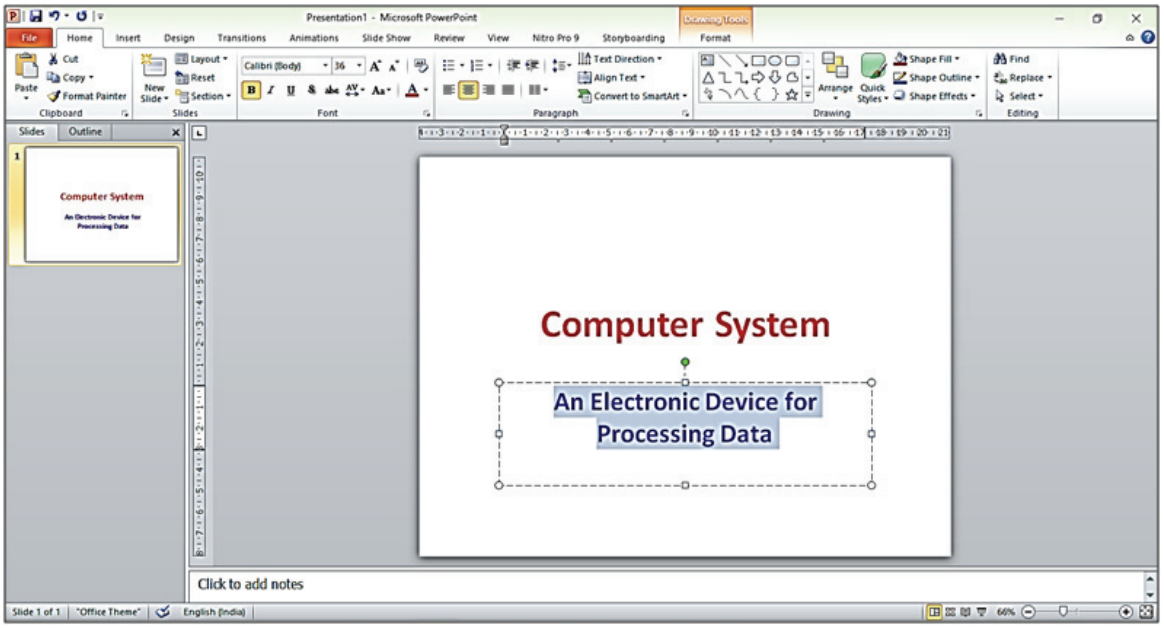


Fig 5.5: Formatting Text of Slide

To apply formatting, first of all we have to select the text in the placeholder on which we want to apply formatting, then select the appropriate options such as: Font, Bold, Italic, Underline, Text Shadow, Strikethrough, Font Colour, Font Size, Change Case, and Alignments etc. in the Font and Paragraph groups of Home tab.

5.3 INSERTING NEW SLIDE

After adding the **Title** and **Subtitle** of our presentation on the first slide, we can add more slides to our presentation. During the insertion of a new slide, we have to determine which placeholders to appear on it. It is the slide layout that determines which placeholders will appear on the new slide. We can use the following steps to insert a new slide:

I. From the **Home** tab, click the bottom (▼) half of the **New Slide** command to open the menu of **slide layout options.**

II. Select the slide we want to insert.

III. A new slide will be added to our presentation.

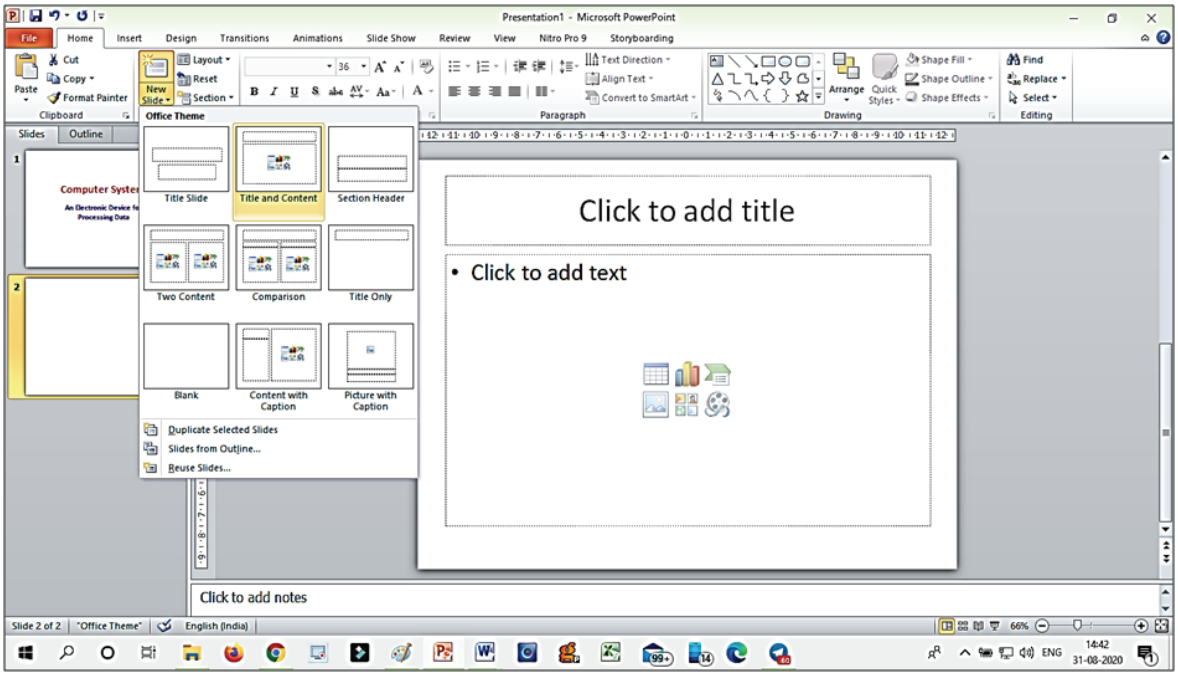


Fig 5.6: Insert a New Slide

To instantly add a slide that uses the same layout as the one we have selected, click the top half of the **New Slide** command or press shortcut key **Ctrl + M** from keyboard.

5.3.1 How to Change the Slide Layout?

A Slide Layout defines the design and placement of different elements on a slide.If we want to draw a chart on a slide, we have to select a slide layout that provides a convenient way to add chart to the slide. We can select the Slide Layout during insertion of new slide. However, we can also change the slide layout after the slide has been inserted in the presentation.To change the layout of the slides, we can follow the steps as given below:

I. Select the slide whose layout we want to change.

II. In the **Home** tab, click on the Layout drop-down menu, located in the **Slides** group.

III. Select the layout that suits our requirements.

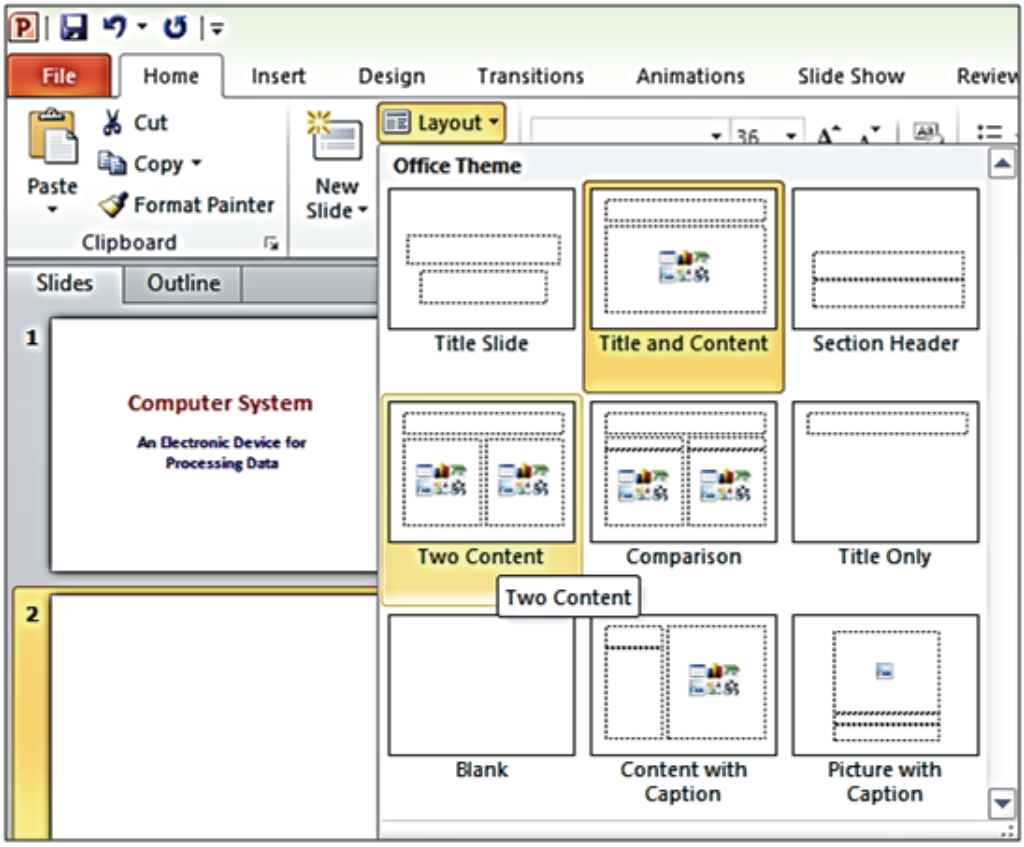


Fig 5.7: Slide Layout

5.4 HOW TO CHANGE THE APPEARANCE OF SLIDES?

Whenever we start PowerPoint, we may typically see a single slide with a white background. Sometimes, we need to change the appearance of our slides to improve the look and feel of our slides. PowerPoint provides us the facility to change the complete appearance of slide by changing the background-design, colour-scheme, background-colour, texture, pattern and gradient. In PowerPoint 2010, Design tab helps us to easily modify and customize our slides' theme, background, and more.

5.4.1 Working with Themes

A theme is a predefined set of colours, fonts, and visual effects that we apply to our slides for a unified, professional look.Themes help us to create content that looks attractive and consistent while avoiding lots of manual formatting. Following steps can be used to apply themes to our current presentation:

I. Click on the **Design** tab and find design themes in the **Themes** group.

II. To preview how the current slide would look with a particular theme, hover the mouse pointer over the thumbnail image of that theme.

III. To view more themes, on the Design tab, click on **"More"** button at the right-bottom end of the gallery.

IV. To select and apply a theme, click the thumbnail image of that theme.

V. Unless we specify otherwise, PowerPoint applies the selected theme to the entire presentation.

VI. To apply a theme to only one or a few slides, select the slide or slides, right-click the theme we want, and select Apply to Selected Slides.

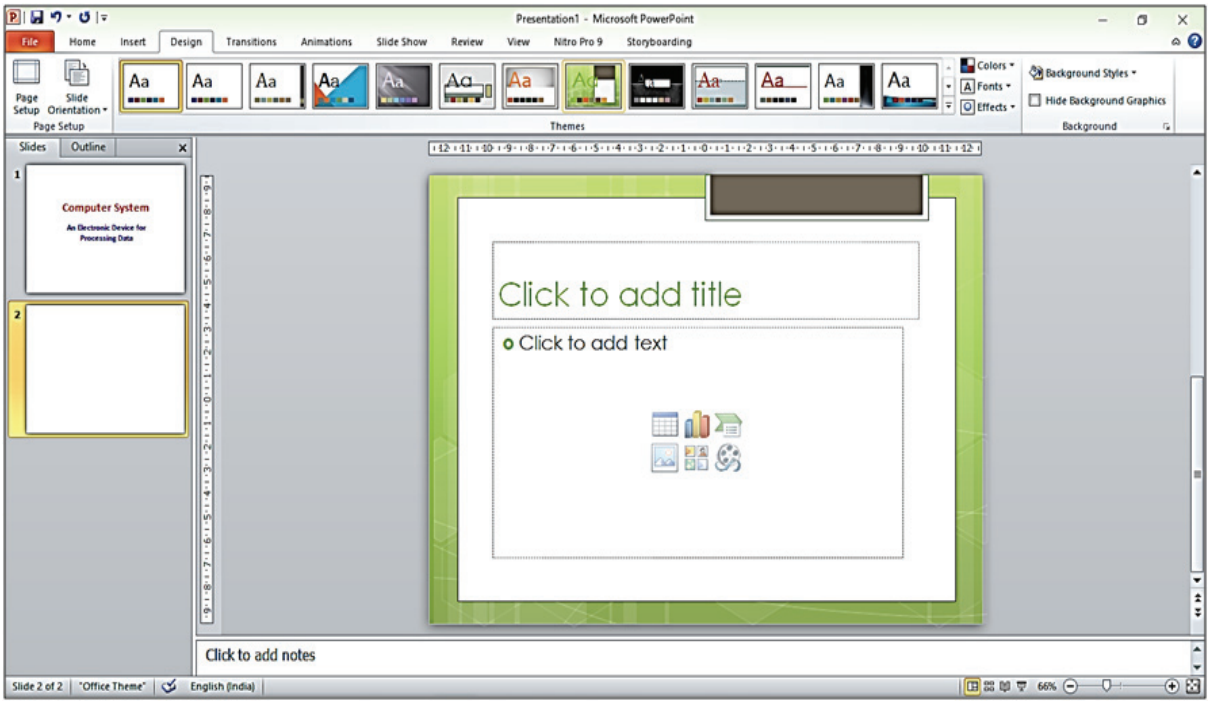


Fig 5.8 Themes

5.4.2 Changing Background Styles

PowerPoint backgrounds are images or design elements that are placed on our slides behind whatever text, charts, images, or other objects we are presenting on the slides.Background styles can be added to our slides after a theme is applied. These styles are fill-variations based on theme colours. When we switch to a different theme, the background styles are updated based on the new theme colours.

In PowerPoint, we can add a background style to our presentation. There are 12 default slide Background Styles available in PowerPoint 2010. In the following discussion, we will learn how to apply the background styles of slides in PowerPoint:

I. Click on **Design** tab

II. Click on the **Background Styles** button in Background group.

III. **Background Styles** drop-down gallery will open which shows 12 predefined background styles as shown in the figure 5.9. Click a style to select it. The new background will appear on the slides.

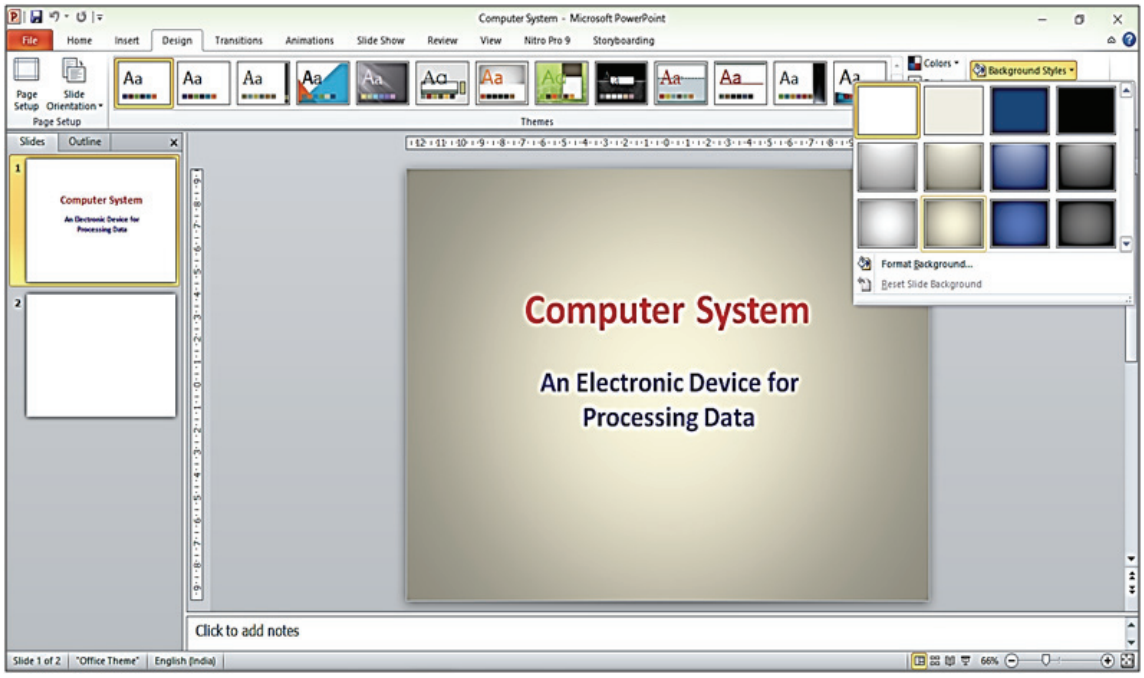


Figure 5.9: Background Styles gallery and Format Background option

5.4.3 Format Background

Beyond the Background Styles, we can also change the default background to a solid colour, a gradient, a picture or texture, or even a pattern.For this purpose, we have to use the Format Background dialog box. To open the **Format Background** dialog box, perform the following steps:

Click **Design tab → Background Styles in Background group → Format Background…**

Following **Format Background** dialog will appear:

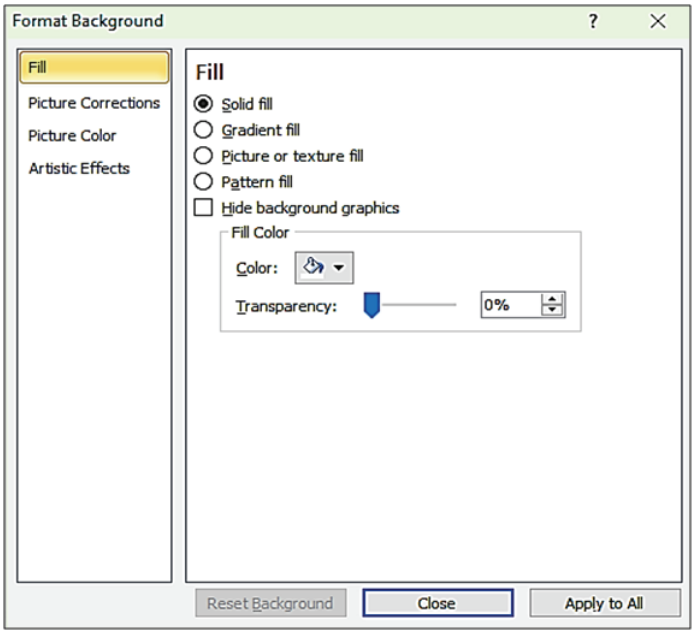


Figure 5.10: Format Background dialog box

Two panes are present in this dialog box. Left pane shows 4 options: Fill, Picture Corrections, Picture Color, and Artistic Effects. First option - **"Fill"** is used to format the background of slides while other options - Picture Corrections, Picture Color, Artistic Effects, are used to format the background picture (if we use Picture as a Background on the slides). The options within the **Format Background** dialog box under **Fill** panel are explained below:

i. **Solid Fill :** This option is used to add a solid colour background to our slide. We can use any of the Theme colours, Standard colours, or any other colour of our choice. To fill a solid colour, click the **Color** button to open the **Color** drop-down gallery. The options in this gallery are:

- **Automatic :** This option is used to set the default background colour of the Theme applied to the presentation.
- **ThemeColors :** This option is used to select any of the colors which are from the active Theme of the presentation.
- **Standard Colors :** This option is used to choose a color from any of the ten standard colors.These ten standard colors are just choices of colors that PowerPoint believes to be widely used.
- **Recent Colors :** This option is used to select a color from the list of most recently used colors.
- **More Colors :** This option is used to open the **Colors** dialog box, which helps us to create our own new color to use as a background fill.

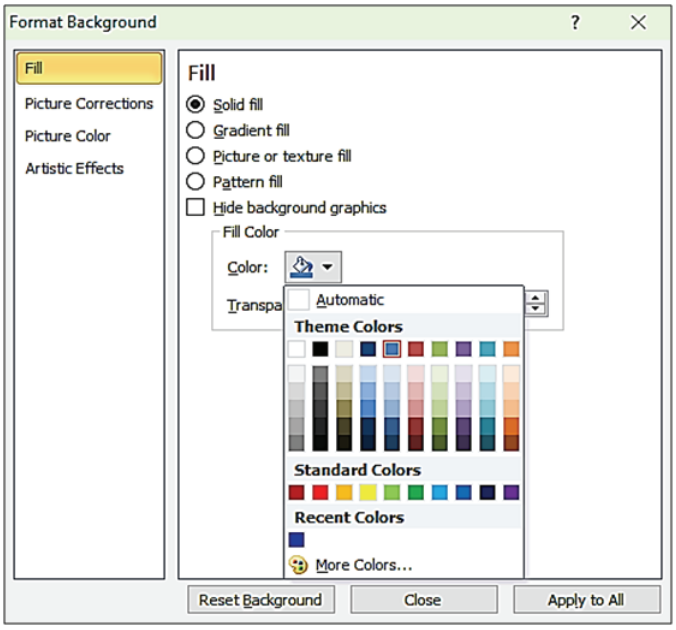


Fig 5.11: Fill Options-Solid Fill

ii. **Gradient Fill :** A gradient is a blend of two or more colours merging into each other. Gradient Fill option is used to apply a gradient as a slide background. On Clicking the Gradient Fill radio button, we can see many options to format background with the

Gradient. **Preset colors** include a gallery of several ready to use default gradients that we can select for our slide background. Other options under Gradient Fill can be used to adjust the settings for Gradient.

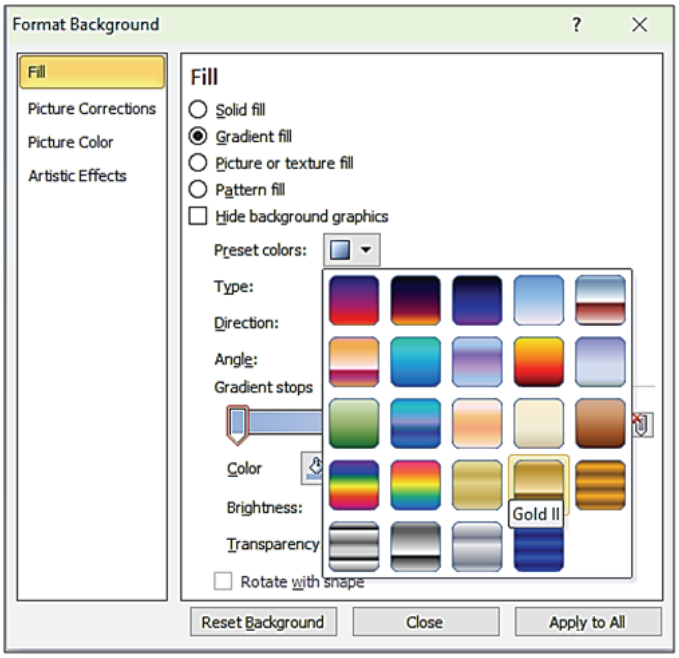


Fig 5.12: Fill Options-Gradient Fill

iii. Picture or Texture Fill : It allows us to use a picture or a texture as a background. When we click on the Picture or texture fill radio button, it will display many options to fill the slide background with the texture or picture.

Clicking on **Texture** button will show Texture drop-down gallery as shown in the following figure. Choose from any of these readymade textures to change the slide background.

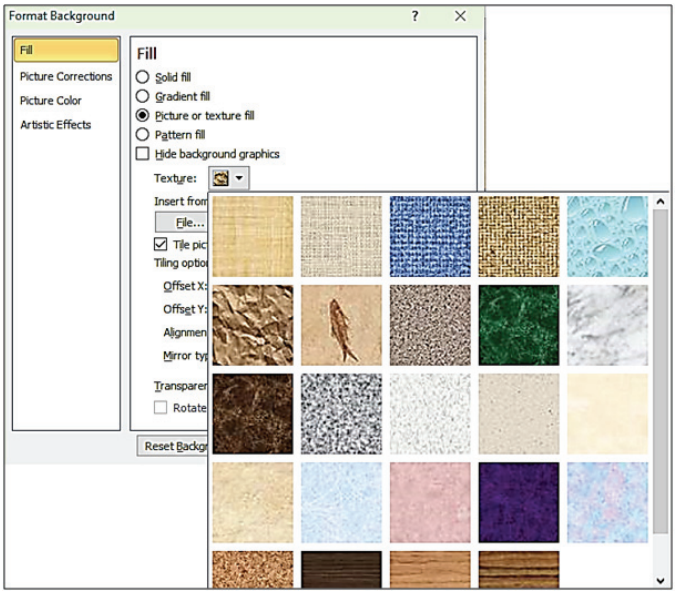


Fig 5.13: Fill Options-Picture or Texture Fill

If we want to use any other picture as a texture, then click on the **File…** button under the **Insert From** section. Clicking the **File…** button brings up the **Insert Picture** dialog box. Navigate to where we have some pictures saved, after selecting the picture, click the Insert button in the dialog box.

iv. **Pattern Fill :** Patterns in PowerPoint are two-color designs. These designscomprise of lines, dots, dashes, checks, etc. PowerPoint includes 48 such patterns with names like plaid, weaves, shingle and zigzag etc.We can choose any from these patterns to apply at the slide background. To change the foreground or background colors of these patterns, we can use **Foreground Colors** and **Background Colors** galleries which are present below these patterns.

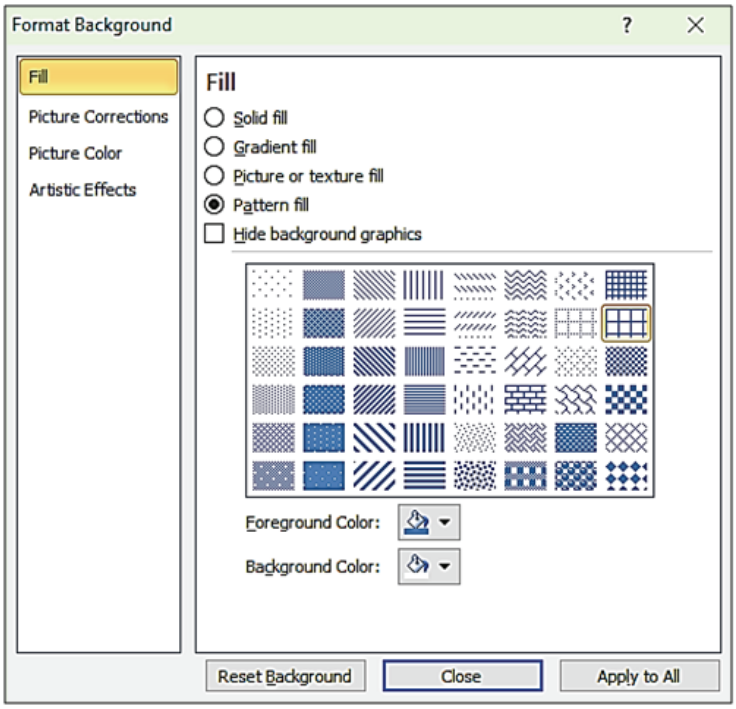


Fig 5.14: Fill Options-Pattern Fill

Select any of the Format Background options explained in this section. Thereafter, to apply the selected format to the background of our slides, either click on "Close" or **"Apply to All"** button. By Clicking on Close button, we can format the background of selected slides in the presentation. If we don't have multiple slides selected, then the formatting selection of background will be applied to the active slide only. Clicking on "Apply to All" button will fill all slides in the presentation with the selected formats.

If our slide background includes graphics which we want to hide for printing purposes, or another reason, we can select **Hide Background Graphics** check box in the Format Background dialog box. Although the background graphics will remain part of our presentation, it will be hidden from view.

Tip : The **"Hide Background Graphics"** check box is also available under the **Background Styles** button on the **Design** tab.

If we want to abandon all the changes that we made to the slide background, click the **Reset Background** button. Note that this button will be greyed out unless we make some changes to the slide background.

5.5 ADDING CONTENTS TO A SLIDE (WORDART, CLIPART, SHAPES, TABLES, SMARTART, PICTURES, MOVIE / VIDEO etc.)

The presentation slides contain the information that we want to communicate with our audience. This information can include text, pictures, charts, video, and sound.

Adding **Graphics** will help make our presentation more presentable for viewing by making it more interesting. Ifwe are presenting numbers, statistics, or other data then it would be convenient to represent such numbers/data in the form of **charts** or **tables. Shapes** are a way to add creativity to our project. Shapes allow us to separate our designs into boxes, circles, and other interesting formats to make our presentation more exciting. **ClipArt** is an excellent way to make our project more appealing to our audience.

To add these contents to our slides, we can use appropriate options available in **Tables, Images, Illustrations and Media** groups of **Insert** tab. These options work in the same way as we do in Microsoft Word. So, we are not going to discuss these options individually in detail as we have learnt about them in your previous class.

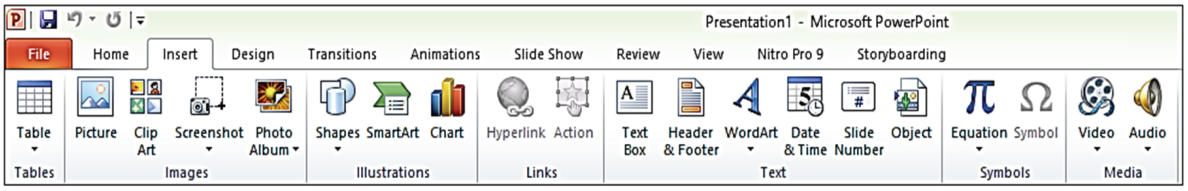


Fig 5.15: Options of Insert Tab

There is one other way to insert graphics, tables, shapes etc. into our presentation slides. Many slides have a set of 6 icons in the Content Placeholders as shown in the following diagram. These icons can be used to insert Tables, Chart, SmartArt Graphics, Picture from File, Clipart, and Media Clip. Clicking on appropriate icon will open/show options for the insertion of respective Objects in the slide.

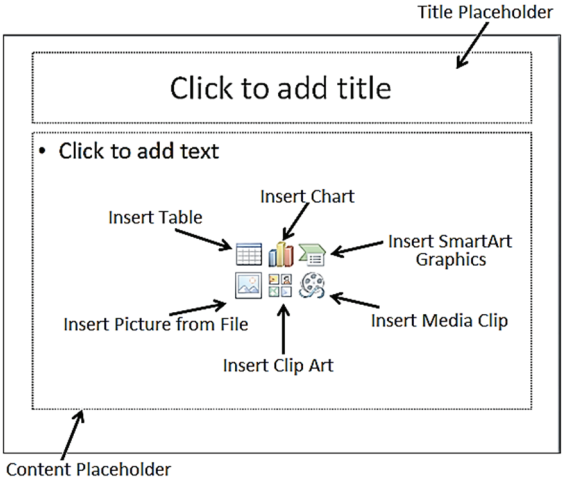


Fig 516: Slide with Title and Contents Layout

When we add graphics to a slide, we may need to resize them to another location. To resize a graphic image, PowerPoint displays handles around our selected object. Move the mouse pointer over a handle. The mouse pointer turns into a two-way pointing arrow. Hold down the left mouse button and drag (move) the mouse. PowerPoint resizes our selected graphic image. Release the left mouse button when we are happy with the new size of our graphic image. We can also rotate graphics with the help of a green rotate handle that appears on the selected graphics. To delete any graphics, just select the graphics by clicking on it and then press the Delete button from the keyboard.

5.6 SLIDEVIEW OPTIONS IN POWERPOINT

Status bar contains view options that allow the ability to switch between PowerPoint views. It is important to be able to access the different slide views and use them for various tasks. There are four view buttons (Normal View, Slide Sorter View, Reading View and Slide Show) along with the Zoom slider on the status bar as shown in the following figure. These view options are located on the bottom-right of the PowerPoint window in Normal view.

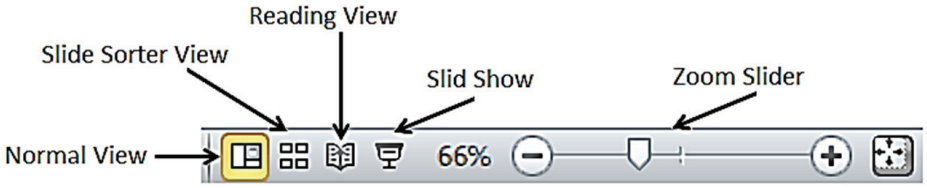


Fig 5.17: View Options in Status Bar

A brief description of these views is given below:

- **Normal view :** This is the default view where we create, edit and design our slides. This view has 3 working areas: left area (having slide/outline tabs), right area (having slide pane) and the bottom area (having notes pane). We can also move slides in the Slides tab pane on the left area of this view. If we want to delete a slide, just click on the slide that we want to delete in the left area and press Delete key from the keyboard.
- **Slide Sorter view :** This view represents the presentation slides in thumbnail form. Slide Sorter View gives an overall picture of presentation making it easy to reorder, add, or delete slides.
- **Reading view : T**his view fills most of the computer screen with a preview of our presentation. This view shows some easily accessible buttons for navigation, which are located at the bottom-right of the screen.
- **Slide Show view :** We use Slide Show view to deliver our presentation to our audience. Slide Show view has an additional menu that appears when you hover over it. This menu allows us to navigate slides and access other features that we can use during a presentation.

- **Zoom Slider :** It is located at the right side of the Status Bar. The Zoom control allows us to zoom-in for a closer look at slide contents. The zoom control consists of a slider that we can slide towards left or right to zoom in or out. We can also click on the + and - buttons to increase or decrease the zoom factor.

Points To Remember

1. We can also create a blank presentation by just pressing the Ctrl + N shortcut key
2. Placeholders are the dotted-line containers on slide layouts that hold contents such as: titles, subtitles, tables, charts, SmartArt graphics, pictures, clip art, videos, and sounds.
3. To instantly add a slide that uses the same layout as the one we have selected, press shortcut key Ctrl + M from keyboard.
4. A Slide Layout defines the design and placement of different elements on a slide.
5. A theme is a predefined set of colours, fonts, and visual effects that we apply to our slides for a unified, professional look.
6. There are 12 default slide Background Styles available in PowerPoint 2010.
7. A gradient is a blend of two or more colours merging into each other.
8. Patterns in PowerPoint are two-color designs which comprises of lines, dots, dashes, checks, etc.
9. Normal view is the default view where we create, edit and design our slides.
10. We use Slide Show view to deliver our presentation to an audience.

1. Multiple Choice Questions:

i. A _____ defines the design and placement of different elements on a slide.

a) Background Style b) Place holder

c) Slide Layout d) Pattern

ii. A _____ is a blend of two or more colours merging into each other

a) Theme b) Pattern

c) Background Style d) Gradient

iii. _____ is the default view where we create, edit and design our slides.

a) Normal view b) Slide Show

c) Slide Sorter View d) Reading View

iv. There are _____ default slide-background styles available in PowerPoint 2010.

a) 48 b) 4

c) 12 d) 3

v. The _____ control allows us to zoom-in for a closer look at slide contents.

a) Zoom b) Slide

b) Normal View d) Gradient

2. Very Short Answer Type Questions

I. What is the Shortcut Key to Insert a New Slide?

II. What is the shortcut key to Create a New Presentation?

III. Which tab is used to format text on the slide?

IV. Which PowerPoint view is used to deliver our presentation to our audience?

V. Which bar contains the View buttons and Zoom Slider in PowerPoint?

3. Short Answer Type Questions

I. Write the steps to create a new presentation using File tab in PowerPoint.

II. What are Placeholders?

III. What are Themes?

IV. Write the names of different view buttons available at the status bar of PowerPoint window.

V. What is Gradient Fill?

VI. Which options are available in the Fill pane of the Format Background dialog box?

4. Long Answer Type Questions

I. Explain briefly about the different methods to change the appearance of slides.

II. What is Slide Layout? How will you change it in PowerPoint?

III. Write about the Slide View options in PowerPoint.

Lab Activity

ACTIVITY – I

I. Create a New blank presentation having at least 5 slides.

First slide : slide related to your School name

Second Slide : about infrastructure

Third Slide : About Computer lab

Fourth Slide : About Teachers

Fifth Slide : Best Thing about your school

II. Format the Background of all slides with the Gradient Fill

III. Insert at least one picture in two slides from clip art gallery

IV. Save it with your roll no

V. Run the Slide Show to present it to other students of your class

ACTIVITY – II

I. Create a New blank presentation having at least 5 slides explaining the topic of your own choice.

II. Apply Theme of your choice to this presentation

III. Try changing the order of Slides in your presentation

IV. Save it with your name and roll no

V. Run the Slide Show to present it to other students of your class

CHAPTER - 6

MICROSOFT POWERPOINT (PART-III)

OBJECTIVES OF THIS CHAPTER

6.1 Introduction

6.2 Working with Transition

6.3 Working with Animation

6.3.1 How to Apply Animation?

6.3.2 Working with Animation Options

6.4 Narration and Timings

6.5 Save Presentation as…

6.1 INTRODUCTION

In the previous Chapter, we have learnt about some basics and advanced options of PowerPoint. In this chapter, we will learn some more advanced features of PowerPoint such as adding Transition and Animation Effects, how to add narration, and how to save presentation in other formats.

6.2 WORKING WITH TRANSITION

A slide transition is the visual and motion effect that occurs when we move from one slide to the next slide during a presentation. We can control the speed, add sound, and customize the look of transition effects. Following are the steps to apply Transition in the presentation:

1. Select the slide we want to add a transition to
2. Click on the Transitions tab and select a transition from the "Transition to This Slide" group.
3. Set other options such as Effect Options, Sound, and Duration etc. according to our requirement.
4. Select Preview to see what the transition looks like
5. If we want to apply the same transition on all slides in the presentation, then click **"Apply To All"** in the Timing group.

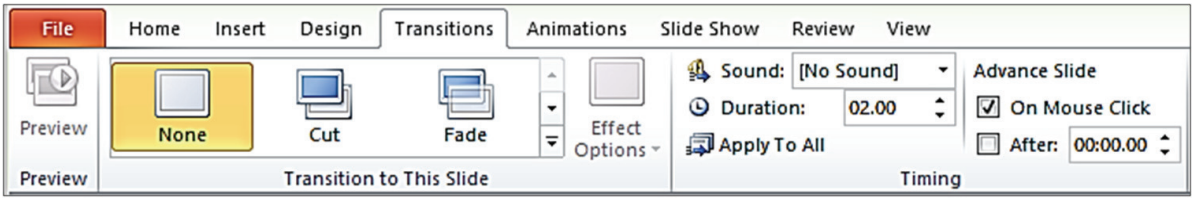
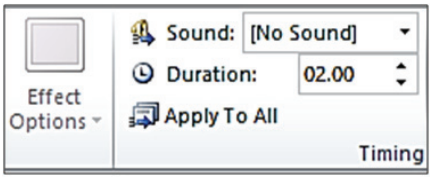


Fig 6.1: Transitions Tab

We can also remove the transition effect that has been applied on the slides by clicking on **None** in the **Transitions** tab. (in Transition to this Slide group)

Following are some additional settings that can be set for Transition Effects in PowerPoint:

- **Effect Options :** This option is present in the **"Transition to This Slide"** group of **Transition** tab after the transition gallery. This option is used to change how the transition occurs. It allows us to change the direction or other options of the effect.
- **Sound :** This option is present in the **"Timing"** group of **Transition** tab. It allows us to set a sound on each transition.



- **Duration :** This option is also present in the **"Timing"** group of **Transition** tab. It allows us to increase or decrease the duration or time of the effect. We can set a time in Duration option to set how fast the transition goes.

We can apply these settings to our presentation according to the requirements and thus make our presentation more effective.

6.3 WORKING WITH ANIMATION

Animations are visual effects that display movement on the objects in the presentation. These slide objects can be anything such as: text, pictures, charts, SmartArt graphics, shapes, even movie clips etc. Animation can help make a PowerPoint presentation more dynamic. PowerPoint provides following four types of animations:

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

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

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

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

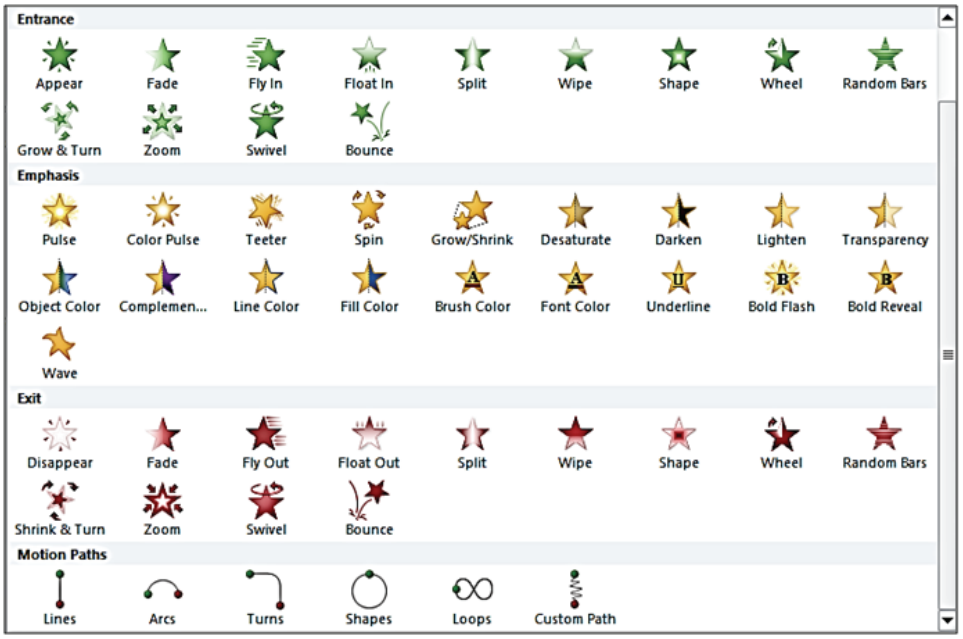


Fig 6.2: Types of Animations in PowerPoint

6.3.1 How to Apply Animation?

PowerPoint provides predefined collection of animation effects. This collection of animation effects is also known as Animation Schemes. We can apply these predefined visual effects to slide objects with a single click. Following are the steps to apply these animation effects on the slide objects:

1. Click on the **Animation** tab
2. Select the object on which we want to apply animation scheme.
3. In the **Animation** group, click the **More** arrow button to view the available animations.
4. Select the desired animation effect, for example: Appear or Fade or Fly In etc., that we want to apply on the selected object.

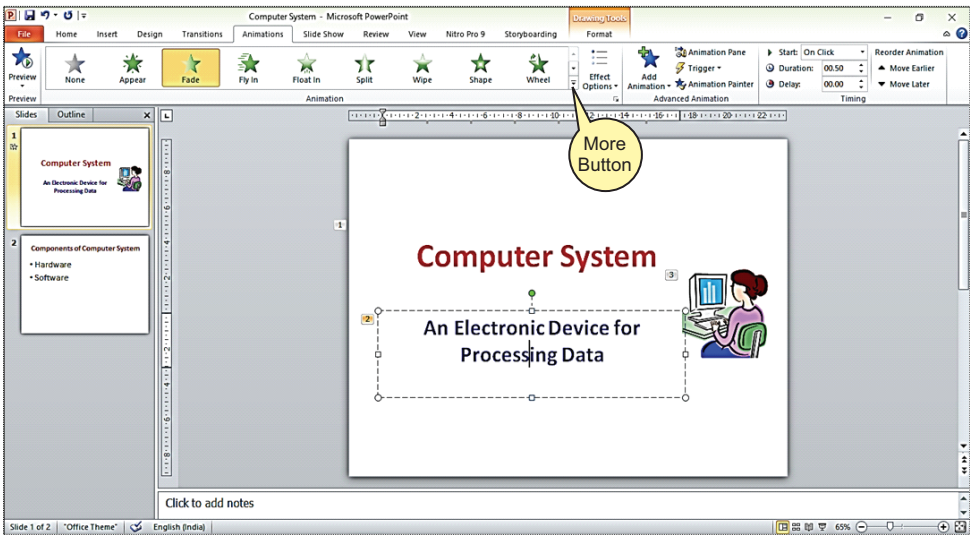


Fig 6.3: PowerPoint Window with Animation Tab

6.3.2 Working with Animation Options

We can customize the animations effects applied on the slide objects such as increase or decrease the speed of moving objects, duration of effect, delay in effect, change the order to animation etc. To customize such animation effects, we have to modify the values of options available in the Animation tab. Some of commonly used options to customize the animation effects on the slide are explained below:

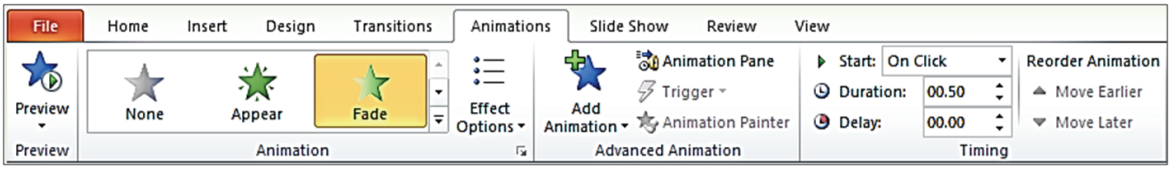
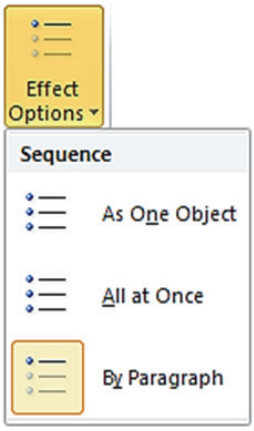
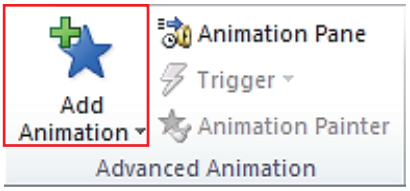


Fig 6.4: Animation Tab

- **Effect Options :** Some animation effects will have options that we can change. There will be different Effect Options depending on the animation we choose for the object.For example, with the **Fly-In** effect, we can control which direction the object comes from.Similarly, with the **"Appear"** effect on the bulleted list, we can control the sequence of list items, i.e.we can set whether the text appears as one object, all at once, or by paragraph.We can access the Effect Option by selecting **Effect Options** on the **Animation tab** ribbon.

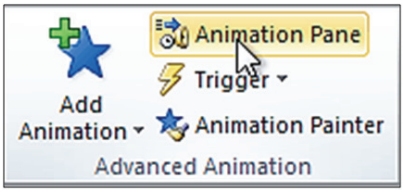


- **Add Animation :** We can also apply more than one animation effects on a single object. The same slide object can have all four animation types added to it and set to play one after the other.To apply multiple animations, select the object and then click the **Add Animation** button to display the animation effects. Just as we did with the first effect, we can hover over to get a live preview. Click to apply the effect. The animation effects will play in the order they are applied.



- **Animation Pane :** The **Animation pane** allows us to view and manage all of the effects that are on the current slide. We can **modify** and **reorder** effects directly from the Animation pane, which is especially useful when we have several effects.To open the Animation pane, perform the following steps:

i. From the **Animations** tab, click the **Animation Pane** command.



ii. The Animation Pane will open on the right side of the window as shown in the following figure. It will show all of the effects for the current slide in the order they will appear during slide show.

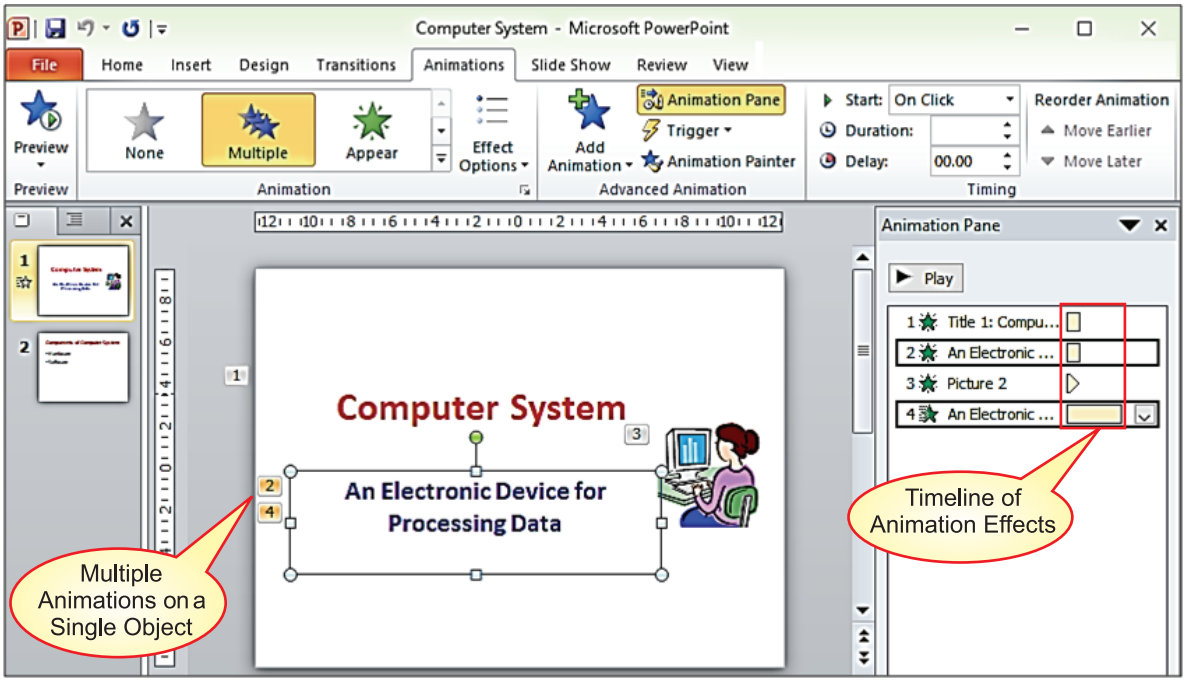


Fig 6.5: Multiple Animations and Animation Pane with Timeline

We can reorder the sequence of animation effects of slide objects from the Animation Pane using the following steps:

I. On the **Animation Pane,** click and drag an effect up or down

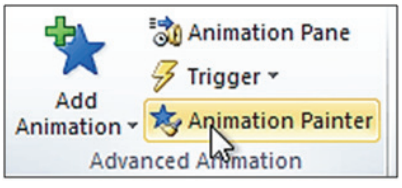
II. The effect will get reordered.

We can preview the animation effects of slide objects from the Animation pane using the following steps:

I. From the **Animation pane,** click the **Play** button.

II. The effects for the current slide will play. On the right side of the Animation pane, we will be able to see a **timeline** that shows the progress through each effect. If the timeline is not visible, click the drop-down arrow for an effect, then select Show Advanced Timeline.

- **Animation Painter :** This option is used to copy animation effect. Sometimes we may want to apply the same effects to more than one object. We can do this by copying the animation effects from one object to another using the Animation Painter. Following are the steps to do so :

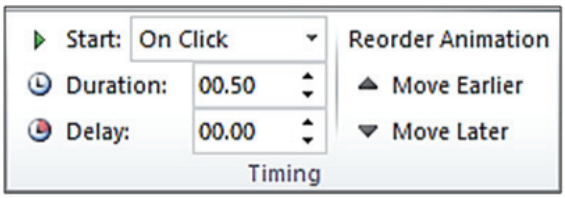


I. Click the object whose effects we want to copy

II. From the Animations tab, click the **Animation Painter** command.

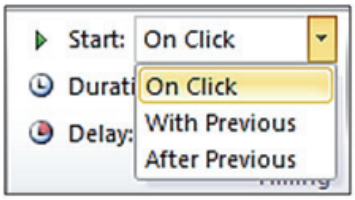
III. Click the object we want to copy the effects to. The effects will be applied to the object.

- **Timing Effects :** Timing group of Animation tab provides options for when to start animation, duration of animation effect, delay time and Reordering options of animation effects.To change/adjust the value of any option in this group, first of all select the effect in the Animation Pane and then set the value of that option.



I. Using **Start** option, we can change when our animation starts to play. By default, it is On Click. Choose one of the options from the **Start** dropdown list:

- ***On Click :*** It starts the animation when we press the left click button of the mouse.



- ***With Previous :*** It starts animation of object at the same time as the previous animation begins.
- **After Previous :** It starts animation when previous animation ends.

II. Using **Duration** option, we can also set/edit the time duration that the animation plays.

III. We can also set the time **Delay** for the animation effects by setting the time whatever we want.

IV. We can change the order in which the animation effects are applied by clicking **Move Earlier** or **Move Later.**

- **Previewing Animations :** Click on the Preview button in Preview group of Animations tab at any time to test how our animations look.We can also select the Play button on the Animation Pane to preview the Animation effect.

6.4 RECORD SLIDE SHOW (NARRATION AND TIMINGS)

Record Slide Show is a very useful feature of PowerPoint. This feature is similar to the Rehearse Timing feature, but it's more comprehensive.If we have a sound card, microphone, and speakers, and (optionally) a webcam, we can record our PowerPoint presentation. During this recording, we can capture narrations and slide timings. After recording narration, it can be played for our audience in Slide Show or we can save the presentation as a video file. Such recorded presentations are very useful if we are planning on using our slide show for a self-running presentation.

Adding narration to PowerPoint presentations is very easy. Following are the steps to record slide show with narration and timing in PowerPoint 2010:

i. Click the **"Slide Show"** tab on the ribbon.

ii. Click the **"Record Slide Show"** drop-down arrow in the Setup group.

iii. Select either Start Recording from Beginning or Start Recording from Current Slide. The Record Slide Show dialog box will appear.

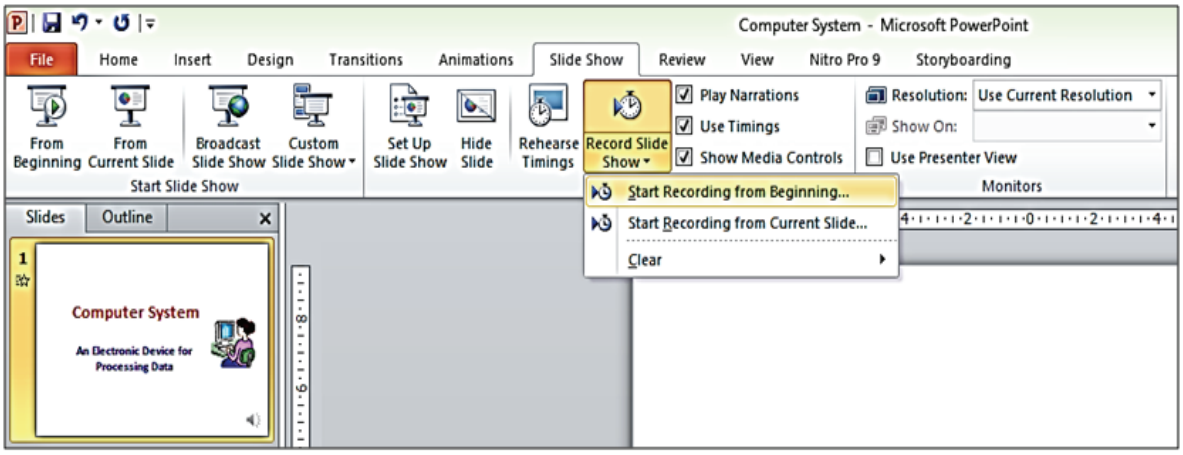
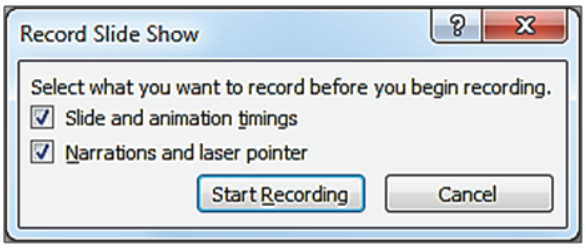


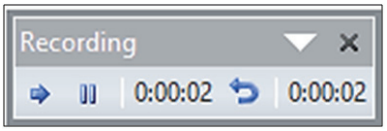
Fig 6.6: Record Slide Show

iv. Choose what we would like to record by clicking on the appropriate check boxes (Slide and animation timings and/or Narrations and laser pointer) and click **"Start Recording".** (Remember, we can only record narration only if we have a microphone attached to our computer.)



v. Our presentation will open up to a full-screen view. Play the slide show of our presentation. If we are recording narration, Make sure to speak clearly into the

microphone. When we are ready to move to the next slide, click the Next button on the Recording Toolbar in the top-left corner, or use the right arrow key from keyboard.



vi. We can also pause recording of our slide show using the Pause Recording button available on the Recording Toolbar and can view the time duration of Recording.

vii. When we reach the end of the show, press the Esc key to exit.

viii. Our slide show timings and narration are now included in our presentation. The slides with narration will be marked with a speaker icon at the bottom-right corner of the slide.

ix. We may now play our presentation and see the recorded narrations in the self-running presentation.

6.4.1 How to Remove Narration or Timings from a Recorded Slide Show

i. Click the **Slide Show** tab

ii. Click the **Record Slide Show** drop-down arrow in the Set Up group.

iii. Click/Hover on **Clear** option to open submenu.

iv. Select the option as per the requirement.

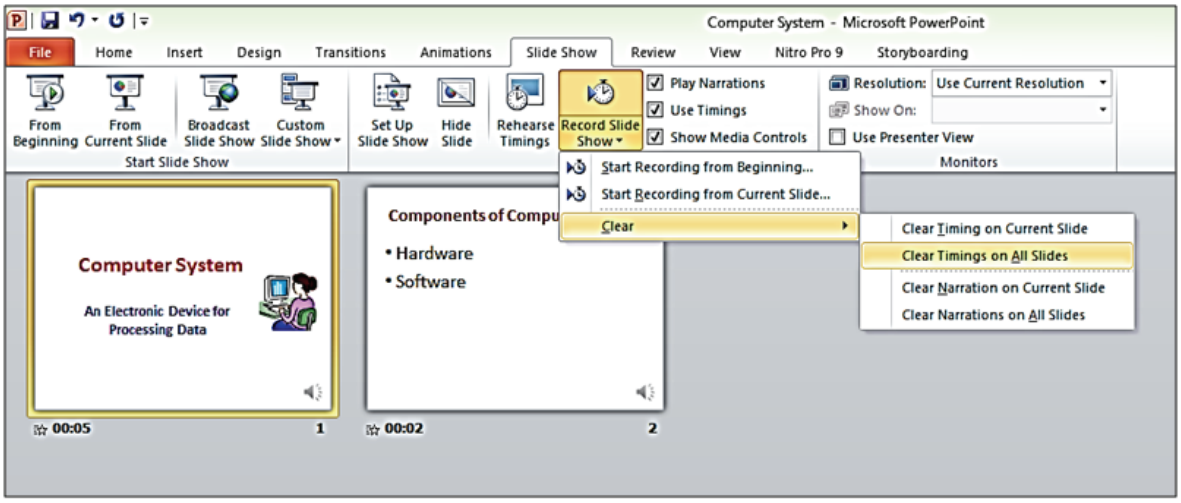


Fig 6.7: Clear Timings on Slides

6.5 SAVE PRESENTATION AS...

We have learnt about saving the PowerPoint presentation file with **.pptx** extension. Besides this, a presentation file can be saved in several other formats. To save a presentation file in other formats, we have to use the **Save As...** dialog box which can be opened by **File → Save** As option. Following discussion shows how we can save our presentation file in other common formats using PowerPoint 2010:

6.5.1 Save Presentation in PDF format

Saving our PowerPoint presentation as a PDF (Portable Document Format) file is a quick way to produce a PowerPoint presentation that is ready for printing, reviewing, or emailing. The biggest advantage of saving a presentation in PDF is that recipients won't be able to edit our presentation contents. Following are the steps to save the presentation slides in the PDF format:

i. Click on **File** tab

ii. Click on **Save** As option

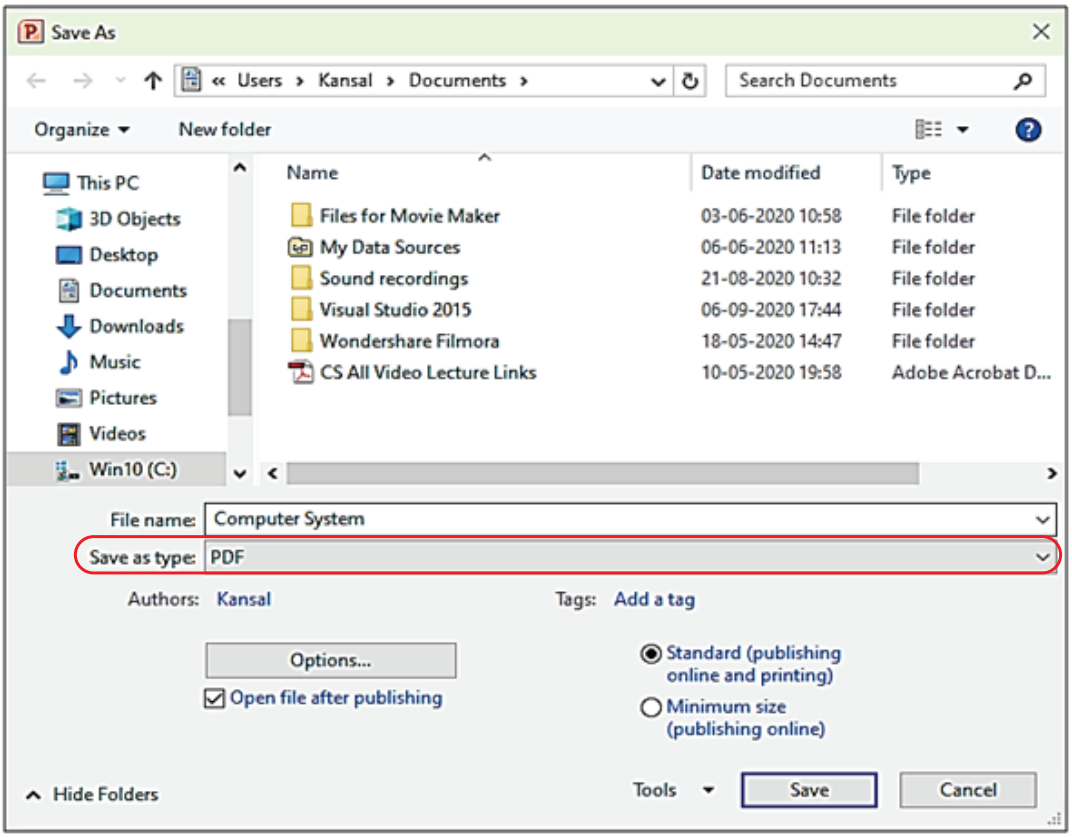


Fig 6.8: Save As dialog box – Saving presentation in PDF Format

iii. Select a location and type the name for the file.

iv. Select the **"Save as type"** drop down arrow and choose PDF **(*pdf)**

v. Click on **Save** button to create PDF file

6.5.2 Save Presentation as a Video:

One of the new features in PowerPoint 2010 helps us to create a video with just a click. After we have created our slides and record timing and narrations that we want to include in our video, we're ready to create a video file. Following are the steps to save a presentation as a Video:

i. Click on **File** tab

ii. Click on **Save As** option

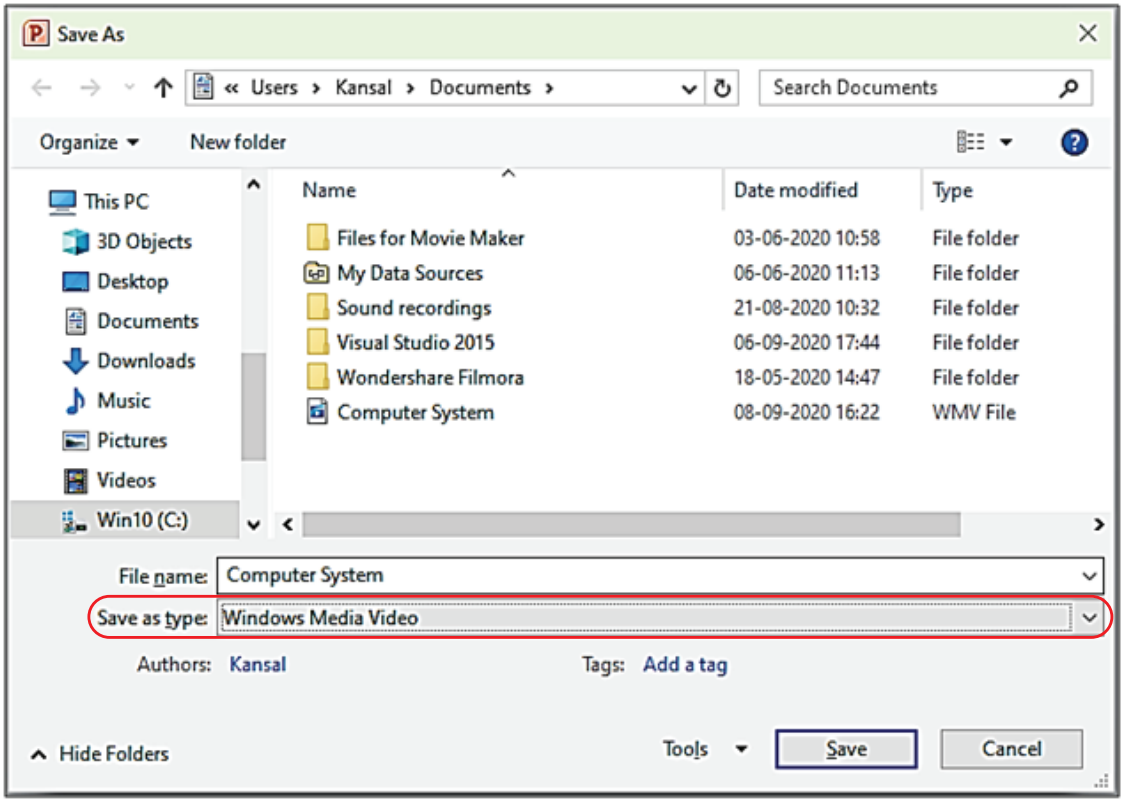


Fig 6.9: Save As dialog box – Saving presentation in Video Format

iii. Select a location and type the name for the file.

iv. Select the **"Save as type"** drop down arrow and choose Windows Media Video **(*wmv)**

v. Click on Save button to create Video file.

As the conversion to **.wmv** format begins, there will be a progress bar displayed in the lower right corner of PowerPoint that indicates the pace. The time taken for the conversion will depend on the size of the PowerPoint file.

Once the presentation is converted to video, the video can be posted to a website, Facebook or YouTube for others to view or it can be played on computers using any video player.

6.5.3 Save a Presentation as a PowerPoint Show

We can save our PowerPoint presentation as a PowerPoint Show (a .ppsx file) so that it automatically starts the slide show when the file is opened. Following are the steps to save a presentation as PowerPoint show:

i. Click on **File** tab

ii. Click on **Save A**s option

iii. Select a location and type the name for the file.

iv. Select the **"Save as type"** drop down arrow and choose **PowerPoint Show**

v. Click on **Save** button to create PowerPoint Show.

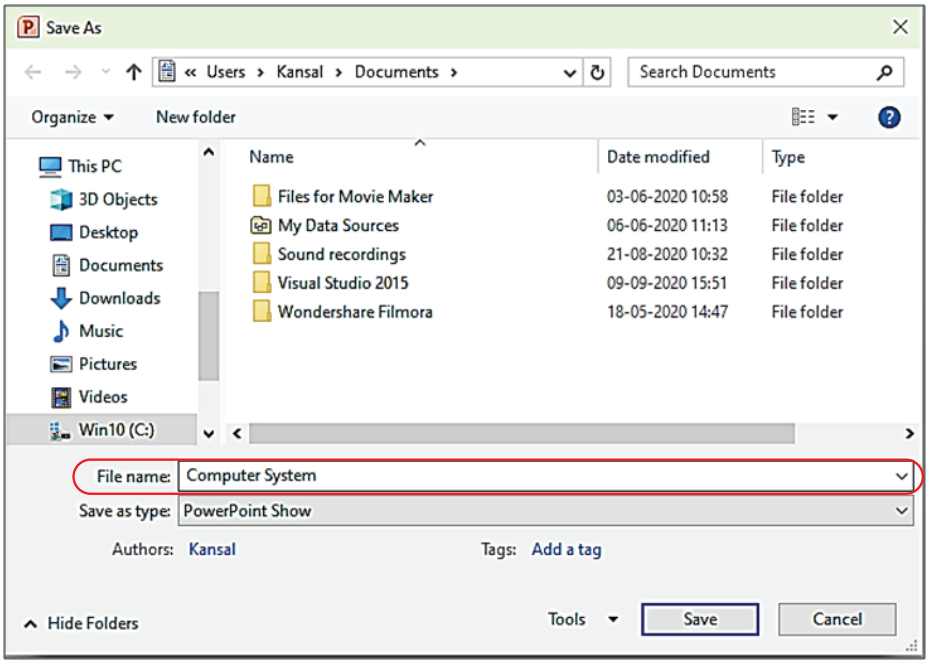


Fig 6.10: Save As dialog box – Saving presentation as PowerPoint Show

The file is saved as a .ppsx file. When the file is double-clicked, it directly opens as a slide show.

6.5.4 Save Presentation in the form of Picture Files

We can either save all slides as images at the same time or do one slide at a time. Following steps shows how to save presentation slides as pictures:

i. Click on **File** tab

ii. Click on **Save As** option

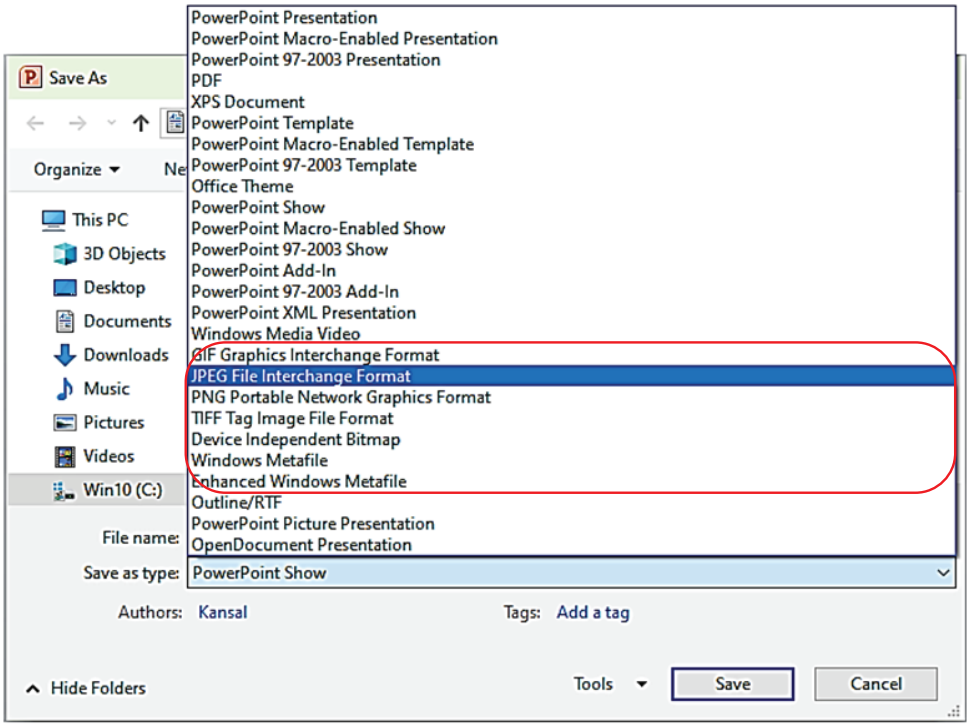


Fig 6.11: Save As dialog box – Saving presentation in picture Format

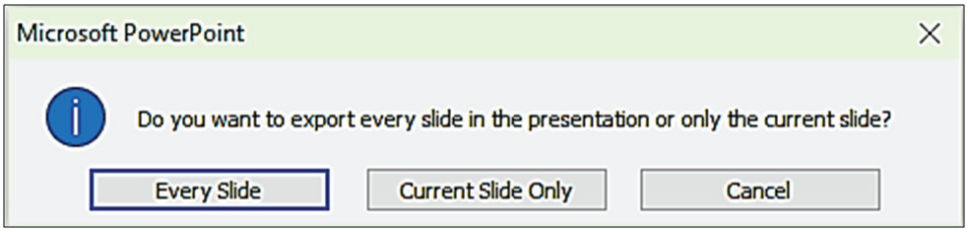
iii. Select a location and type the name for the file.

iv. Select the **"Save as type"** drop down arrow and choose one of the following image formats to save the slide in the form of pictures

- GIF Graphics Interchange Format
- JPEG File Interchange Format
- PNG Portable Network Graphics Format
- TIFF Tag Image File Format
- BMP Device Independent Bitmap
- WMF Windows MetaFile
- EMF Enhanced Windows MetaFile

v. Click on **Save** button.

vi. A new dialog shows up asking with 3 buttons: "Every Slide", "Current Slide Only" or "Cancel". Select the appropriate option as per the requirement.



vi. A confirmation message shows up telling us that all our slides or current slide have been saved as a separate image. Click "OK".

This is a really neat feature if we want to post an image of a slide or a whole Slide Show on our blog or online.

Points To Remember

1. A slide transition is the visual and motion effect that occurs when we move from one slide to the next slide during a presentation.
2. **Animations** are visual effects that display movement on the objects in the presentation.
3. PowerPoint provides four types of animations: Entrance, Emphasis, Exit and Motion Paths.
4. PowerPoint provides predefined collection of animation effects which are also known as **Animation Schemes.**
5. The **Animation pane** allows us to view and manage all of the effects that are on the current slide.
6. **Animation Painter** option is used to copy animation effect.
7. **Preview** button in Preview group of Animations tab can be used at any time to test how our animations look.

8. Record Slide Show feature is similar to the Rehearse Timing feature
9. The biggest advantage of saving a presentation in PDF is that recipients won't be able to edit our presentation contents.
10. We can save our PowerPoint presentation as a PowerPoint Show (a .ppsx file) so that it automatically starts the slide show when the file is opened.

1. Multiple Choice Questions:

I. A _____ is the visual and motion effect that occurs when we move from one slide to the next slide during a presentation

a) Slide transition b) Animation
c) Animation Scheme d) Slide Show

II. PowerPoint provides _____ types of animations

a) Two b) Three
c) Four d) Five

III. PowerPoint provides predefined collection of animation effects which are also known as _____.

a) Slide transition b) Animation
c) Animation Scheme d) Slide Show

IV. Full Form of PDF is _____

a) Portable Data Format b) Portable Document Form
c) Portable Data Form d) Portable Document Format

V. We can save our PowerPoint presentation as a PowerPoint Show with _____ extension.

a) .ppsx b) .ppt
c) .pptx d) .pdf

2. Fill in the Blanks:

I. Using _____ tab, we can apply transition effects.

II. _____ option allows us to increase or decrease the duration or time of the effect.

III. _____ option is used to copy animation effect.

IV. To save a presentation file in other formats, we have to use _____ option.

3. Short Answer Type Questions

I. What is Slide Transition?

II. What is Animation?

III. What are Animation Schemes in PowerPoint?

IV. How will you preview animations in PowerPoint?

V. Write the name of four types of animations available in PowerPoint.

4. Long Answer Type Questions

I. What is Animation? What are its types in PowerPoint?

II. How will you save PowerPoint presentation in PDF format?

III. How will you apply Slide Transition in PowerPoint?

Lab Activity

ACTIVITY – I

1. Create a New blank presentation having at least 5 slides.

   First slide : Write about Internet

   Second Slide : Hardware Requirements of Internet

   Third Slide : Software Requirements of Internet

   Fourth Slide : Types of Internet Connection

   Fifth Slide : Write about your name and school name
2. Format the Background of all slides with the Solid Color
3. Apply Slide Transition Effects on all Slides
4. Save it with your Roll No and Section
5. Run the Slide Show to present it to other students of your class
6. Save the presentation as PDF

ACTIVITY – II

1. Create a New blank presentation having at least 5 slides.

   First slide : Write about Information Technology

   Second Slide : What is Web Site?

   Third Slide : What is Web Surfing?

   Fourth Slide : What is Downloading?

   Fifth Slide : Write about your name and school name
2. Format the Background of all slides with Gradient Fill
3. Apply Slide Transition and Animation Effects on all Slides and its objects
4. Save it with your Roll No and Section
5. Run the Slide Show to present it to other students of your class
6. Save the presentation as a video

CHAPTER - 7

GENERATIONS OF COMPUTER

OBJECTIVES OF THIS CHAPTER

7.1 Introduction
7.2 First Generation Computers
7.3 Second Generation Computers
7.4 Third Generation Computers
7.5 Fourth Generation Computers
7.6 Fifth Generation Computers

7.1 INTRODUCTION

In computer terminology, Generation is a change in technology of computer. Earlier, the generation term was used to distinguish between varying hardware technologies. But now-a-days, generation includes both hardware and software, which together make up an entire computer system. There are totally five computer generations known till date. These are explained as follows:

7.2 FIRST GENERATION COMPUTERS (1942-1955)

The time period of first generation was 1942-1955. The first generation computers used vacuum tubes as the basic components for memory and circuitry for CPU (Central Processing Unit). These tubes were like electric bulbs which produced a lot of heat and were prone to frequent fusing. They were very expensive and could be afforded only by very large organizations.

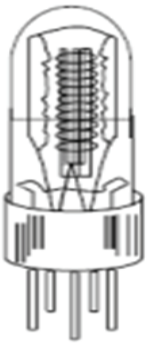


Figure 7.1 Vacuum Tube

In this generation, mainly Batch Processing Operating Systems were used. Punched cards, Paper tape and Magnetic tapes were used as Input & Output devices. Machine codes and electric wired board languages used to operate the machines.

Main features and characteristics of First Generation:

- **Vacuum Tubes** as basic processing component, **Electromagnetic Relay** as main memory; **Punched Cards** as secondary storage were used.

- Machine and Assembly languages and stored program concept for operating the machines were used.
- They were very much bulky in size and produce a lot of heat.
- They were not much reliable systems.
- They could not be commercially used.
- They were costly and difficult to use.

Examples of First Generation Computer Systems:

- ENIAC (Electronic Numerical Integrator and Computer)
- EDVAC (Electronic Discrete Variable Automatic Computer)
- EDSAC (Electronic Delay Storage Automatic Calculator)
- UNIVAC I (Universal Automatic Computer I)
- IBM 701 (International Business Machines 701)

7.3 SECOND GENERATION COMPUTERS (1955-1964):

The time period of second generation was 1955-1964. This generation used the transistor as their basic processing component. They were cheaper, consumed less power, more compact in size, more reliable and faster than the first generation machines. In this generation, magnetic cores were used as primary memory, and magnetic tape and magnetic disks as secondary storage devices.

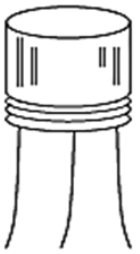


Figure 7.2 Transistor

In this generation, Assembly Language and High-Level Programming languages like FORTRAN and COBOL were used. Batch processing and Multiprogramming Operating systems were also used.

Main features and characteristics of Second Generation:

- **Transistors** as the basic processing components, magnetic cores as main memory, **Magnetic Tapes** and **Disks** as secondary storage were used.
- Batch Operating System and High-Level Programming Languages were used.
- They were faster, smaller in size, more reliable and easier to program than first generation systems and were used for scientific and commercial applications.
- Commercial production of second generation computers was still difficult.
- They were costly.

- They generated less heat as compared to first generation computers.
- They consumed less electricity as compared to first generation computers.

Examples of Second-GenerationComputer Systems:

- IBM 7030
- UNIVAC LARC (Livermore Advanced Research Computer).

7.4 THIRD GENERATION COMPUTERS (1964-1975)

The time period of third generation was 1964-1975. The third generation of computer used Integrated Circuits (IC's) in place of transistors. A single IC has many transistors, resistors and capacitors along with the associated circuitry. The IC was invented by Jack Kilby. This development made computers smaller in size, reliable and efficient.

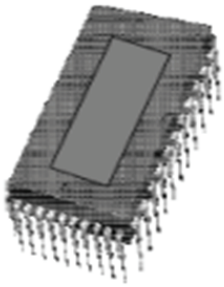


Figure: 7.3 IC (Integrated Circuit)

In this generation, Remote processing, Time-sharing, Real-time, Multi-programming Operating Systems were used. High-level languages such as FORTRAN-II TO IV, COBOL, PASCAL PL/1, BASIC, ALGOL-68, etc. were used during this generation.

Main features and characteristics of Third Generation:

- ICs with SSI and MSI technologies were used as basic processing components
- Larger magnetic cores main memory, larger capacity disks and magnetic tapes as secondary storage were used.
- They used Time sharing operating system and multi-programming operating systems.
- They were commercially easier to use and easier to upgrade.
- They were used for Scientific, commercial and interactive online applications.

Examples of Third Generation Computer Systems:

- IBM 360/370-(International Business Machines 360/370)
- PDP-8-(Personal Data Processor-8)
- PDP-11-(Personal Data Processor-11)
- CDC 6600-(Control Data Corporation 6600)

7.5 FOURTH GENERATION COMPUTERS (1975-1989)

The period of Fourth Generation was 1975-1989. The fourth generation of computers used Very Large Scale Integrated (VLSI) circuits. VLSI circuits having about 5000 transistors, other circuit elements and their associated circuits, all on a single chip made it possible to have microcomputers of fourth generation. Fourth Generation computers became more powerful, compact, reliable, and affordable. As a result, it gave rise to personal computer (PC) revolution.

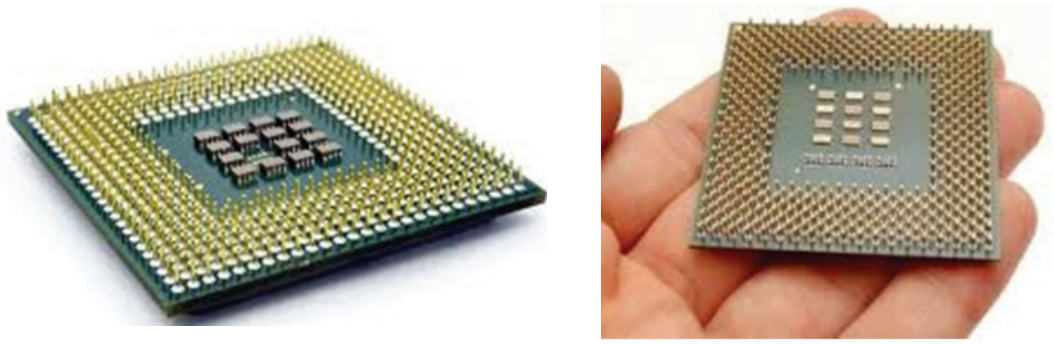


Figure: 7.4 Microprocessors

In this generation, Time sharing, Real time, Network, Distributed Operating Systems were used. All the higher level languages like C and C++, DBASE, etc., were used in this generation.

Main features and characteristics of Fourth Generation:

- ICs with VLSI Technology and microprocessors as processing components were used in the computers of this generation.
- Semiconductor main memories and larger capacity hard disks as secondary storage were used in these computers.
- Magnetic tapes and floppy disks were used as portable storage media.
- Operating systems for PCs with GUI and multiple windows on a single terminal screen were used in these computers.
- Multi-Processing OS, UNIX Operating System, C Programming language, Object-Oriented Programming were used in these computers.
- PC, Network-based and supercomputing applications were used in these computers.
- These computers were small, affordable, reliable, and easy to use.
- They were totally general purpose machines, easier to produce commercially and easier to upgrade.

Examples of Fourth Generation Computer Systems:

- IBM PC and its clones
- Apple II
- CRAY-1
- CRAY-2
- CRAY-X/MP

7.6 FIFTH GENERATION COMPUTERS (1989-onwards):

The period of Fifth Generation is 1989-till date. In the fifth generation, the VLSI technology became ULSI (Ultra Large Scale Integration) technology. The ULSI microprocessor chips have ten million electronic components in them.

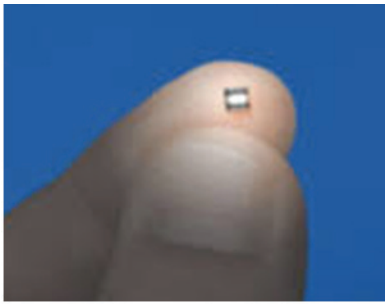


Figure:7.5 ULSI chip

This generation is based on Parallel Processing Hardware and AI (Artificial Intelligence) software. AI is an upcoming branch in computer science which interprets means and methods of making computers think like human beings.

AI includes the following areas:

- Robotics
- Game Playing
- Development of Expert Systems to make decisions in real life situations
- Natural language understanding and speaking

All the higher level languages like C, C++, Java, .Net, etc., are used in this generation.

Fig 7.6 Robotics using AI (Artificial Intelligence)

Main features and characteristics of Fifth Generation:

- ICs with ULSI technology, larger capacity main memory, hard disks with RAID support are used.
- Optical disks as portable read-only storage media are used.

- Notebooks, powerful desktop PCs and workstations, powerful servers and supercomputers are used in this generation.
- Internet and Cluster computing is used.
- Multithreading, Distributed OS, Parallel Programming,JAVA, World Wide Web, Multimedia, Internet based applications are used.
- These are portable computers, and are more powerful, cheaper, reliable, and easier to use.
- These computers have high uptime due to hot-pluggable components and they are totally general purpose machines.
- These computers are easier to produce commercially.
- Rapid software development is possible

Examples of Fifth Generation Computer Systems:

- IBM notebooks
- Pentium PCs
- SUN Workstations
- IBM SP/2
- PARAM 10000

Points To Remember

1. In computer terminology, Generation is a change in hardware as well as software technology of computer.
2. The first generation computers used Vacuum Tubes as the basic components for memory and circuitry for CPU
3. Second generation used the Transistor as their basic component.
4. The third generation of computer used Integrated Circuits (IC's) in place of transistors.
5. A single IC has many transistors, resistors and capacitors along with the associated circuitry.
6. The fourth generation of computers used Very Large Scale Integrated (VLSI) circuits.
7. Fourth Generation computers became more powerful, compact, reliable, and affordable. As a result, it gave rise to personal computer (PC) revolution.
8. In the fifth generation, the VLSI technology became ULSI (Ultra Large Scale Integration) technology.
9. AI is an upcoming branch in computer science which interprets means and methods of making computers think like human beings.

1. Multiple Choice Questions:

I. Second generation of computers used the _____ as their basic component.

a) Vacuum Tubes b) VLSI

c) ULSI d) Transistor

II. The _____ generation of computers used VLSI circuits.

a) First b) Second

c) Third d) Fourth

III. The third generation of computers used _____ in place of transistors.

a) Integrated Circuits b) Vacuum Tubes

c) ULSI d) VLSI

IV. _____ is an upcoming branch in computer science which interprets means and methods of making computers think like human beings.

a) Robotics c) ULSI

c) Artificial Intelligence d) Integrated Circuits

V. ULSI technology is used in _____ generation of computers.

a) Second b) Third

c) Fourth d) Fifth

2. Write the Full forms:

I. ENIAC II. IBM

III. IC IV. VLSI

V. ULSI VI. OI

3. Very Short Answer Type Questions

I. Write the main features of First Generation computers.

II. Which technology was used for Second Generation of Computers?

III. What is IC?

IV. Write about Fourth Generation of computers.

V. What is AI? Write the areas which are included in AI.

VI. Write the examples of First Generation of Computers.

4. Long Answer Type Questions

I. What do you mean by Generation of Computers? How are they classified?

II. Explain Fifth Generation of Computers.

CHAPTER - 8 COMPUTER MEMORIES

OBJECTIVES OF THIS CHAPTER

8.1 What is Memory?

8.1.1 Memory Units

8.2 Types of Memory

8.2.1 Internal Memory

8.2.2 External Memory

8.3 Physical Structure of Magnetic disks

8.3.1 Tracks

8.3.2 Sectors

8.1 WHAT IS MEMORY ?

Computer Memory is just like a human brain. It is the storage space of computer where a computer can store all the required data and instructions for processing that data. Computer memory is divided into a large number of small parts, called cells. Each location or cell has a unique memory address.

8.1.1 Memory Units

Memory capacity of a computer is the amount of data that can be stored in the memory device which is equal to the number of bytes that can be stored in its storage device. The storage capacity is expressed in terms of Bytes. Following are the main memory storage units:

- **Bit (Binary Digit) :** A bit or a binary digit may be represented by logical 0 and 1.
- **Nibble :** A group of 4 bits is called nibble, e.g. (1011)
- **Byte :** A group of 8 bits is called byte. A byte is the smallest unit which can represent a data item or a character e.g. (01000001)
- **Word :** A computer word is a group of fixed number of bit which is processed as a unit. The length of a computer word is called word-size or word-length. It may be as small as 8 bits or may be as long as 96 bits. A computer stores the information in the form of computer words.

Measuring Units for Computer Memory:

Sr. No.	Memory Unit	Description
1	Bit	Single Binary digit either 0 or 1
2	Nibble	Group of 4 bits
3	Byte	Group of 8 bits
4	Kilobyte (KB)	1 KB = 1024 Bytes
5	Megabyte (MB)	1 MB = 1024 KB
6	Gigabyte (GB)	1 GB = 1024 MB
7	Terabyte (TB)	1 TB = 1024 GB
8	Petabyte (PB)	1 PB = 1024 TB

Fig: 8.1 Measuring Units for Computer Memory

8.2 TYPES OF MEMORY:

Following Figure shows the basic classification of Memories:

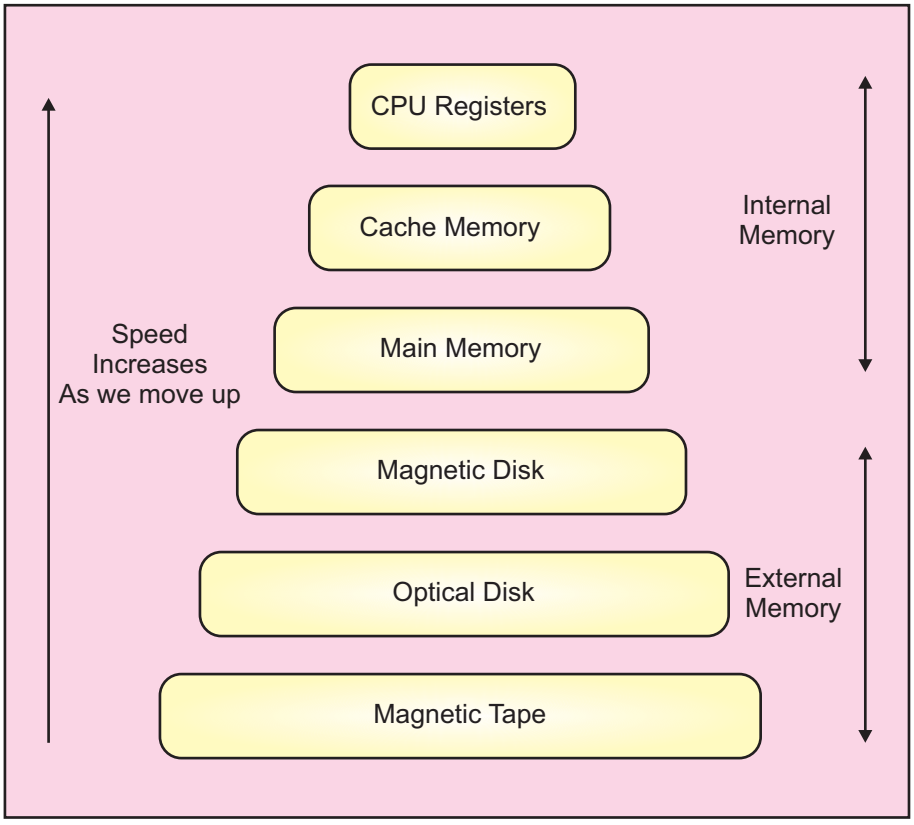


Fig: 8.2 Types of Memory

Memory can be classified into two main categories: Internal & External

8.2.1 Internal Memory

The instructions of a program and related data are placed in such a memory where CPU can work on them. The CPU uses Internal Memory for such purposes. CPU Registers, Cache Memory and Main Memory comes under the category of Internal Memory. These different types of memories are explained below:

8.2.1.1 CPU Registers : A register is a fastest and temporary memory built into CPU. These registers are used to store/transfer data and instructions which are being used immediately by the CPU. The registers used by the CPU are often termed as Processor registers. A processor register may hold an instruction, a storage address, or any data. Common examples of CPU registers are: Instruction Register (IR), Memory Buffer Register (MBR), Memory Data Register (MDR), and Memory Address Register (MAR).

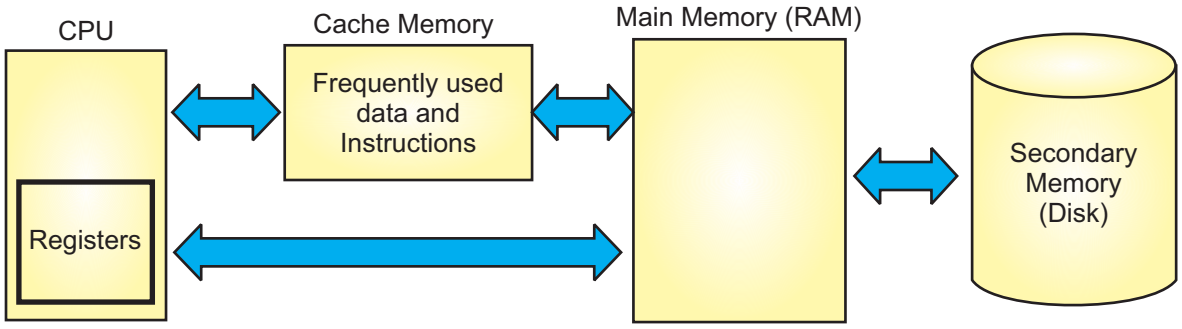


Fig 8.3: Relationship between Different types of memories

8.2.1.2 Cache Memory : Cache memory is a very high speed semiconductor memory which can speed up the working of CPU. It acts as a buffer between the CPU and Main Memory (RAM). It is used to holddata and instructions of a program which are frequently used by CPU.

Advantages of cache memory :

- Cache memory is faster than main memory.
- It takes less access time as compared to main memory.
- It stores the program that can be executed within a short period of time.
- It stores data for temporary use.

Disadvantages of cache memory:

- Cache memory has limited capacity.
- It is very expensive.

8.2.1.3 Primary/Main memory : Primary memory is directly accessible by CPU. A computer cannot run without primary memory. These memories are located close to the CPU on the computer motherboard. CPU can read data from primary memory very quickly. It is used to store data that the CPU needs immediately. These memories are faster than secondary memories but slower than registers and cache memories. Primary memory can be classified into two main categories RAM and ROM:

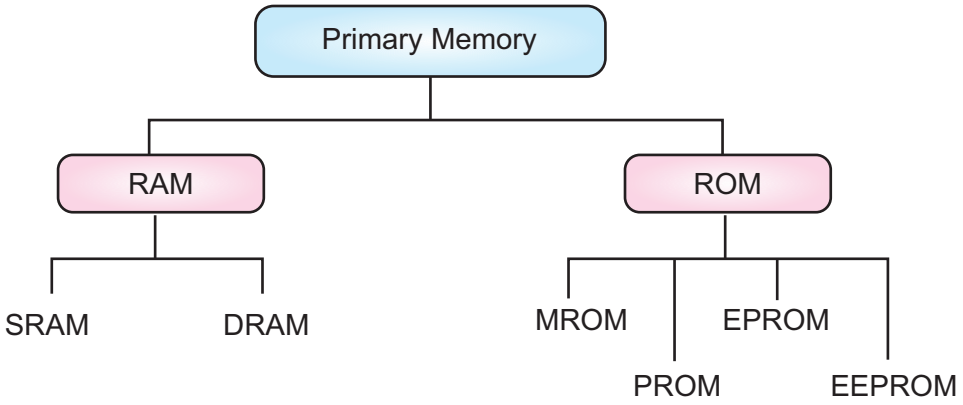


Fig 8.4: Types of Primary Memory

(i) RAM (Random Access Memory) : RAM stands for Random Access Memory. It stores the programs and data that our computer system is actively using so that it can be accessed quickly. It is a read/write memory which means we can read from and write into this memory. But, we cannot store data permanently into this memory. It is a volatile memory which means data stored in it is lost when we switch off the computer or if there is a power failure. This is the reason a backup Uninterruptible Power Supply (UPS) is often used with computers. Data in the RAM can be accessed randomly but it is very expensive memory. RAM is small, both in terms of its physical size and in the amount of data it can hold. RAM can further be classified into following two types:

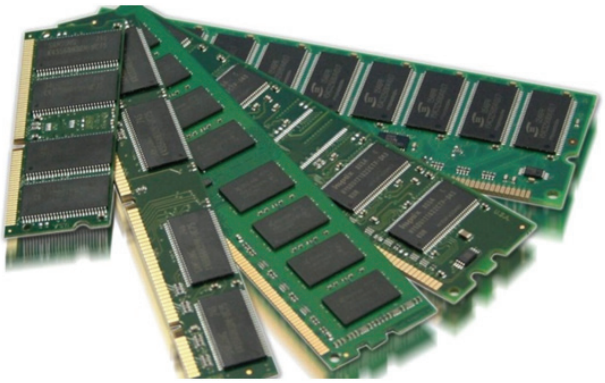


Fig 8.5: RAM

(a) Static RAM (SRAM) : The word static indicates that the memory retains its contents as long as power is being supplied. However, data is lost when the power gets down due to volatile nature. SRAM chips use a matrix of 6-transistors and no capacitors. Transistors do not require power to prevent leakage, so SRAM need not have to be refreshed on a regular basis.

Characteristic of the Static RAM:

- It has long life
- There is no need to refresh
- Faster
- Used as cache memory

- Large size
- Expensive
- High power consumption

(b) Dynamic RAM (DRAM) : DRAM must be refreshed in order to maintain the data. This is done by placing the memory on a refresh circuit that rewrites the data several hundred times per second. All DRAMs are made up of memory cells which are composed of one capacitor and one transistor. DRAM is used for system memory because it is cheap and small.

Characteristics of the Dynamic RAM:

- It has short lifetime
- Need to be refreshed continuously
- Slower as compared to SRAM
- Used as RAM
- Lesser in size
- Less expensive
- Less power consumption

(ii) ROM (Read Only Memory) : ROM stands for Read Only Memory. This is the memory from where we can only read, but cannot write on it. This type of memory is non-volatile that means the information is stored permanently in such memories during the time of manufacturing. A ROM, stores such instructions that are required to start a computer. This operation is referred to as bootstrap. ROM chips are not only used in the computer but also in other electronic items like washing machine and microwave oven etc.

Fig 8.6: ROM

Following are the various types of ROM:

(a) MROM (Masked ROM) : Earlier ROMs were hard-wired devices that contained a pre-programmed set of data or instructions. These kinds of ROMs are known as masked ROMs which are inexpensive.

(b) PROM (Programmable Read only Memory) : PROM is read-only memory that can be modified only once. We can buy a blank PROM and enters the desired contents using a PROM program. It can be programmed only once and is not erasable.

(c) **EPROM (Erasable and Programmable Read Only Memory) :** The EPROM can be erased by exposing it to ultra-violet rays/lights. During programming, an electrical charge is used. This charge can be retained for more than ten years. For erasing this charge, ultra-violet rays are passed through it.

(d) **EEPROM (Electrically Erasable and Programmable Read Only Memory) :** The EEPROM is programmed and erased electrically. It can be erased and reprogrammed about ten thousand times. In EEPROM, any location can be selectively erased and programmed. EEPROMs can be erased one byte at a time, rather than erasing the entire chip. Hence, the process of re-programming is flexible but slow.

Advantages of ROM :

- Non-volatile in nature.
- These cannot be accidentally changed.
- Cheaper than RAMs.
- More reliable than RAMs
- These are static and do not require refreshing.

8.2.2 External Memory

This type of memory is also known as secondary or auxiliary or non-volatile memory. It is slower than main memory. These are used for storing data and Information permanently. CPU does not access these memories directly. They are accessed via input-output routines. Contents of secondary memories are first transferred to main memory, and then CPU can access it. For example: Hard disk, CD-ROM, DVD etc.

Fig 8.7: External Memory (HDD)

Characteristic of Secondary Memory:

- These are magnetic and optical memories.
- **Backup / Reusable memory :** Data stays in the secondary storage on permanent basis until it is not overwritten or deleted by the user.
- **Non-volatile memory :** Data is permanently stored even if power is switched off.
- **Reliable :** Data in secondary storage is safe because of high physical stability of secondary storage device.

- **Convenience :** With the help of computer software, authorized people can locate and access the data quickly.
- **Capacity :** Secondary storage can store large volumes of data in sets of multiple disks.
- **Cost :** It is much lesser expensive to store data on a tape or disk than primary memory.
- Computer may start without secondary memory.
- Slower than primary memories.

External/Secondary Memory is mainly of two types. Following diagram shows different types of secondary memory:

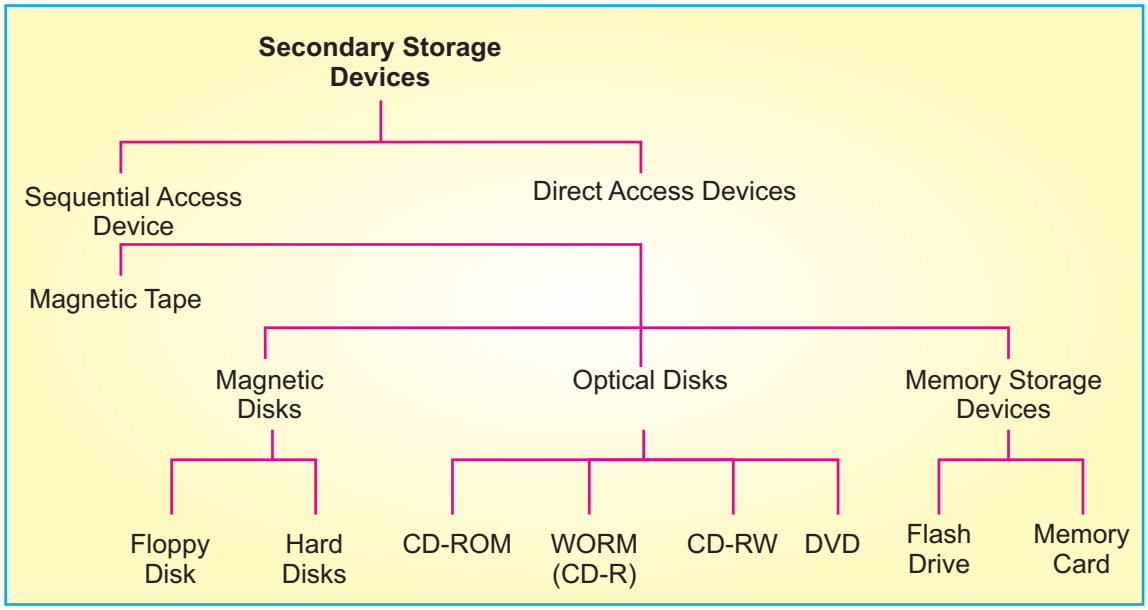


Fig: 8.8 Types of External/Secondary Memory devices

8.2.2.1 Sequential Access Devices : In these types of storage devices, data can only be retrieved in sequential order, in which it is stored. These devices are suitable for sequential processing applications where most of the data records need to be processed one after another.

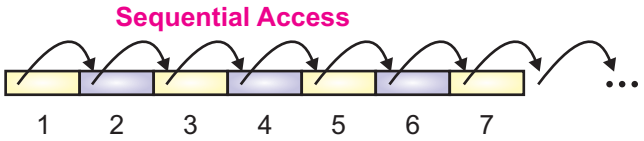


Fig: 8.9 Concept of Sequential Access

Magnetic tape is a good example of such types of storage device. Storage Capacity of magnetic tape depends upon the length of the tape. Data storage capacity is the amount of data that can be stored on a given length of tape. It is measured in bytes per inch (bpi)

Storage capacity of a tape = Data recording density × Length

8.2.2.2 Direct Access Devices : In these storage devices, any storage location may be selected and accessed randomly. They permit access to individual information in a more direct or immediate manner.

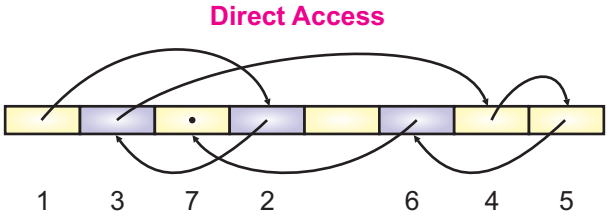


Fig: 8.10 Concept of Direct Access

These storage devices are suitable for direct processing applications such as online ticket booking systems, on-line banking systems etc. Magnetic, optical, and magneto-optical disks are examples of direct access storage devices.

8.3 PHYSICAL STRUCTURE OF MAGNETIC DISK

Magnetic disk is a secondary storage device which is used to store data permanently. We can access stored data in the sequential as well as random manner from the magnetic disk. A magnetic disk is divided into tracks and sectors. Following figures shows the physical structure of magnetic disk:

8.3.1 Tracks

The surface of disk is divided into a number of invisible concentric circles, called tracks. These tracks are numbered consecutively from outermost to innermost starting from zero. The number of tracks on a disk may vary according to the capacity of disks.

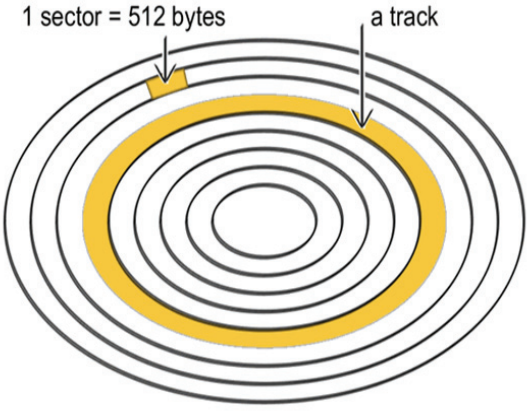


Fig: 8.11 Tracks and Sectors on a Magnetic Disk

8.3.2 Sectors

Each track of a disk is subdivided into small portions, known as sectors. There are 8 or more sectors per track. A sector typically contains 512 bytes.

Storage capacity of a disk system may be calculated by using the following formula:

Storage Capacity = Number of recording surfaces × Number of tracks per surface ×
Number of sectors per track × Number of bytes per sector

Points To Remember

1. Memory is the storage space of computer where a computer can store all the required data and instructions for processing that data.
2. Memory capacity of a computer is the amount of data that can be stored in the memory device.
3. Cache memory is a very high speed semiconductor memory which can speed up the working of CPU.
4. A computer cannot run without primary memory.
5. RAM stands for Random Access Memory.
6. ROM stands for Read Only Memory.
7. The surface of disk is divided into a number of invisible concentric circles, called tracks.
8. Each track of a disk is sub divided into small portions, known as sectors.
9. External Memory is also known as secondary or auxiliary or non-volatile memory.

1. Multiple Choice Questions:

I. A group of _____ bits is called byte

a) 8 b) 16
c) 32 d) 64

II. A bit or a binary digit may be represented by logical _____ and _____

a) 0,1 b) 0,0
c) 1,2 d) 1,1

III. RAM stands for _____

a) Read Access Memory b) Random Access Memory
c) All of these d) None of these

IV. ROM stands for _____

a) Read Only Memory b) Random Only Memory
c) Read Open Memory d) None of these

V. Each track of a disk is sub divided into small portions known as _____

a) Sector b) Area
c) Cell d) Tape

2. Write Full forms of the following terms:

I. MB II. GB
III. RAM IV. ROM
V. IR

3. Short Answer Type Questions

I. What is Memory?

II. Write the namesof different types of Memories

III. What is Primary Memory?

IV. Write the name of various types of ROM.

4. Long Answer Type Questions

I. Explain RAM and ROM.

II. Explain the External Memory.

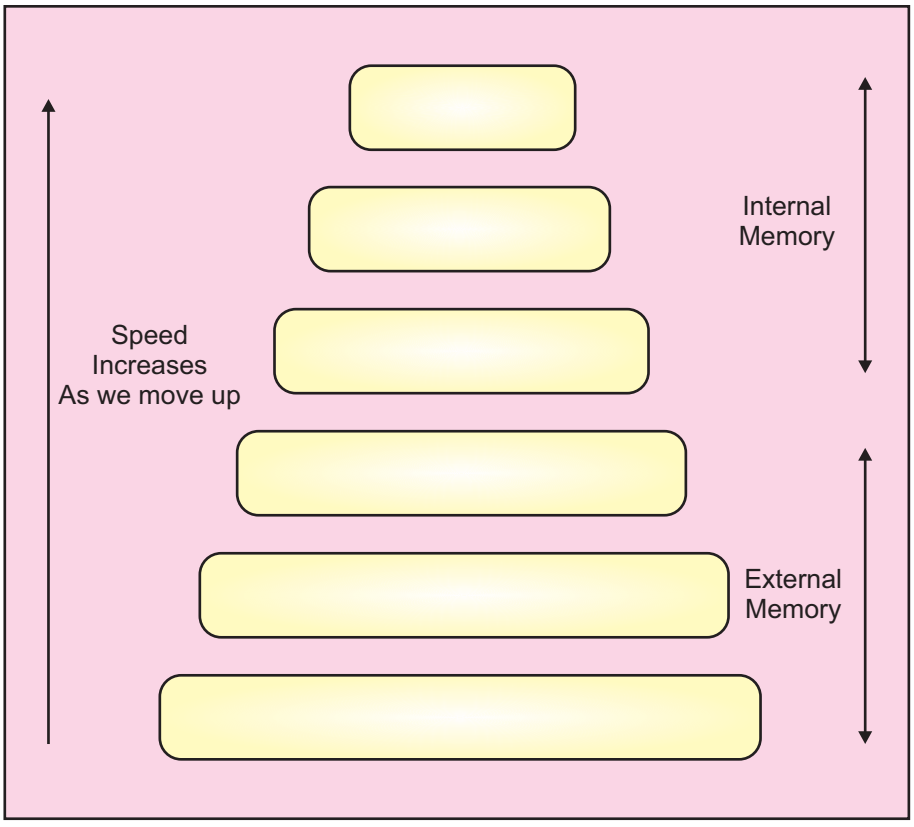
III. Explain the Characteristic of Secondary Memory.

IV. What are Tracks and Sectors?

V. What is Cache Memory? What are its advantages and disadvantages?

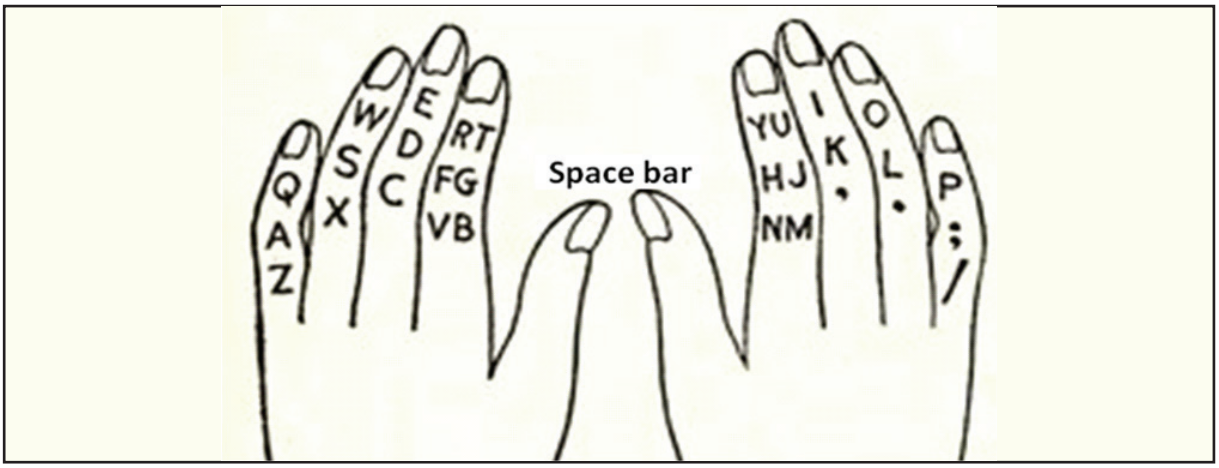
Lab Activity

Fill the blanks in following figure about basic classification of Memories.



APPENDIX – I

Lab Activity for Typing Practice in English



EXERCISE I

asdfg	;lkjh	asdfg	;lkjh	asdfg	;lkjh	asdfg	;lkjh	asdfg
asdfg	;lkjh	asdfg	;lkjh	asdfg	;lkjh	asdfg	;lkjh	asdfg
asdfg	;lkjh	asdfg	;lkjh	asdfg	;lkjh	asdfg	;lkjh	asdfg
asdfg	;lkjh	asdfg	;lkjh	asdfg	;lkjh	asdfg	;lkjh	asdfg
asdfg	;lkjh	asdfg	;lkjh	asdfg	;lkjh	asdfg	;lkjh	asdfg

EXERCISE II

Ask	Fad	Alsas	Shad	Lads	Flags	Flask
Jag	Fag	Fall	Hash	Glad	Galls	Salad
Jak	Had	Gaff	Dash	Gall	Flash	Slash
Sad	Lad	Adds	Lash	Hall	Lakhs	Dhalls
Dad	Asks	Alas	Dall	Fall	Glass	Shall

EXERCISE III

qwert	poiuy	qwert	poiuy	qwert	poiuy	qwert	poiuy	qwert
poiuy	qwert	poiuy	qwert	poiuy	qwert	poiuy	qwert	poiuy
qwert	poiuy	qwert	poiuy	qwert	poiuy	qwert	poiuy	qwert
poiuy	qwert	poiuy	qwert	poiuy	qwert	poiuy	qwert	poiuy
qwert	poiuy	qwert	poiuy	qwert	poiuy	qwert	poiuy	qwert
poiuy	qwert	poiuy	qwert	poiuy	qwert	poiuy	qwert	poiuy

EXERCISE IV

awerqfa	;oiupj;	awerqfa	;oiupj;	awerqfa	;oiupj;
awerqfa	;oiupj;	awerqfa	;oiupj;	awerqfa	;oiupj;
awerqfa	;oiupj;	awerqfa	;oiupj;	awerqfa	;oiupj;
awerqfa	;oiupj;	awerqfa	;oiupj;	awerqfa	;oiupj;
awerqfa	;oiupj;	awerqfa	;oiupj;	awerqfa	;oiupj;

EXERCISE V

Fish	Dirks	Oldest	Apple	Grade	Falls	Kodak
Rails	Jaded	Dead	Usual	Sales	Filed	Legal
Lease	Lakes	Agile	Isles	Ahead	Larks	Roses
Forks	Hedge	Skill	Rupee	Grass	Would	Alpine
Jaded	Liked	Equip	Quail	Jokes	Asked	Walks
Fiddle	Saddle	Dead	Filed	Lakes	Lease	Legal

EXERCISE VI

azxcvf	lkmnbj	azxcvf	lkmnbj	azxcvf	lkmnbj
azxcvf	lkmnbj	azxcvf	lkmnbj	azxcvf	lkmnbj
azxcvf	lkmnbj	azxcvf	lkmnbj	azxcvf	lkmnbj
azxcvf	lkmnbj	azxcvf	lkmnbj	azxcvf	lkmnbj
azxcvf	lkmnbj	azxcvf	lkmnbj	azxcvf	lkmnbj

EXERCISE VII

Cat	Jack	Colour	Neither	Enemy	Boat	Calcutta
Not	Have	Joints	Calling	Voted	Very	Vineyard
Met	Wind	Nerves	Enlarge	Money	Move	Material
Men	Verb	Verbal	Someone	Marry	Give	Sterling
Bent	Joint	Jackets	Examine	Thousand	Cylinder	Assessment
King	Carry	Jumbled	Examined	Struggle	Possible	Beginning
Zeal	Night	Booklet	Gracious	Grizzled	Frequent	Meanings
Zero	Tonic	Cutting	Becoming	Zodiacal	Exponent	Doubtless

EXERCISE VIII

12345	098767	12345	098767	12345	098767
12345	098767	12345	098767	12345	098767
12345	098767	12345	098767	12345	098767
12345	098767	12345	098767	12345	098767
12345	098767	12345	098767	12345	098767

EXERCISE IX

Type the following sentences 5 times:

1. Lost time is never regained.
2. Get-up early and do your work.
3. Today's youth and tomorrow's old
4. Age is a virtue when wisdom is with it.
5. Measure your word before it goes out of you.
6. My steps are measured.
7. A friend in need is a friend indeed.
8. Children are innocent and should be guided rightly.
9. Our Land has great sages who knew the eternal truth.
10. Truth never fails.
11. The Quick Brown Fox Jumps Over A Lazy Dog.

EXERCISE X

Type the following paragraph 10 times:

Our flag is tri-colour. SAFFRON is the symbol of sacrifice and a string mind. WHITE is the symbol of purity, love and peace. GREEN is the symbol of plenty and joy. We hoist and salute our flag. We are ready to make sacrifices for our country. We want peace and progress. We want to be pure.

APPENDIX – II

COMMONLY USED FULL FORMS

ACRONYM		FULL FORM
AI	:	ARTIFICIAL INTELLIGENCE
ARPANET	:	ADVANCED RESEARCH PROJECT AGENCY NETWORK
BMP	:	BITMAP PICTURE
bpi	:	BITS PER INCH
CD	:	COMPACT DISK
CPU	:	CENTRAL PROCESSING UNIT
CSS	:	CASCADING STYLE SHEET
CUI	:	CHARACTER USER INTERFACE
DOS	:	DISK OPERATING SYSTEM
DRAM	:	DYNAMIC RANDOM ACCESS MEMORY
DSL	:	DIGITAL SUBSCRIBER LINE
DVD	:	DIGITAL VIDEO DISK
E COMMERCE	:	ELECTRONIC COMMERCE
EEPROM	:	ELECTRONICALLY ERASABLE PROGRAMMABLE READ ONLY MEMROY
EMAIL	:	ELECTRONIC MAIL
EPROM	:	ERASABLE PROGRAMMABLE READ ONLY MEMROY
FTP	:	FILE TRANSFER PROTOCOL
GB	:	GIGABYTE
GIF	:	GRAPHICS INTERCHANGE FORMAT
GUI	:	GRAPHICAL USER INTERFACE
HTML	:	HYPER TEXT MARKUP LANGUAGE
IAP	:	INTERNET ACCESS PROVIDER
IBM	:	INTERNATIONAL BUSINESS MACHINE
IC	:	INTEGRATED CIRCUIT
ISDN	:	INTEGRATED SERVICE DIGITAL NETWORK

ISP	:	INTERNET SERVICE PROVIDER
IT	:	INFORMATION TECHNOLOGY
JPEG	:	JOINT PHOTOGRAPHIC EXPERTS GROUP
KB	:	KILOBYTE
MB	:	MEGABYTE
MIDI	:	MUSICAL INSTRUMENT DIGITAL IDENTIFIER
MODEM	:	MODULATER DEMODULATER
MPEG	:	MOVING PICTURE EXPERTS GROUP
MROM	:	MASKED READ ONLY MEMORY
NIC	:	NETWORK INTERFACE CARD
PB	:	PETA BYTE
PC	:	PERSONAL COMPUTER
PNG	:	PORTABLE NETWORK GRAPHICS
POP	:	POST OFFICE PROTOCOL
PROM	:	PROGRAMMABLE READ ONLY MEMORY
RAM	:	RANDOM ACCESS MEMORY
ROM	:	READ ONLY MEMORY
RTF	:	RICH TEXT FORMAT
SERP	:	SEARCH ENGINE RESULT PAGE
SMTP	:	SIMPLE MAIL TRANSFER PROTOCOL
SRAM	:	STATIC RANDOM ACCESS MEMORY
TB	:	TERABYTE
TCP/IP	:	TRANSMITION CONTROL PROTOCOL
ULSI	:	ULTRA LARGE SCALE INTEGRATED CIRCUIT
UPS	:	UNINTERRUPTIBLE POWER SUPPLY
URL	:	UNIFORM RESOURCE LOCATER
USB	:	UNIVERSAL SERIAL BUS
VLSI	:	VERY LARGE SCALE INTEGRATED CIRCUIT
WWW	:	WORLD WIDE WEB

APPENDIX – III

COMMONLY USED SHORTCUT KEYS

(MS WORD)

Shortcut Keys	Used for
Ctrl+A	Select All
Ctrl+B	Bold the selected text
Ctrl+C	Copy the selected contents
Ctrl+D	Opens the Font Dialog Box
Ctrl+E	Center Align text
Ctrl+F	Find text
Ctrl+G	Goto line/page no etc.
Ctrl+H	Replace text
Ctrl+I	Italic the selected text
Ctrl+J	Justify paragraph
Ctrl+K	Create Hyperlink for the selected text
Ctrl+L	Left Align the paragraph
Ctrl+M	Increase Indent
Ctrl+N	Create a New File
Ctrl+O	Open Existing File
Ctrl+P	Print File
Ctrl+Q	Clear Indents and Tabs
Ctrl+R	Right Align the text
Ctrl+S	Save File
Ctrl+T	Increase Hanging Indent
Ctrl+U	Underline the selected contents
Ctrl+V	Paste the contents from the clipboard
Ctrl+W	Close File
Ctrl+X	Cut the selected contents
Ctrl+Y	Redo the last action (if possible)
Ctrl+Z	Undo the last operation
Ctrl+1	Single Line Spacing
Ctrl+2	Double Line Spacing
Ctrl+5	1.5 Line Spacing

Ctrl+]	Increase Font Size
Ctrl+[	Decrease Font Size
Ctrl+Shift+C	Copy the Formats of selected text
Ctrl+Shift+V	Paste the copied Formats on selected text
Shift+F3	Change Case
F7	Spelling and Grammar Check
Alt+F4	Close Program

COMMONLY USED SHORTCUT KEYS
(MS POWERPOINT)

Shortcut Key	Used for
Alt + A	Go to the Animations tab
Alt + F	Open the File tab menu
Alt + F2 or F12	Open the Save As dialog box
Alt + G	Open the Design tab
Alt + H	Go to the Home tab
Alt + K	Go to the Transitions tab
Alt + N	Open the Insert tab
Alt + Q	Directs to the “Tell me what you want to do” box
Alt + R	Go to the Review tab
Alt + S	Go to the Slide Show tab
Alt + W	Go to View tab
Alt + X	Go to the Add-ins tab
Alt + Y	Go to the Help tab
Alt or F10	Turn the key tips to ‘on’ or ‘off’
Ctrl + A	Select all the objects on an active slide
Ctrl + Alt + V	Open the Paste Special dialog box
Ctrl + B	Toggle bold on the selected text
Ctrl + C	Copy the selected text, object, or selected slide
Ctrl + D	Duplicate the selected object or a slide
Ctrl + E	Center align the selected text
Ctrl + F	Search in a presentation or use Find and Replace
Ctrl + F1	Show or hide the ribbon
Ctrl + F2	Print Preview View
Ctrl + I	Toggle italics on the selected text
Ctrl + J	Justify the selected text
Ctrl + K	Insert a hyperlink
Ctrl + L	Left align the selected text
Ctrl + M	Insert a new slide
Ctrl + N	Create a new presentation document
Ctrl + O	Open an existing presentation document

Ctrl + P	Annotate using a Pen tool while playing the slideshow
Ctrl + Q	Save and close a presentation
Ctrl + R	Right align the selected text
Ctrl + S	Save a presentation
Ctrl + T	Display the Font dialog box after text or object is selected
Ctrl + U	Add or remove underline to selected text
Ctrl + V	Paste the selected text, object, or slide
Ctrl + W or Ctrl + F4	Close a presentation
Ctrl + X	Cut the selected text, object, or slide
Ctrl + Y	Redo an action
Ctrl + Z	Undo an action
Delete	Delete the selected text, object, or slide
Esc	End the slideshow
F5	Play the presentation from the start
F7	Check for spellings
Home	Go back to the beginning of the slide
N or Page Down	Move to the next slide while playing the slideshow
P or Page Up	Return to the previous slide while playing the slideshow
Shift + F5	Play the presentation from the current slide