

# KEY FEATURES



## Latest Trending Technologies

Incorporates chapters on trending technologies

## Additional Annexures

Information and updates about the latest topics in the field of computers



## Project Work

Cross-curricular projects integrating knowledge, principles, and values of various disciplines

## Online Links

To access more information on the given topics



## Group Discussion

To help the students understand the topics in an interactive manner

## Brain Developer & Worksheets

For self assessment of the concepts learnt



Incorporates NEP 2019 Guidelines in Activities and Projects

Life Skills and Values



Art Integration



Interdisciplinary

# CONTENTS

S.No.	CHAPTERS	PAGE
<b>1</b>	<b>PARTS OF A COMPUTER</b> <ul style="list-style-type: none"><li>• How Does a Computer Work?</li><li>• Parts of a Computer</li><li>• What Makes a Computer Powerful?</li><li>• Disadvantages of a Computer</li></ul>	<b>8</b>
<b>2</b>	<b>HARDWARE AND SOFTWARE</b> <ul style="list-style-type: none"><li>• Hardware</li><li>• Software</li></ul>	<b>20</b>
<b>3</b>	<b>TUX PAINT</b> <ul style="list-style-type: none"><li>• How to Open Tux Paint?</li><li>• Paint Brush Shapes</li><li>• Difference between Paint and Lines Tool</li><li>• Stamp Tool</li><li>• Magic Tools</li><li>• Rainbow Effect</li><li>• Printing a Drawing</li></ul>	<b>30</b>
<b>4</b>	<b>UNDERSTANDING WINDOWS 10</b> <ul style="list-style-type: none"><li>• Features of Windows 10</li><li>• Windows Taskbar</li><li>• Selecting and Deselecting Icon</li><li>• Selecting Adjacent and Non Adjacent Items</li><li>• Opening a Program</li><li>• Arranging the Desktop Icons</li><li>• Sorting the Icons</li><li>• Changing the Desktop Background</li><li>• Changing the Screen Saver</li><li>• Mouse Pointer Shapes</li><li>• Shut Down Your Computer</li></ul>	<b>39</b>
	<b>WORKSHEETS 1 AND 2</b>	<b>50</b>
<b>5</b>	<b>EDITING TEXT IN MS WORD 2016</b> <ul style="list-style-type: none"><li>• Starting Word 2016</li><li>• Entering the Text</li><li>• Selecting and Editing the Text</li><li>• Inserting the Text</li><li>• Moving, Copying and Deleting the Text</li><li>• Using Undo and Redo Commands</li><li>• Checking Spellings and Grammar</li><li>• Using Thesaurus</li></ul>	<b>52</b>



# CONTENTS



S.No.	CHAPTERS	PAGE
<b>6</b>	<b>FORMATTING A DOCUMENT</b>	<b>64</b>
	<ul style="list-style-type: none"> <li>• Changing the Font Type</li> <li>• Applying Bold, Italic, and Underline Effects</li> <li>• Changing Text Colour</li> <li>• Changing Text Case</li> <li>• Changing Text Alignment</li> <li>• Applying Superscript and Subscript Effects</li> <li>• Creating Bulleted or Numbered List</li> <li>• Applying Border and Shading</li> <li>• Applying Drop Cap Effect</li> </ul>	
<b>7</b>	<b>WORKING WITH PAINT 3D</b>	<b>76</b>
	<ul style="list-style-type: none"> <li>• Paint 3D</li> <li>• How to Open Paint 3D?</li> <li>• Components of Paint 3D Window</li> <li>• Drawing a 2D Circle</li> <li>• Drawing a 3D Sphere</li> <li>• Working with the Brushes Tool</li> <li>• Erasing a Drawing</li> <li>• Saving a Drawing</li> </ul>	
<b>8</b>	<b>INTRODUCTION TO SCRATCH</b>	<b>85</b>
	<ul style="list-style-type: none"> <li>• Scratch—A Simple Language</li> <li>• Starting Scratch</li> <li>• Main Components of Scratch</li> <li>• Moving a Sprite</li> <li>• Drawing a Colourful Circle</li> <li>• Making a Duplicate Copy of Sprite</li> <li>• Saving a Scratch Project</li> <li>• Opening a Saved Project</li> </ul>	
<b>9</b>	<b>SIMPLE MOVEMENT OF SPRITE</b>	<b>96</b>
	<ul style="list-style-type: none"> <li>• Creating a New Project</li> <li>• Changing the Appearance of Sprite</li> <li>• How to Make a Sprite Say Something?</li> <li>• Repeating Actions</li> <li>• Adding Sound</li> </ul>	
	<b>WORKSHEETS 3 AND 4</b>	<b>106</b>
	<b>PROJECT WORK</b>	<b>108</b>
	<b>NATIONAL CYBER OLYMPIAD</b>	<b>113</b>

# PARTS OF A COMPUTER

## LEARNING IN THIS CHAPTER

- How does a computer work?
- Parts of a computer
- What makes a computer powerful?
- Disadvantages of a computer

A computer is a useful machine. It is used in almost every sphere of our life. We can play games, write letters, draw pictures, listen to music, store information, solve sums, etc., on a computer. It can work very fast and can do many jobs at the same time.

In the previous class, we learnt about the use of computers in different fields. Let us quickly revise some of them:



**Figure 1.1:** Uses of Computer in Different Fields

A computer is one of the greatest inventions of mankind. It performs the following functions:

- |                   |   |
|-------------------|---|
| <b>INPUT</b>      | Accepts data given by the user              |
| <b>PROCESSING</b> | Works on data according to the instructions |
| <b>OUTPUT</b>     | Gives the desired results                   |
| <b>STORAGE</b>    | Stores the information                      |

## ➤ HOW DOES A COMPUTER WORK?

Every computer goes through the following three stages:

### INPUT

The data and instructions, which we enter using a keyboard or a mouse into a computer, is called **Input**. We can enter numbers, words, pictures or sounds as input.

### PROCESSING

After entering the data and instructions in a computer, the CPU works on the input to give us meaningful information. This is called **Processing**.

### OUTPUT

The meaningful information that we get after processing is known as **Output**.

This Input Process Output (IPO) cycle can be understood with the help of an example.



Example

Suppose, you want to calculate the total marks of different subjects on a computer. See, how the processing takes place in a computer.

#### INPUT

90, 85, 69, 98, 76, 84 +  
Data and Instructions

The first step is to input data and instructions, i.e., marks and plus (+) symbol.



#### PROCESS

90 + 85 + 69 + 98  
+ 76 + 84

Then, the computer works on the data on the basis of given instructions.



#### OUTPUT

502

The computer gives meaningful information or result as output.

On the basis of the total marks obtained, the teacher calculates the percentage of a student and finds his/her position in the class.

Likewise, we also perform various tasks by following the Input–Process–Output (IPO) cycle.

Let us understand it through some day-to-day examples.



Example

What are the steps that your mother follows when she prepares a cup of tea? Look at the example given below.

#### INPUT



Take some water, tea leaves, milk, and sugar.



#### PROCESS



Boil water, tea leaves, milk, and sugar.



#### OUTPUT



Tea is ready.

#### Fact File



Charles Babbage is regarded as the 'Father of Computer'.

#### Let's Know More



IBM's first PC was introduced on August 12, 1981. The term 'PC' stands for 'Personal Computer'; making IBM responsible for popularising the term 'PC'.

Let us take another example:



What do you do, when you want to talk to your friend on a telephone?



## ➤ PARTS OF A COMPUTER

A computer has four main parts, which help in performing the IPO cycle.

### KEYBOARD

A keyboard is used to type data and instructions into the computer. The commonly used keyboard has 104 keys, which can be divided into many groups based on their functions.

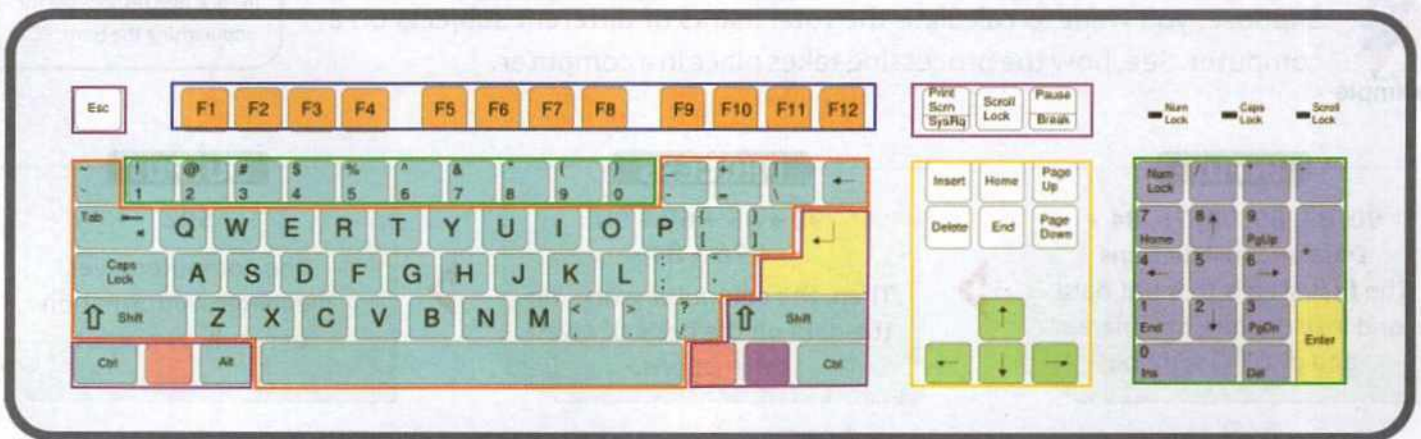


Figure 1.2: Types of Keys

- Typing (alphanumeric) Keys
- Control Keys
- Function Keys
- Navigation Keys
- Numeric Keypad

<b>1. Typing Keys</b>	These keys include letters (Alphabet keys), numbers (Number keys), punctuation (. , ; ' " ), and special symbols (+ - ; \$ etc) keys. These keys also include the Shift, Caps Lock, Spacebar, Backspace, and Tab keys.
<b>2. Control Keys</b>	These keys are either used alone or in combination with the other keys to perform certain actions. Ctrl, Alt, Windows logo key, and the Esc key are the various examples of Control keys.

<b>3. Function Keys</b>	These keys are used to perform specific tasks. They are placed on the top row of the keyboard and are labelled as F1,..F12. These keys have different functions in different programs.
<b>4. Navigation Keys</b>	These keys are used for moving through the documents and editing the text. These keys include the Arrow keys, Home, End, Page Up, Page Down, Delete, and Insert keys.
<b>5. Numeric Keypad</b>	The numeric keypad consists of number keys from 0 to 9, the arithmetic operators and the decimal point, similar to their appearance on a calculator. It is placed on the right side of the keyboard and used for entering numbers at a fast speed.

## MONITOR

A monitor looks like a TV screen. It displays the work that we do on a computer. It also displays the results and movement of the mouse pointer on the screen. A monitor is also known as a Visual Display Unit (VDU). The information that we see on a monitor is called soft copy. There are three types of monitors.



**1. Cathode Rays Tube (CRT) monitor:** CRT monitors are big in size and consume more power.

**2. Liquid Crystal Display (LCD) monitor:** They are monitors with flat screens that consume less power.



**3. Light-Emitting Diode (LED) monitor:** These monitors have better display. They are thinner and lighter in weight. LED monitors use 40% less power than LCDs and last longer. These monitors are in maximum use nowadays.

## CENTRAL PROCESSING UNIT (CPU)

It is the brain of a computer that processes all the instructions given to the computer. It does all the calculations and displays the result on the monitor. It also stores a lot of information.

A CPU consists of three main parts. They are– MU, CU, and ALU.



## Memory Unit (MU)

In memory unit, we can store information or data according to our need. The information in the memory can be changed and recalled on the screen, whenever needed. The data and instructions are also stored in the memory unit, which are to be processed.

## Control Unit (CU)

The control unit works like a traffic policeman. It controls and manages the working of all the parts of a computer.

## Arithmetic and Logical Unit (ALU)

The ALU unit performs all the arithmetic calculations, like addition, subtraction, multiplication, and division. It also performs logical operations.

## MOUSE

A mouse is a pointing device. It is connected to the CPU by a cable. A mouse usually has two buttons on it. It is used to point, select, and move any object on the screen. When we move a mouse with our hand, a pointer on the screen moves in the same direction. It also helps to draw pictures. Nowadays, the most commonly used mouse is the one that has a scroll wheel in the centre of the two buttons.



## Activity Zone >> For Better Concept Clarity

### Using a Mouse

- Click on **Start** > scroll down to **Paint 3D** to open Paint 3D program.
- Select the **Oval** tool in the **2D shapes** menu.
- Now, drag the pointer on the drawing area to draw the oval shape.



The 'All apps' option has been omitted in the Windows 10 Anniversary Edition. Now, you can look for various applications directly by clicking the Start button.






## ➤ WHAT MAKES A COMPUTER POWERFUL?


<b>Speed</b>	A computer works very fast and can do a large number of calculations quickly.
<b>Reliability</b>	Computers are quite reliable. They do not make any mistakes.
<b>Storage</b>	A computer can store a large amount of data, which can be used anytime.
<b>Versatility</b>	A computer can perform a variety of tasks and is used in almost all the fields.
<b>Accuracy</b>	A computer always gives correct results. Mistakes are normally done from a user's side.
<b>Diligence</b>	A computer can work for long hours without getting tired.
<b>Multitasking</b>	A computer can do many things at the same time.


## ➤ DISADVANTAGES OF A COMPUTER

A computer is a useful learning tool, but it has some disadvantages, too. Some of them are as follows:

 **INTELLIGENCE QUOTIENT (ZERO IQ):** A computer does not have an IQ or its own intelligence. By mistake if you enter the incorrect input, it will give the wrong result.

**HEALTH:** Working on a computer for long hours can affect your eyesight. It can also become the cause of obesity in people.



 **ELECTRICITY:** A computer depends on electricity and cannot work for a long time without it.

**COSTLY:** It is a costly device.



### NOTE

GIGO means Garbage In Garbage Out. It implies that if you enter wrong input, the computer will generate wrong output.

## RECAP

- Computer is a machine that works with data and instructions given by the user. It works on IPO cycle.
- Input is the data and instructions that is entered into a computer.
- A keyboard and mouse are used to enter data and instructions into the computer.
- A keyboard has a different sets of keys. They are—Typing keys, Control keys, Function keys, Navigation keys, and Numeric keypad.
- A monitor displays all the work that we do on a computer and also shows the output.
- A CPU does all the calculations and displays the result on the monitor.
- A CPU consists of MU, CU, and ALU.
- An ALU performs all arithmetic calculations and logical operations. A mouse is used to point, select, and move any object on the computer screen.
- The output printed on a paper using a printer is called the hard copy.



**BRAIN  
DEVELOPER**

### SECTION - A

#### A. Fill in the blanks.

1. A computer works with ..... and .....
2. A computer can ..... a large amount of information.
3. A keyboard has ..... keys.
4. A ..... is used to point, select, and move any object on the computer screen.
5. The ..... consists of number keys, arithmetic operators, and the decimal point.
6. A ..... does all the calculations and displays the result on the monitor.
7. A monitor is also known as a .....
8. A ..... displays all the work that we do on a computer.

9. .... keys are used for moving through the documents.

**HINTS**

- CPU
- Store
- Data
- Instructions
- Monitor
- VDU
- 104
- Navigation
- Numeric keypad
- Mouse


**B. State True or False.**

1. A computer has an IQ.
2. An output printed on paper is known as soft copy.
3. A computer has four main parts.
4. MU stands for Memory Utility.
5. A CPU consists of AU and LU.
6. The information that we see on a monitor is known as softcopy.
7. Function keys are placed on the right side of the keyboard.

**C. Match the following.**

I give output on a paper.	■	■	Mouse
Whatever you type and draw can be seen on me.	■	■	CU
I am not afraid of a cat, sit on a mat, have a long tail, can send e-mail.	■	■	ALU
I am a part of a CPU and do arithmetic calculations.	■	■	Monitor
Control all the activities of a computer.	■	■	Printer



**D. Application-based Questions.**

1. Mary is reading the soft copy of a letter. Which part of a computer is she using?
2. Supriya wants to paint using a computer. Which computer device will you suggest her to use for making a colourful drawing?
3. Saurabh wants to type a story using a computer. Which device should he use to do so?

## SECTION - B

### A. Multiple-choice questions.

- ..... can be words, numbers, pictures, or sound.  
a. Data                      b. Processing                      c. Meaningful information
- A computer displays ..... after processing the data.  
a. Input                      b. Process                      c. Output
- ..... keys are used for moving through the documents or web pages.  
a. Control                      b. Function                      c. Navigation
- The ..... monitor consumes the least amount of power.  
a. LCD                      b. CRT                      c. LED
- ..... keys are either used alone or in combination with the other keys to perform certain actions.  
a. Control                      b. Typing                      c. Navigation

### B. Write full form of the following.

- |              |              |
|--------------|--------------|
| 1. IPO ..... | 5. VDU ..... |
| 2. CU .....  | 6. MU .....  |
| 3. CPU ..... | 7. IQ .....  |
| 4. ALU ..... | 8. LCD ..... |

### C. Answer the following questions.

1. What is a computer?  
.....  
.....

2. How do you enter data and instructions into a computer?  
.....  
.....

3. What do you call the information, that you enter into the computer?  
.....

4. Name the device that is known as the brain of a computer.

.....

5. List any two features of a computer.

.....

.....

6. Mention any two disadvantages of a computer.

.....

.....

7. How many types of keys are there on the keyboard? Name them.

.....

.....

## ACTIVITY SECTION

### MY ACTIVITY

### Learning While Playing



A. Find words from the word grid with the help of the given hints:

> A device used to type numbers, letters, or words

> Information we get after processing

> A unit that stores the information

> The part of a computer that processes all the instructions

> The information that we see on a monitor



D	K	P	C	A	S	Y	Q	R	P	O	M	G
K	E	Y	B	O	A	R	D	H	N	E	S	Q
C	A	R	F	U	L	O	U	Z	G	C	K	T
T	H	O	M	E	M	O	R	Y	U	N	I	T
O	R	M	O	Q	N	R	X	S	F	E	A	W
U	P	E	R	B	I	L	T	W	P	K	T	Y
T	U	C	F	W	T	C	N	C	E	W	A	B
P	I	P	Z	M	O	E	I	J	L	R	D	U
U	S	U	N	X	R	S	T	O	R	A	G	E
T	B	H	F	A	S	O	F	T	C	O	P	Y

**B. Write the missing Input, Processing and Output for the following machines by using the hints given below.**

MACHINE	INPUT	PROCESSING	OUTPUT
	Microwave	Rice and water ..... .....	Ready to eat
	Juicer	Carrots, oranges	Churning and extracting juice ..... .....
	Food Processor	..... .....	Cutting the vegetables ..... .....
	Calculator	Numbers and operating symbols	..... ..... Calculated answer
	Washing Machine	..... .....	Washing clothes Clean clothes
	Toaster	Slices of bread	Heating and grilling ..... .....
	Music System	..... .....	Spinning Music and songs
	Water Purifier	Plain water	..... ..... Clean drinking water

**HINTS**

Ready juice, Big pieces of vegetables, Calculation, Heating and cooking, Purifies water, Chopped vegetables, Dirty clothes, Music CD, Toasted bread slices.

## LAB SESSION

### Perfection Through Practice



Open **Microsoft Word** by clicking on the **Start** > scroll down to **Word 2016**.

Arrange the given sentences according to the word **COMPUTER** and type them in MS Word.

**R**aise your hand if you need help.

**E**at and drink outside the lab.

**P**ress the keyboard keys gently.

**M**aintain silence.

**C**ome to the lab in a queue.

**O**bey your teacher's instructions.

**T**urn your computer off before you leave.

**U**se devices carefully.

For example:

1. **C** - Come with clean hands.

2. ....

3. ....

4. ....

5. ....

6. ....

7. ....

8. ....

## GROUP DISCUSSION

### For Concept Clarity

Divide the class into four groups and discuss the topic:

**How is the computer useful?**



## PROJECT WORK

### Using Creativity

Make a **COLOURFUL COLLAGE** on **Parts of a Computer** and label them.



## ONLINE LINKS

### Looking For More

- > To learn the mouse skills through activities, visit the website:  
[www.mouseprogram.com/practice.html](http://www.mouseprogram.com/practice.html)
- > To practice various keys, visit the website:  
[http://www.learninggamesforkids.com/keyboarding\\_games.html](http://www.learninggamesforkids.com/keyboarding_games.html)
- > To learn more about the basic parts of a computer, visit the website:  
<http://www.wartgames.com/themes/tech/computerparts.html>



# HARDWARE AND SOFTWARE

## LEARNING IN THIS CHAPTER

■ Hardware

■ Software

Students! By now you must have understood that a computer is an amazing machine that can do different types of jobs. It has different parts that work together to form a computer system.

The two basic parts of a computer system are:

➤ **HARDWARE**                      ➤ **SOFTWARE**

### ➤ **HARDWARE**

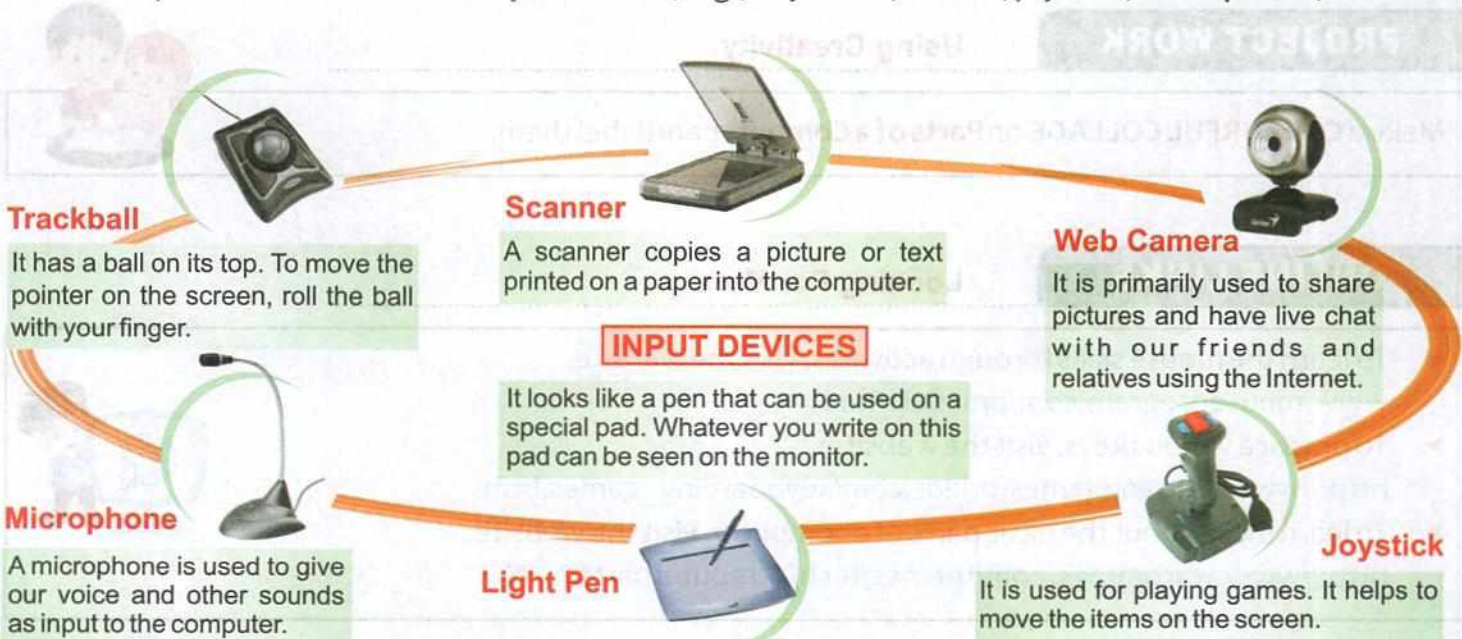
The physical parts of a computer that you can touch and feel are called **Hardware**.

A human body consists of different parts. The outer parts of a body are visible, but the parts, like brain, lungs, heart, etc., which are inside, cannot be seen. Similarly, in a computer, we can see the parts of the hardware that are outside, e.g., monitor, keyboard, etc. They are attached to the CPU by cables. Some parts of hardware are inside the CPU. You can see them only when you open the CPU box, e.g., hard disk, CPU chip, etc.

The hardware of a computer is further classified into three parts—Input, Output, and Storage devices.

### INPUT DEVICES

There are special types of hardware devices that are used to input words, numbers, sound, or pictures into a computer. These are called **Input** devices, e.g., keyboard, mouse, joystick, microphone, etc.





## OUTPUT DEVICES

The devices that display the information and results are called the **Output** devices, e.g., monitor, printer, etc.

### Monitor



A monitor looks like a TV screen. Whatever you type on the keyboard can be seen on the monitor. It also displays the processed information.

### Printer



It prints the output that you see on the computer screen on paper.

### Speaker



Speakers are used to hear music and sounds stored in a computer.

### Fact File



**Alan Turing** is known for his contribution towards modern computers. He is considered as the Father of Modern computers.

### Quick Quiz

Which part of our body acts as an input unit?

## STORAGE DEVICES

The devices used for storing data are called **Storage** devices. Hard disk is the main storage device, which stores the entire work that we do on a computer. Some other important devices, like CD, Pen drive, and DVD are also used to store information.

### CD



CD stands for Compact Disk. It is a round, flat, and shiny disk that stores a lot of information.

### Hard Disk



It is a device that stores a huge amount of data and information. It is present inside the CPU box.

### Pen Drive



It is very small in size, but can store and transfer a lot of data from one computer to another. Due to its small size, it can be handled easily.

### Fact File



**Lady Ada Lovelace** is regarded as the first computer programmer.

### Know the Fact



**Intel** is the world's largest processor-making company.

## SOFTWARE

Software is that part of a computer, which cannot be touched. To make the hardware work, we need to have software in the system.

Let us understand software with the help of the following examples:



Students! All of you must have seen and used a music system. The parts, like speakers, CD, and DVD, etc., which you can touch are hardware. Can you touch the songs or music recorded on a CD or DVD? No, because that is **Software**.



Figure 2.1: Music System

**Example** A CD is hardware, but the songs or movies stored in it are **software**, as they cannot be touched.

Likewise, a TV is hardware but the programmes that you watch on it are software.

Let us go back to the working of a computer. Which of the following step is done by software?

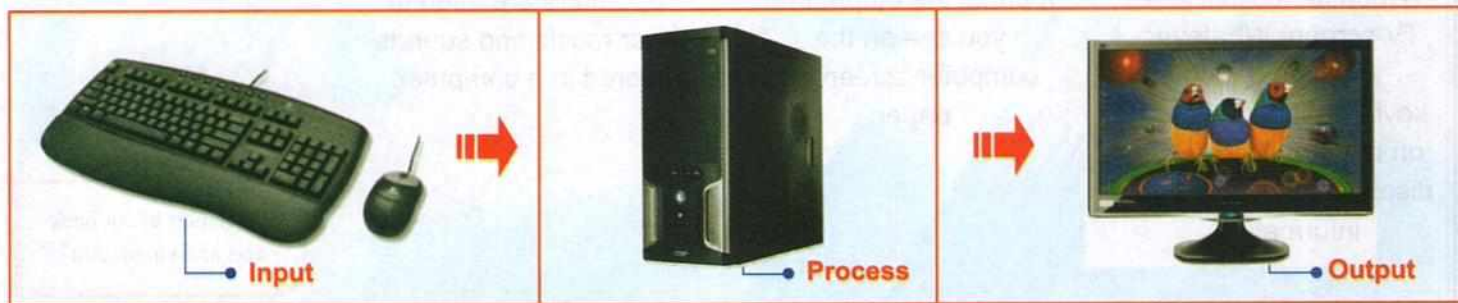


Figure 2.2: Working of a Computer

Yes! Processing is done by software. It takes the input from the user, processes it, and displays the output on the monitor.

Thus, we can define, **software** as a set of instructions given to the computer to do a particular work.

There are two types of software:

- System Software
- Application Software

## SYSTEM SOFTWARE

It is a set of programs that controls the overall working of a computer.

**Operating system** is a part of system software that makes a computer run. It manages all the input and output operations. It also manages the link between the different parts of a computer and the user. Let us understand the operating system with the help of an example.

Let us take the example of a car. It has petrol, engine, and wheels.

But, it is not moving. When will the car move?

It will move only when the **DRIVER** starts it.

So, the **DRIVER** is the **OPERATOR** of the car.



**Example** Similarly, an **Operating System** is the **DRIVER** of a computer, which makes it run. Without an Operating System, a computer cannot work.



Microsoft Disk Operating System (MS DOS), Windows XP, Windows 7, Windows 8, Windows 10, UNIX, LINUX, and Mac OS are the examples of some popular operating systems.

## Functions of Operating System

- It controls the overall working of the Input and Output (I/O) devices.
- It provides the login password to prevent the misuse of a computer.
- It keeps a track of information regarding creation, deletion, transfer, and copying of files.
- It helps to run the Application software, like Paint 3D, MS Word, Scratch, etc.
- It allocates memory to various programs whenever required.

## APPLICATION SOFTWARE

The software that helps you to do a specific type of work is called **Application** software. Let us understand this with the help of an example.



### Example

What can you do with a juicer in your house? You can only extract juice of fruits and vegetables with it. It indicates that you can do only a specific type of job with this machine.



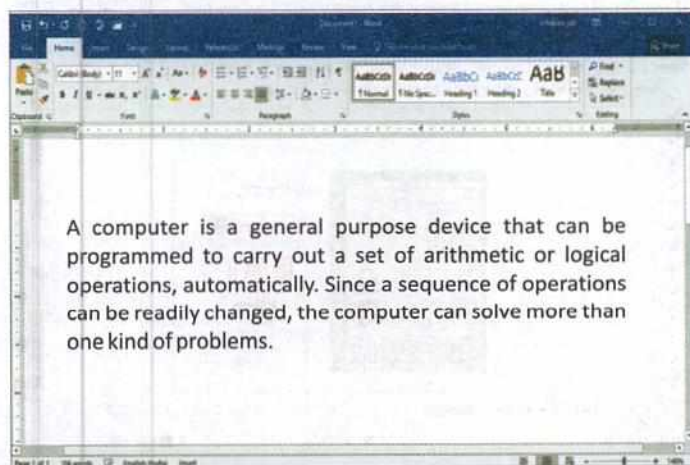
There are different types of application software that help in doing specific types of jobs. Let us have a look at some of the application software:

**Word Processing Software:** A word processor helps you to create professional looking documents, quickly and efficiently. It provides many features to change the appearance of text in a desired manner.

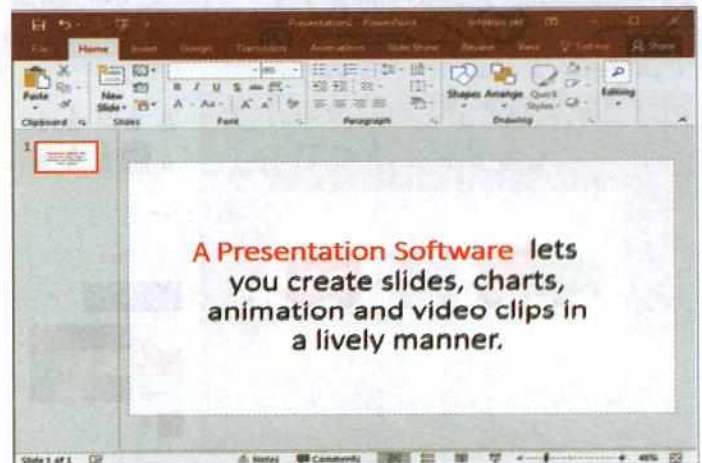
**Examples:** Microsoft Word, WordPad, OpenOffice.org Writer, etc.

**Presentation Software:** It lets you create slides, charts, animation, and video clips in a lively manner.

**Examples:** Microsoft PowerPoint, OpenOffice.org Impress, Adobe Flash, etc.



Microsoft Word



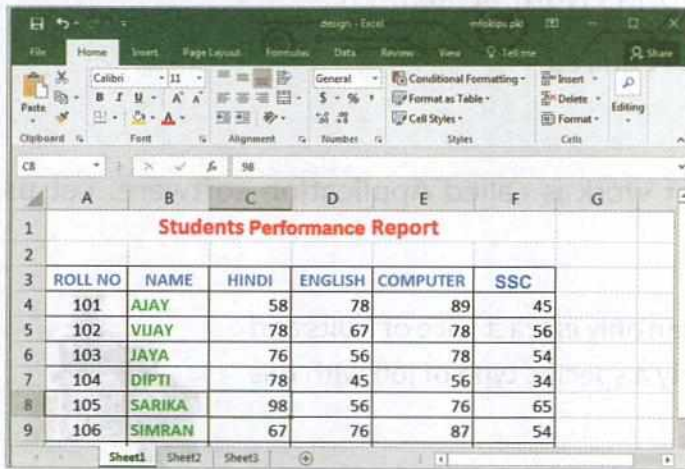
Microsoft PowerPoint

**Spreadsheet:** A spreadsheet program helps you to perform calculations and display data in the form of a chart to analyse in a better way.

**Examples:** Microsoft Excel, Lotus 123, Openoffice.org Calc, etc.

**Multimedia Software:** It is used to create videos, animations, sounds, graphics, and text with a high degree of interaction.

**Examples:** Games software, Windows Media Player, Windows Movie Maker, etc.



ROLL NO	NAME	HINDI	ENGLISH	COMPUTER	SSC
101	AJAY	58	78	89	45
102	VIJAY	78	67	78	56
103	JAYA	76	56	78	54
104	DIPTI	78	45	56	34
105	SARIKA	98	56	76	65
106	SIMRAN	67	76	87	54

Microsoft Excel



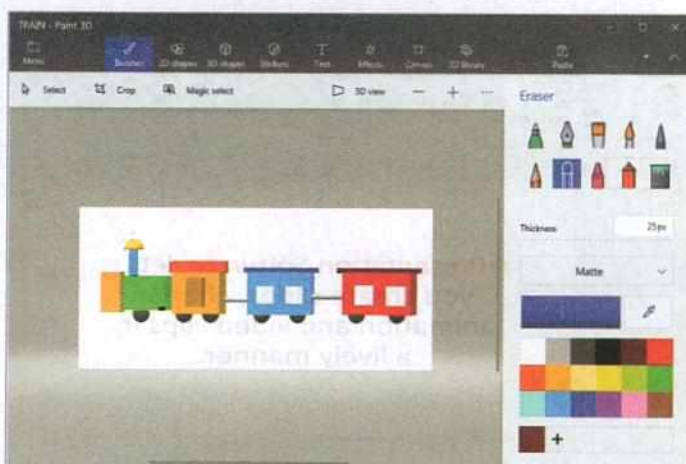
Games

**Graphics Software:** This software is used to create images, such as charts, graphs, photographs, logos, cartoons, and much more.

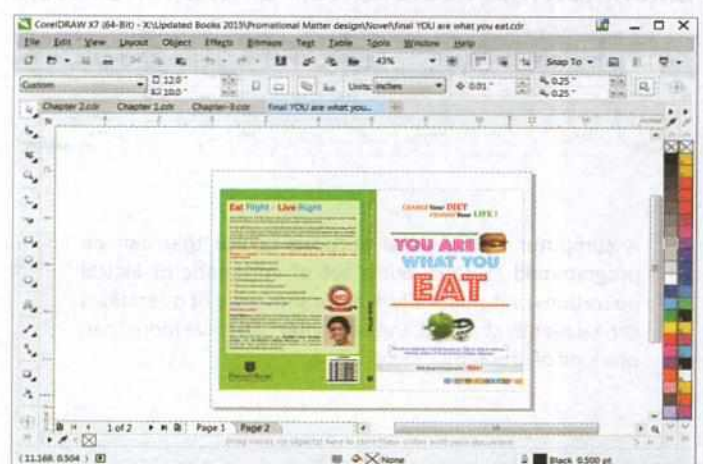
**Examples:** Paint 3D, Photoshop, AutoCad, Dreamweaver, etc.

**Desktop Publishing Software:** This application helps you to combine both text and graphic features to design professional documents, like newsletters, books, magazines, etc.

**Examples:** CorelDRAW, Adobe InDesign, QuarkXPress, etc.



Paint 3D



CorelDRAW

## RECAP

- The two basic parts of a computer are—Hardware and Software.
- The physical parts of a computer that you can touch are called hardware.
- A set of instructions given to the computer to do a particular work is called software.
- System software is a set of programs that controls the overall working of a computer.
- The software that is designed to do a specific type of work is called Application software.



## BRAIN DEVELOPER

### SECTION - A

#### A. Fill in the blanks.

1. The parts of a computer that can be touched are called .....
2. The devices used for storing data are called ..... devices.
3. The devices that give results after processing are called ..... devices.
4. A set of instructions given to a computer to do a particular work is called .....
5. The ..... manages the overall working of a computer.

#### HINTS

- Software
- Hardware
- Operating system
- Storage
- Output

#### B. State True or False.

1. The software that can do a specific type of work is called System software.
2. A scanner is an input device.
3. The Paint 3D program is used for drawing pictures.
4. A printer is an output device.
5. The devices that give us output are called input devices.

#### C. Application-based questions.

1. Ayush wants to record a song in the computer. Which input device can he use?  
.....
2. Sheena wants to draw a greeting card using a specific software. Which type of software will she use?  
.....

**D. Match the following.**

Input device

Data

Storage device

Hardware

Software

Printer

Hard disk

Songs

$90+85+69+98+76+84$

Keyboard

**SECTION - B**

**A. Name the device used for each of the following jobs.**

1. A device commonly used for playing games .....  
.....
2. A device used to store huge amount of data and information .....  
.....
3. A device that can read words, pictures, or numbers from paper and store them in a computer .....  
.....
4. A device that is used to hear sounds and music stored in a computer .....  
.....

**B. Answer the following questions.**

1. Define the term software. Name its types.  
.....  
.....
2. What is a storage device? Give any one example.  
.....  
.....
3. Which hardware devices are used to enter words, numbers, or pictures?  
.....
4. Which application software is used for typing and making corrections in the text?  
.....
5. Name the program used for performing calculations.  
.....

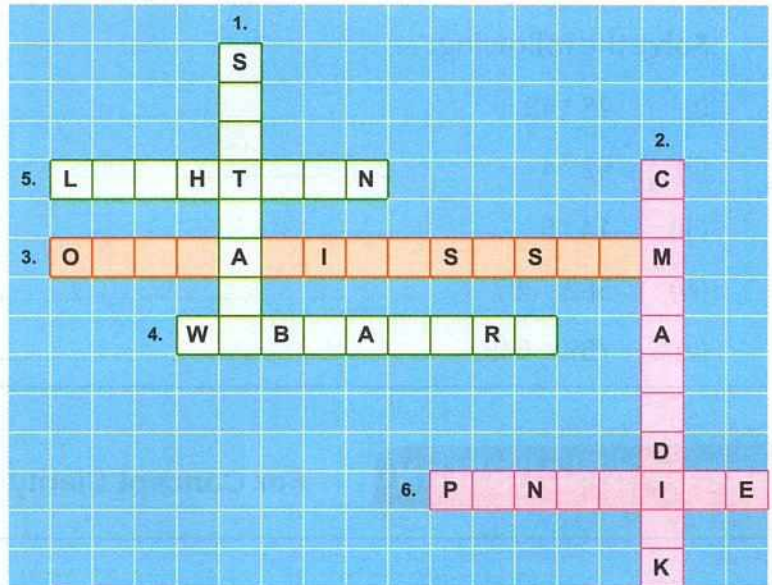
# ACTIVITY SECTION



## MY ACTIVITY

### Learning While Playing

A. Complete the crossword puzzle using the hints given below.



- I am a part of a computer that cannot be touched .....
- I am a round, flat, and shiny disk that is used to store a lot of information .....
- I am a part of the system software that makes a computer run .....
- I am used to share pictures and have live chat .....
- I look like a pen and am used to write on a special pad .....
- I am small in size and can transfer data from one computer to another .....

B. Name the devices and place them in correct columns.



Input	Output	Storage

## LAB SESSION

### Perfection Through Practice



- Make a list of hardware devices that you see in your computer lab. Classify them into Input, Output, and Storage devices.
- Make a list of different types of application software and write about their usage in one line each.
- Open the **Calculator** software by selecting the **Start** > scroll down to **Calculator**.

Solve the following:

- (i)  $25 * 45$  .....
- (ii)  $52 / 4$  .....
- (iii)  $14 * 5$  .....
- (iv)  $582 - 287$  .....
- (v)  $789 + 649$  .....



## GROUP DISCUSSION

### For Concept Clarity

- Conduct a group discussion on the topic: **Input and output devices**. Ask the students to support the discussion by giving real-life examples.
- Divide the class into four groups and discuss with them the topic, **Types of Software**.



## PROJECT WORK

### Using Creativity

- Make a **COLOURFUL** chart or collage on the topic– **Hardware Devices**.
- Draw any four hardware devices and write a few lines about them.



## ONLINE LINKS

### Looking For More

Visit the following websites to perform activities on hardware devices:



- [www.ictspecialist.com/io-facts.html](http://www.ictspecialist.com/io-facts.html)
- [www.ictspecialist.com/hardsoft.html](http://www.ictspecialist.com/hardsoft.html)
- [www.ictspecialist.com/peripherals.html](http://www.ictspecialist.com/peripherals.html)









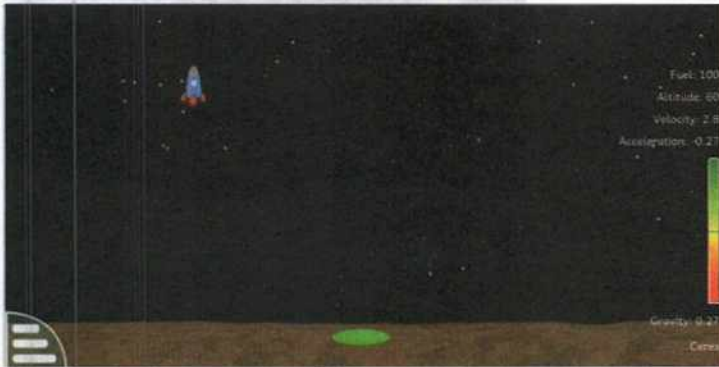
## Activity-1

- Open **GCompris educational** software.
- Select Top Menu > **Mathematics**  > **Share pieces of candy**  activity.
- Drag and drop the characters on the screen.
- To divide the candies equally, drag and drop equal number of candies in the boxes.
- Click on **Ok** to check the result.



## Activity-2

- From the Top menu select  > **Land Safe**  activity.
- The Tux Ship will move, use up and down cursor keys to control the thrust.
- To control the direction of Tux's Ship use the right and left arrow key.
- The landing platform turns green when the velocity is safe to land.
- Make sure the Tux Ship lands on the landing platform safely.



# TUX PAINT

## LEARNING IN THIS CHAPTER

- How to open Tux Paint?
- Pattern brush shapes
- Haze brush shapes
- Difference between Paint and Lines tool
- Stamp tool
- Magic tools
- Rainbow effect
- Printing a drawing

## ➤ TUX PAINT

Tux Paint is an amazing drawing program for students. Unlike other drawing/painting programs, Tux Paint has a lot of creative tools, funny animations, and magical effects, which make it one of the best drawing software available.

Some of its unique features are:

- Tux Paint is a free software.
- Tux Paint has a drawing mascot, which helps you to learn more about it.
- A large variety of tools help the students to create beautiful designs.
- We can add personalised stamps to our drawing.
- Funny sound effects are played when we select any tool in Tux Paint.
- We can load and save images directly as thumbnails without using any file name in Tux Paint.

## ➤ HOW TO OPEN TUX PAINT?

Select the **Start** button > **Tux Paint** > **Tux Paint (Full Screen)**.

### NOTE

When you open Tux Paint, it displays two modes: Windowed and Full screen. Selecting the Full Screen Mode will not display the Title bar.

- You can now see the welcome screen of **Tux Paint**.
- After the welcome screen, you will get the opening screen of **Tux Paint**.



**Figure 3.1:** Starting Tux Paint

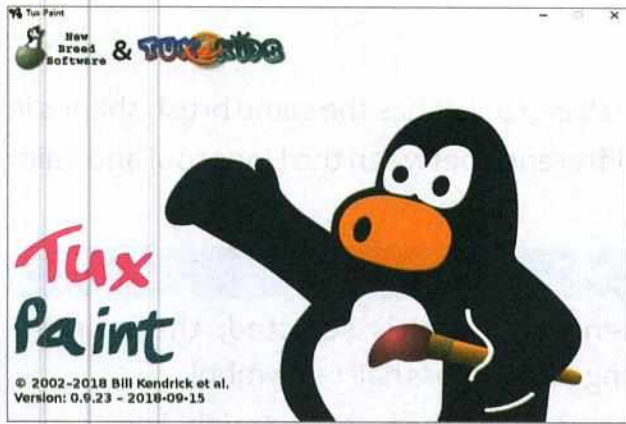


Figure 3.2: Welcome Screen of Tux Paint

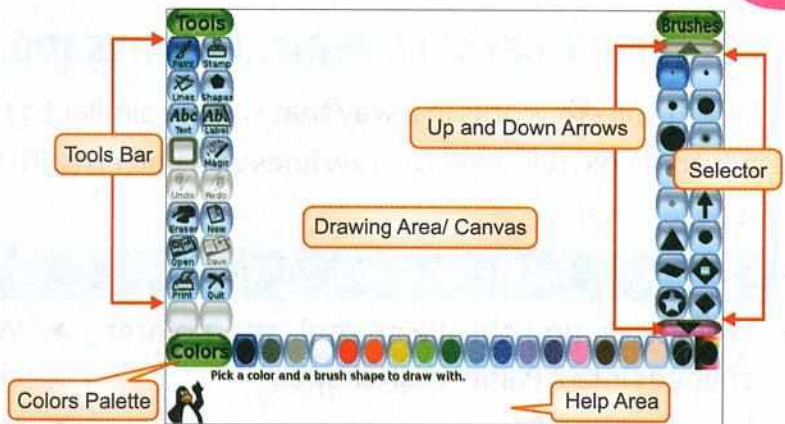


Figure 3.3: First Window of Tux Paint

## ➤ PAINT BRUSH SHAPES


Tux Paint gives us an option to draw beautiful patterns using the **Paint** tool . Let us see how many beautiful patterns we can make.



Figure 3.4: Using Paint Brush Shapes

### VINE BRUSH

- Select the **Paint** tool . Now, you will see the Brushes sub-toolbox on the right hand side. Select the filled circle shape and choose brown colour from the palette. Draw the trunk of a tree.



- Scroll down and select the **Vine** brush from the Brushes sub-toolbox.

Now, select green colour from the **Colors** palette.

- Move the pointer to the drawing area and draw the leaves by clicking on the trunk. You will see a beautiful tree as shown in Figure 3.4.
- Similarly, select other brush shapes and see how many different patterns you can draw.

### HAZE BRUSH

Haze brush is a unique sub-tool that produces a hazy appearance. We can use it to draw objects that are far away.

- Select the **Paint** tool , then choose the required colours to draw mountains, Sun, and river.
- Now, select the **Haze** brush  and select light blue colour. Draw a few clouds in the sky. Similarly, select green colour and draw bushes as shown in Figure 3.5.

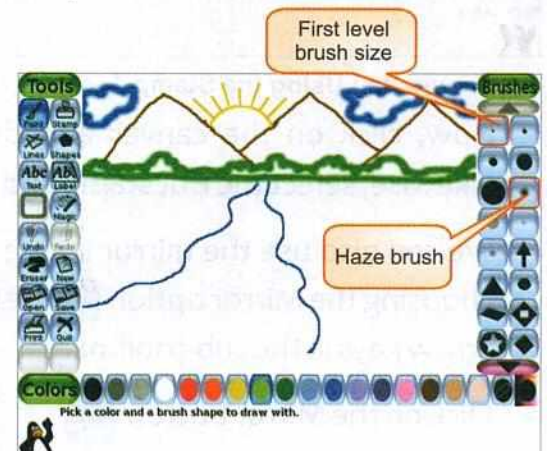


Figure 3.5: Using Haze Brush

#### Fact File




**Bill Kendrick**  
The lead developer and designer of Tux Paint.

#### Let's Know More

You can add more colours by clicking on the last option of the **Colors** palette. After clicking it, you will get **Pick a Color** box on the screen. Select any colour of your choice and click the **Back** button to go back to the main screen and use the selected colour.

## ➤ DIFFERENCE BETWEEN PAINT AND LINES TOOL

The Lines tool  works in a way that is quite similar to the Paint tool. It has the same brush shapes in the sub-tool box. It is used to draw lines and patterns. The difference between the Lines tool and Paint tool is as follows:

Paint Tool	Lines Tool
<ul style="list-style-type: none"><li>➤ While selecting the <b>Paint</b> tool, the pointer changes into a Paint brush shape.</li><li>➤ It is a free-hand drawing tool.</li><li>➤ The selected brush type pattern is directly drawn on the canvas.</li></ul>	<ul style="list-style-type: none"><li>➤ When <b>Lines</b> tool is selected, the pointer changes into cross hair (+) symbol.</li><li>➤ It draws only in the form of straight line.</li><li>➤ The pattern appears on canvas only after you complete the line and release the mouse button.</li></ul>





## ➤ STAMP TOOL

It is an interesting tool, which you have already used in your previous class. This tool is used to add ready-made images as stamps. Tux Paint already has some inbuilt stamps. Additional stamps can be downloaded from the following website: [www.tuxpaint.org/download/windows](http://www.tuxpaint.org/download/windows)



Further, select the link: [tuxpaint-stamp-2009.06.28-win32-installer.exe](http://tuxpaint-stamp-2009.06.28-win32-installer.exe)

On installing the stamps file, we can see various categories of stamps in the sub-toolbox.



- Click on the **Stamp** tool  in the Tools bar.
- Choose any one stamp from the Stamp sub-toolbox. To have more stamps, click either on the Left  or Right arrow . Select the Cock stamp.
- You can also increase and decrease the size of the stamp using the **Slope bar**  just above the **Colors** palette in the sub-toolbox.


**Figure 3.6:** Using the Stamp Tool

- Now, click on the canvas and the stamp will be pasted. Likewise, select the Hut stamp and paste it on the canvas.
- We can also use the mirror image of the selected stamp by choosing the Mirror option  below the right and left arrow keys in the sub-toolbox.
- Click on the Mirror button .
- Now, paste the selected stamp besides the previous stamp.





**Figure 3.7:** Using the Mirror Option

## ➤ MAGIC TOOLS

In Tux Paint, there are various magic effects that allow you to draw wonderful patterns. Let us learn about some of the pattern effects in **Magic tool** .

### MOSAIC EFFECT

The mosaic effect tool is used to apply a pattern of many small coloured pieces of stones on the canvas.

- Open a new canvas and draw a sunset scene or you can select any coloured background.
- Click the **Magic tool**  and select the **Mosaic effect**  on the Selector.
- Bring the magic wand to the canvas and click on it.
- The canvas will be filled with mosaic effect. Clicking it further will change its colour.

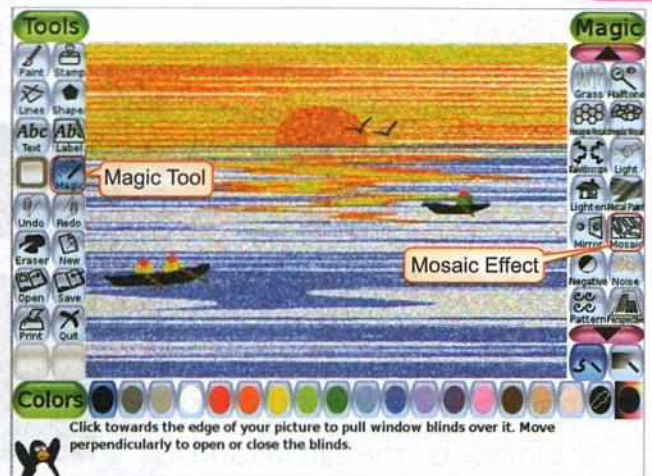




Figure 3.8: Using the Mosaic Effect

### KALEIDOSCOPE EFFECT

This tool is used to create free-hand patterns. The most amazing feature of this tool is that even if we move the magic wand from a single point, it draws from all the four directions. Let us learn how to use it.

- Select the green background. Now, click on the **Magic tool**  and select **Kaleidoscope effect**  from the Selector.
- Pick yellow colour and bring the magic wand on the canvas.
- Now, click and drag the mouse as you wish.
- A pattern will start appearing on the canvas. After designing the pattern, fill colour in it.

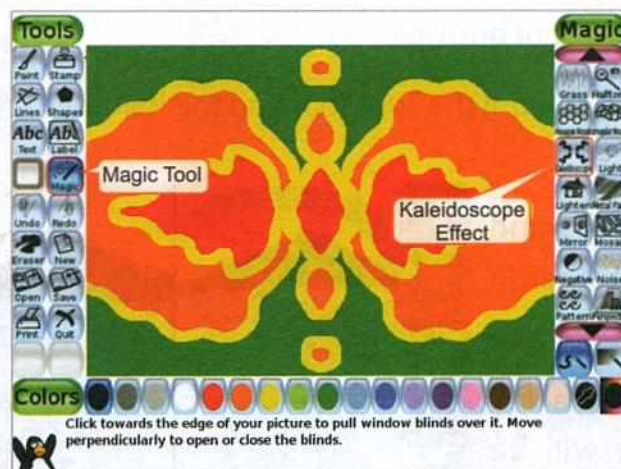



Figure 3.9: Using the Kaleidoscope Effect

#### Let's Know More

Tux Paint supports vector graphics, which means that you can draw images that can be zoomed up to 100 times their original size without compromising on the quality of the image.

#### Let's Know More

##### Fold Effect

If you want to apply the fold effect on your drawing, use the **Fold** sub-tool  of Magic tool.

#### Let's Know More

##### Rosette Effect

This magic tool is used to draw a pattern in the shape of a rose.


#### Let's Know More

##### Ripples Effect

Applying this magic tool makes an object look wavy in a circular pattern.

## EMBOSS EFFECT

This magic tool gives a raised effect to an object from the surface that you have drawn.

- Select the **Emboss** effect  from the Selector.
- Bring the magic wand over the image on the canvas and drag the mouse to emboss the image.

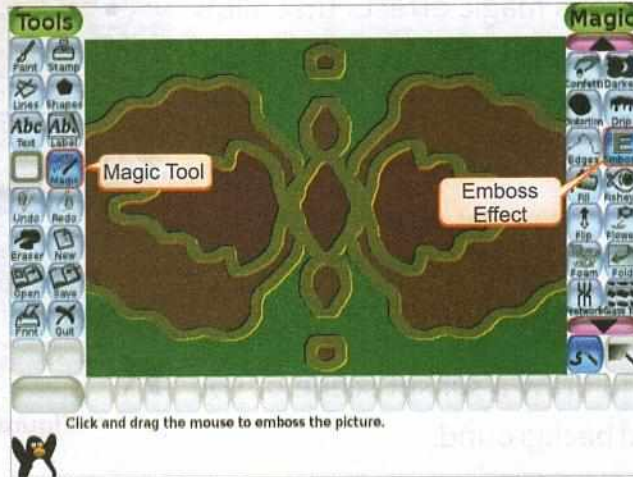



Figure 3.10: Using the Emboss Effect

- Observe the change in the image.

## RAINBOW EFFECT

In the sub tools of Magic tool, there are two types of Rainbow effect tools.

**RAINBOW EFFECT** : It draws a trail of rainbow colours as you drag the magic wand on the drawing area.

**REAL RAINBOW** : It allows you to draw a rainbow just like the one you see in the sky after rainfall.

Let us try both the effects on our drawing.

- Select the **Magic** tool  from the **Tools** bar and the **Rainbow** effect  from the sub-toolbox.
- Now, drag the magic wand from one point to another in an arc shape.
- As you move the mouse, a trail of rainbow colours will be drawn.
- Now, select the **Real Rainbow** effect .

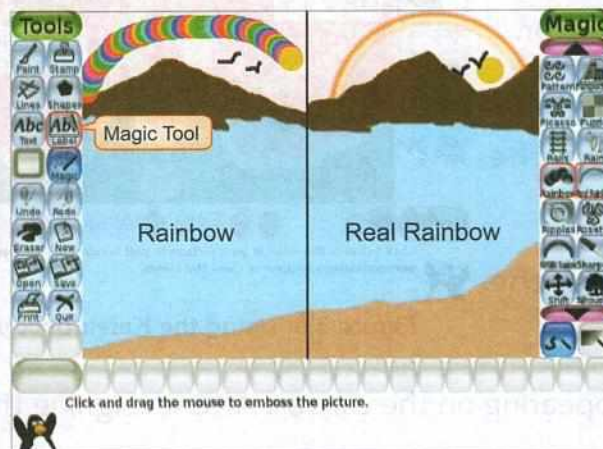


Figure 3.11: Using Rainbow and Real Rainbow Effect

- Choose a single point on the drawing area.

### Know the Fact

**Tux Paint** is translated in 129 languages. Many Indians have participated actively in the translation process of Tux Paint into the languages of Indian origin.

Ankit Malik - Hindi  
Ravishankar Ayyakkannu - Tamil  
Kartik Mistry - Gujarati  
Pavithran Shakamusi - Telugu

### Know the Fact

There are 47 different background colours/pictures with which you can start a new drawing in Tux Paint.

### Let's Know More

**Noise effect** is used to add grainy look to an image by adding random variations in the brightness or in the colour of an image.

- Click and drag the wand from one end to the other.
- Release the mouse and you will see a real rainbow on your canvas.

You can add the other effects using **Magic** tools in the same way.

## ➤ PRINTING A DRAWING

Tux Paint allows you to print your drawing on a paper.

- Open the drawing that you want to print.
- Select the **Print** tool  in the **Tools** bar.
- A box appears on the screen.
- Click on **Yes** to print.

You have learnt almost everything about the **Tux Paint**, and its various tools. Draw more pictures by applying new effects and ideas for better understanding of the tools.

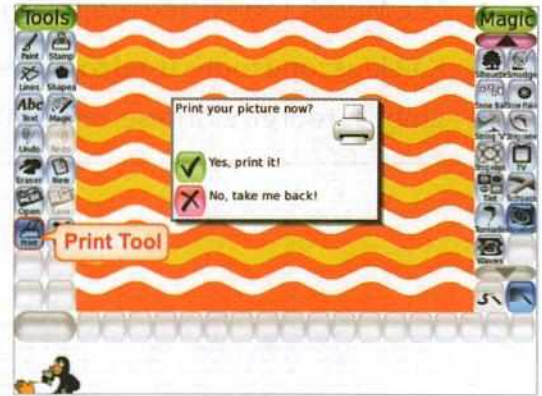













Figure 3.12: Printing a Drawing

## Activity Zone >> For Better Concept Clarity

Let us draw a scenery on a new blank canvas.

- Open a new file with green background.
- Select the **Paint** tool . Choose blue colour to draw the pond. Now, select the **Magic** tool  and then choose **Fill** tool. Click on the pond to fill it with blue colour.
- Now, select the **Grass** effect  and choose dark green colour. Draw some grass on the ground.
- Apply noise effect to the pond by using the **Noise** effect  from the **Magic** sub-toolbox .
- Now, choose the **Flower** tool  and draw flowers of different colours.
- Select the **Paint** tool . Draw the trunk of trees and fill brown colour in them. Pick the **Vine** tool  from the **Brushes** section. Draw the upper part of the tree as shown in the figure.
- Add cherries on the trees by using the **Stamp** tool .
- Add two **Gander** birds by using the **Stamp** tool.
- Now, select the **Starfish**  shape from the **Brushes** section of the **Paint** tool .



## RECAP

- Tux Paint gives us an option to draw beautiful patterns using the Paint tool.
- Haze brush is a unique sub-tool that produces a hazy appearance.
- Stamp tool is used to add ready-made images as stamps.
- The Mosaic tool is used to apply a pattern of many small coloured pieces of stones on the canvas.
- Kaleidoscope tool is used to create free-hand patterns.
- Emboss tool gives a raised effect to an object from the surface that you have drawn.



## BRAIN DEVELOPER

### SECTION - A

#### A. Fill in the blanks.

1. The ..... is used to draw free-hand drawings.
2. We can create a mirror image of a stamp using the ..... button.
3. .... tool gives the raised effect to an object from the surface that you have drawn.
4. Tux Paint has been translated in ..... languages.
5. The ..... tool is used to apply a pattern of many small coloured pieces of stones.

#### HINTS

- Emboss      • 129      • Mosaic      • Paint      • Mirror

#### B. State True or False.

1. Tux Paint is a free software.
2. When you select the Lines tool, the pointer changes into brush shape.
3. Stamp tool is used to add ready-made images as stamps.
4. Mosaic effect lightens the colour of an object.
5. Tux Paint provides 48 different background colours or pictures.



## SECTION - B

### A. Multiple-choice questions.

1. .... brush is used to draw objects that are far away.
  - a. Vine
  - b. Haze
  - c. Emboss
2. .... is the lead developer and designer of Tux Paint.
  - a. Mark Zuckerberg
  - b. Bill Kendrick
  - c. Bill Gates
3. Which of the following tools is used to create free-hand patterns?
  - a. Kaleidoscope
  - b. Emboss
  - c. Drip
4. When Lines tool is selected, the pointer changes into ..... symbol.
  - a. \*
  - b. +
  - c. \$
5. The ..... draws a trail of rainbow colours as you drag the magic wand on the drawing area.
  - a. Mosaic effect
  - b. Rainbow effect
  - c. Real rainbow

### B. Answer the following questions.

1. List any two features of Tux Paint.

.....

.....

2. Explain the use of Mosaic effect.

.....

.....

3. What is the use of Magic tool?

.....

.....

4. Differentiate between Rainbow and Real Rainbow effects.

.....

.....

.....







5. How is the Stamp tool useful?

.....

.....

.....

**C. Match the following.**

Kaleidoscope effect	→	←	
Mosaic effect	→	←	
Magic tool	→	←	
Paint tool	→	←	
Emboss effect	→	←	
Lines tool	→	←	

# ACTIVITY SECTION

## MY ACTIVITY

### Learning While Playing



Draw these beautiful drawings using the given tools.

Paint tool

Stamp tool

Smudge tool

Waves effect

Grass effect

Noise effect

Lines tool

1



2



## GROUP DISCUSSION

### For Concept Clarity

Discuss the given topics with the students: **Mosaic effect** vs **Emboss effect**.



## ONLINE LINK

### Looking For More

To learn more about magic effect tools, visit: <http://tuxpaint.org/features>



# UNDERSTANDING WINDOWS 10

## LEARNING IN THIS CHAPTER

- Features of Windows 10
- Windows Taskbar
- Selecting and deselecting Icon, Opening a Program
- Arranging and Sorting the desktop Icons
- Changing the desktop background and Screensaver
- Mouse Pointer shapes
- Shutting down your computer

Tell me students, who takes care of all the household work at your home? Yes! You guessed it right. Your parents! They look after all the household work in such a manner that you do not have to worry about anything. It is because they run the house with a system. Imagine if your parents go away for sometime and you have to manage the house, what will you do? You will surely find it difficult to manage the daily chores of the house.

In the same way, a computer has a special set of programs, which manages all the jobs of a computer and makes it run. This is known as the **Operating System**.

Windows is an operating system. Without it, we cannot even start a computer or work on it.

Now again, tell me students, when we use the word “window”, which image comes to your mind?

Yes! It is the glass window through which we can peep outside and see various things. Likewise, in computers, Windows is a program that shows different programs on the screen.

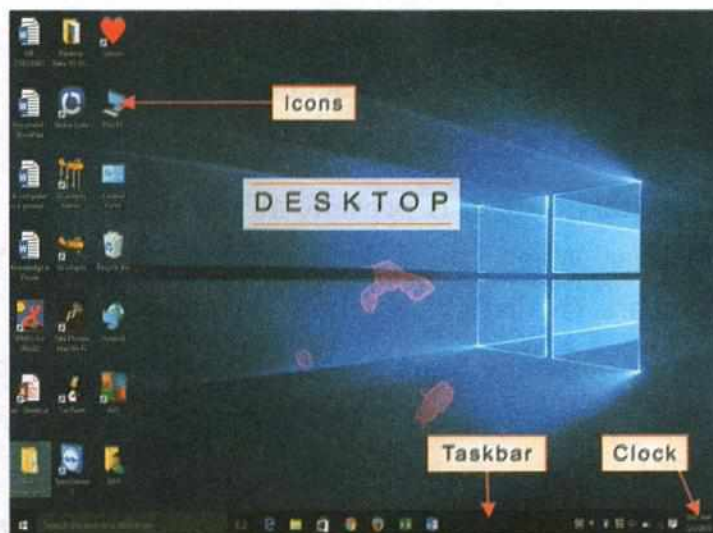


Figure 4.1: Windows 10 Desktop

## ➤ FEATURES OF WINDOWS 10

- Windows 10 is more attractive, with a complete set of new pictures, themes, and icons.
- The best features of both Windows 7 and Windows 8 have been included in Windows 10.
- It has an improved Search tool – Cortana, which helps you to find information on your system or on the web directly. You can even give voice commands to this Search tool.
- It has a new 'Task View' button to the right of the search box, on the taskbar. This button provides the ability to open multiple desktops at the same time.
- Windows 10 provides a Windows Store application where you can get a lot of free apps, games, and songs.

When we switch on a computer, Windows starts automatically. The first screen that appears with labelled pictures on it, is called **Desktop**.

## ICONS

The small labelled pictures or symbols present on the desktop are called **Icons**. These icons are used to open specific programs or documents.

Let us understand the concept of icons and desktop with the help of an example.



When you go to the kitchen and open a cupboard, you find various labelled boxes, containing different items. The cupboard works like Windows and the labelled boxes work like icons.

## ➤ WINDOWS TASKBAR

The Taskbar is a long horizontal bar located at the bottom of the desktop. It is divided into the following sections:

### THE START BUTTON

The Start button is present at the bottom left corner of the Taskbar. When you click on the **Start** button, a list of options appears. This list is called the **Start** menu.



You can use the **Start** button to perform common tasks, such as starting a program, searching files and folders, shutting down the computer, and much more.

You can find File Explorer, Settings, and a list of the most used apps on the left side of the Start menu.

### MIDDLE SECTION

The middle section of the bar shows the opened programs as buttons. Here you can add commonly used programs, such as the Internet Explorer, Word program, Windows media player, etc. They can be opened with a single click. When a program is active, its icon is highlighted in a lighter shade with a bar below it.

### NOTIFICATION AREA

The right side of the taskbar is known as the **Notification Area**, which includes a clock and a group of icons that tell the status and notifications about the programs running on a computer. For example, software updates, network connectivity, battery, volume, etc.


### Fact File



**William (Bill) H. Gates**

He is the founder of Microsoft corporation; the world's leading software company.

### Let's Know More

The **Start** menu can also be opened by pressing Windows key  on the keyboard.

### Quick View

You can also activate **Task View** by pressing the **Windows logo key + Tab** key on your keyboard.

### Quick View

Press **Windows logo + D** key combination to minimise all the open windows.

The **Peek** button is present on the extreme right of the taskbar. Click this button to minimise all the open program windows and view the desktop.



Figure 4.2: Taskbar

## MOVING THE TASKBAR

The Taskbar can be moved to any of the four sides of the Desktop.

To move the Taskbar, take the following steps:

- Place the pointer on the blank area of the Taskbar.
- Press and hold the left mouse button, and drag the taskbar to any side of the desktop.
- Now, release the mouse button.



Figure 4.3: Moving the Taskbar

## LOCKING THE TASKBAR

You can lock the Taskbar, that means it will not move to any place until you unlock it.

- Right-click on the blank area of the Taskbar.
- Click on the **Lock the taskbar** option in the Shortcut menu.
- You will notice that the taskbar will not move from its location.

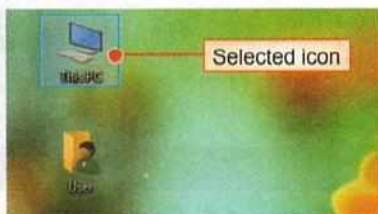


Figure 4.4: Locking the Taskbar

## ➤ SELECTING AND DESELECTING ICON

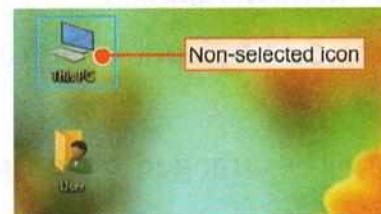
### SELECTING AN ICON

- To select any icon, simply click on it.
- It will be highlighted.



### DESELECTING AN ICON

- To deselect the icon, click away from the icon.
- The icon will now be displayed in its original form.



## ➤ SELECTING ADJACENT AND NON ADJACENT ITEMS

### SELECTING ADJACENT ITEMS

- Left-click on the first item to be selected.
- Hold down the **Shift** key and click on the last item to be selected.
- Release the **Shift** key. All the adjacent items will be selected.

### SELECTING NON ADJACENT ITEMS

- Hold down the **Control (Ctrl)** key.
- Click on each of the items to be selected, one-by-one.
- In this way, you will be able to select the non-adjacent items.

## ➤ OPENING A PROGRAM

- Click the icon, which you want to select and press the **Enter** key. The application window will open.

Or

Double-click the left mouse button on the icon to open it.

## ➤ ARRANGING THE DESKTOP ICONS

As you arrange your study desk to make it tidy, similarly, you can arrange the icons on the desktop to give it a better look. To do this:

- Right-click on the blank area of the desktop.
- You will find a list of options.
- Select the **View** option.
- Click the **Auto arrange icons** option from the sub menu.
- Observe the changes.

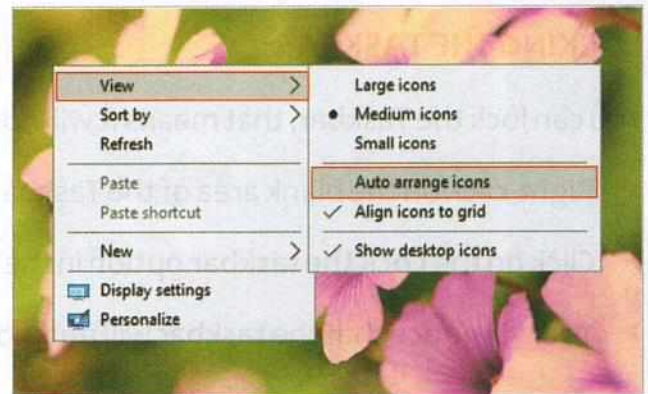


Figure 4.5: Arranging the Icons

## ➤ SORTING THE ICONS

**Sorting** the desktop items means arranging them in a proper order.

- Right-click on the blank area of the desktop.
- A Shortcut menu will appear.
- Point to the **Sort by** option and click the **Size** sub-option.
- The icons will be arranged in the increasing order of the file size.

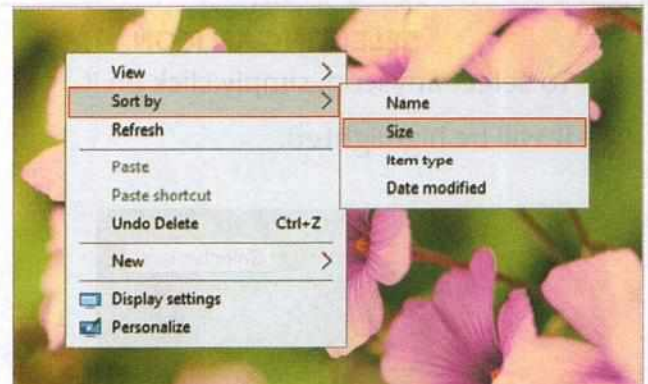


Figure 4.6: Sorting the Icons

## ➤ CHANGING THE DESKTOP BACKGROUND

You can change the appearance of the desktop background according to your choice in the following way:

- Right-click on the blank area of the desktop.
- You will find the list of options. This is called **Shortcut menu**.
- Select the **Personalize** option.
- The **PERSONALIZATION** window will appear.
- By default the **Background** option is selected and preview of the current background is displayed in the right pane.
- Click on the drop-down arrow of the **Background** list box and select any option (Picture, Solid Colour, Slideshow) from the displayed list.



Figure 4.7: Changing Desktop Background



Figure 4.8: Changing Wallpaper

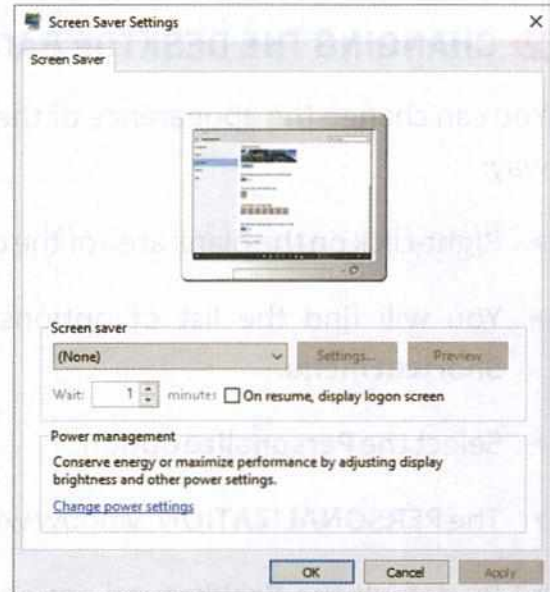
- Select any picture from the 'Choose your picture' section or click on the **Browse** button to get more options for the pictures from your computer.
- Select any layout for the background from the **Choose a fit** list box.
- A preview of the selected background will appear in the 'Preview' section.
- The selected picture will be set as the desktop background.

## ➤ CHANGING THE SCREEN SAVER

The **Screen Saver** is an image, which pops up on the computer screen whenever a computer is left idle for a certain period of time. By pressing any key or moving the mouse, you can again get back to the normal screen. Follow the given steps to change the screen saver:

- Right-click in the blank area of the desktop.
- Click on the **Personalize** option from the Shortcut menu.

- The **PERSONALIZATION** window will appear.
- Select the **Lock screen** option from the left pane.
- Select **Screen saver settings** option from the right pane.
- The **Screen Saver Settings** dialog box will appear.
- Click on the drop-down arrow in the **Screen saver** section and select any screen saver of your choice.
- A mini preview of the screen saver will be displayed in the **Preview** box.
- To watch the preview on full screen, click the **Preview** tab.
- You will get the preview of the selected screen saver on the full screen.



**Figure 4.9:** Changing Screen Saver

- Move the mouse to get back to the **Screen Saver Settings** window.
- Set the time in **Wait** box as per your need. Use the up arrow to increase the time and the down arrow to decrease.
- Click **OK**.







**NOTE** You can even get to the **Screen Saver Settings** directly by typing 'Screen Saver' in the search box placed on the taskbar. Select the **Change screen saver** from the displayed options, the **Screen Saver Settings** dialog box will open.

#### Know the Fact

When a computer is switched on, Windows take a few seconds to load an Operating System. This process of loading the OS is called **Booting**.

## ➤ MOUSE POINTER SHAPES

The shape of the mouse pointer changes according to the actions we perform.

 <p><b>BUSY</b> It means that computer is busy and wants you to wait.</p>	 <p><b>NORMAL</b> This arrow is for pointing, selecting, and dragging the items on the screen.</p>
 <p><b>DOUBLE-HEADED ARROW</b> This arrow is for resizing the window or pictures.</p>	 <p><b>FOUR-HEADED ARROW</b> This arrow is for moving pictures and toolbars.</p>
 <p><b>I BEAM</b> This icon is for inserting the text in a document.</p>	 <p><b>WORKING IN BACKGROUND</b> It means that the computer is processing while you are working.</p>



## ➤ SHUT DOWN YOUR COMPUTER

Shutting down means, turning off a computer. To shut down your system, follow the given steps:

- Click on the **Start** button .
- Now, click on the **Power** button .
- Select the **Shut down** option.
- The system will take a few seconds to shut down.

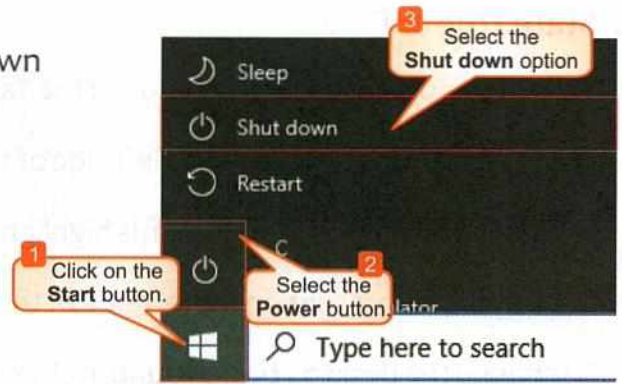


Figure 4.10: Shutting Down a Computer

## RECAP

- Windows is an operating system that controls and manages the functions of a computer.
- The small labelled pictures on the desktop are known as icons.
- The Start button is used to perform common tasks, such as starting a program, searching files and folders, and much more.
- Notification Area is present on the right side of the taskbar. It includes a clock and a group of icons.
- Double-clicking the left mouse button on the icon opens the selected item.
- Screen Saver is an image, which pops up on the screen, whenever a computer remains idle for a short time.



### SECTION - A

#### A. Fill in the blanks.

1. The ..... is the first screen of Windows, which appears when the computer is switched on.
2. .... application provides paid and free games, apps and songs.
3. The ..... is a long horizontal bar at the bottom of the desktop.
4. The right side of the Taskbar contains the .....
5. .... button provides the ability to open multiple desktops at the same time.
6. The advanced search tool of Windows 10 is called .....

#### HINTS

- Notification Area
- Desktop
- Taskbar
- Task View
- Cortana
- Windows Store

## B. State True or False.

1. The clock is present on the left side of the Taskbar.
2. The start button is found on the left side of the Taskbar.
3. When a program is active, its icon is highlighted in a brighter shade with a bar below it.
4. Peek button is present on the left side of the taskbar.
5. To change the desktop background, right-click on the blank area of the desktop.

## C. Application-based questions.

1. Adarsh wants to arrange all the icons on the desktop in alphabetical order. Suggest him the way to do so.  
.....
2. Karan is working on many applications on his computer. By mistake, he has clicked somewhere on the taskbar and all the open windows have minimised. Which button has Karan clicked on?  
.....

## SECTION - B

### A. Multiple-choice questions.

1. Which program manages all the jobs of a computer?  
a. Operating System                      b. Desktop                      c. Screen Saver
2. To arrange the icons on the desktop, ..... click on the blank area.  
a. Left                      b. Right                      c. Double
3. Pressing Windows key + D combination, ..... all the open windows.  
a. Maximizes                      b. Closes                      c. Minimizes
4. To open the Start menu, press the ..... key.  
a. Ctrl                      b. Windows                      c. Alt

### B. Name the mouse pointers, which perform the following actions.

1. For pointing, selecting, and dragging an item.
2. For resizing the pictures.
3. It indicates that you have to wait because the computer is busy.
4. For moving pictures and toolbars.

**C. Answer in one word.**

1. Name the term used for the process of loading operating system.

.....

2. Name the box that displays the preview of the Screen Saver.

.....

3. Name the option that displays all the apps and programs in the computer.

.....

4. Write the shortcut key combination to activate Task View.

.....

**D. Answer the following questions.**

1. Define the term Windows.

.....  
.....

2. What is Desktop?

.....  
.....

3. What is a Taskbar?

.....  
.....

4. Write any two features of Windows 10.

.....  
.....  
.....

5. Briefly explain the use of Start button.

.....  
.....

6. Describe the term Screen Saver.

.....  
.....

# ACTIVITY SECTION



## MY ACTIVITY

### Learning While Playing

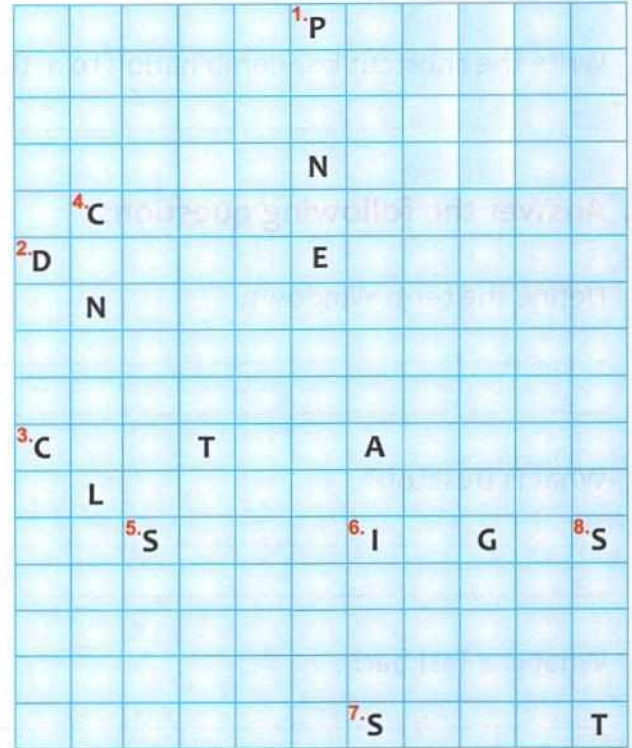
Fill in the crossword with the help of the given clues.

#### DOWN

1. The slant arrow that is controlled by the movement of the mouse .....
4. The key that helps in selecting non-adjacent items.
6. .... are the labelled pictures on the screen.
8. The ..... button gives quick access to documents, windows applications, etc.

#### ACROSS

2. .... clicking the left mouse button on the icon will open the application window.
3. We can give voice commands to ..... to search for a file.
5. .... the icons means arranging them in a proper sequence.
7. The key that helps in selecting adjacent items .....



## LAB SESSION

### Perfection Through Practice



#### A. Selecting and Arranging Icons.

- Click on the **This PC** icon on the desktop. The icon will be selected and highlighted.
- Now, double-click the icon. **This PC** folder will open.
- Click the **Documents** option on the left side pane. This will open the **Documents** folder.
- Select the adjacent folders by clicking the first icon to be selected then hold down the **Shift** key and click on the last icon.
- Click the mouse anywhere on the blank area to deselect the items.

- Select the non-adjacent folders by holding down the **Ctrl** key and clicking each of the desired icons.
- Click the **Close** button. **This PC** folder will be closed.
- Now, arrange icons on your desktop in different ways, such as Name, Size, and Item type.

## B. Changing Background and Screen Saver.

- Right-click on the blank area of the desktop. A Shortcut menu will appear.
- Select **Personalize** option from the menu.
- Click the **Background** option.
- Select any background from the displayed list and click on the **Lock screen** option.
- Select **Screen Saver Settings** option from the right pane.
- Click the drop-down arrow of the **Screen saver** list box. Set the screen saver to **3D Text** and set the wait time to 2 minutes.
- Click the **Settings** tab. In the dialog box, select **Custom Text** radio button and type **KIPS** and then click **OK**. Now again click **OK** and observe the change.

## GROUP DISCUSSION

### For Concept Clarity

- Discuss the features of **Cortana**.
- Differentiate between the functions of **Task View button** and **Peek button**.



## PROJECT WORK

### Using Creativity

Make an informative chart displaying all the **Versions of Windows** and their features.



## ONLINE LINK

### Looking For More

To practice the mouse skills, visit the website: [www.web-esl.com/pages/comp.html](http://www.web-esl.com/pages/comp.html)



**A. Fill in the blanks.**

- The data and instructions entered into a computer using a keyboard or a mouse is called .....
- ..... is a long horizontal bar at the bottom of the desktop.
- A ..... is used to record our voice.
- The ..... is an image, which pops up whenever a computer is left idle for a certain period of time.
- While selecting the ..... tool, the pointer changes into cross hair symbol.

**HINTS**

• Microphone • Input • Lines • Taskbar • Screen Saver

**B. State True or False.**

- To change the desktop background, left click on the blank area of the desktop.
- CRT and LCD are the types of printers.
- A computer does not have an IQ or its own intelligence.
- Operating system is a part of Application software.
- To select an icon, simply click on it.

**C. Identify the shapes and write the names of the different mouse pointers.**

\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

**D. Match the following effects with the correct icons.**

Stamp Tool

Real Rainbow Effect

Emboss Effect

Kaleidoscope Effect

Haze Brush





# EDITING TEXT IN MS WORD 2016

## LEARNING IN THIS CHAPTER

- Starting Word 2016
- Entering, Selecting, and Editing the text
- Inserting the text
- Moving, Copying, and Deleting the text
- Using Undo and Redo commands
- Using Spellings and Grammar, and Thesaurus

Word 2016 is an application software used for Word processing. It was introduced by Microsoft Corporation, one of the world's largest companies in software development. Word 2016 has the power and flexibility to:

- Produce letters, reports, notices, newsletters, books, bills etc., quickly and in a presentable manner.
- Modify the text, both while typing and after typing. Beautify the text using colour, style, font size, border, shading, and various other effects.
- Insert graphics and make use of various drawing tools to draw pictures.
- Copy and move the text from one location to another.
- Share documents on the internet and invite people to view and edit documents which are shareable.
- Preview the text before printing it. Take multiple printouts.

## ➤ STARTING WORD 2016

Click on **Start**  **Word 2016**

The Start Screen of Word 2016 appears, known as the **Backstage view**. The Backstage view is the central location for managing the Word documents. In Backstage view you can create new, save, open, print, share documents, and so on. To create a new document from this location, click on the **Blank document** thumbnail.

- **Word** will open a new blank document with a temporary name, **Document1**.

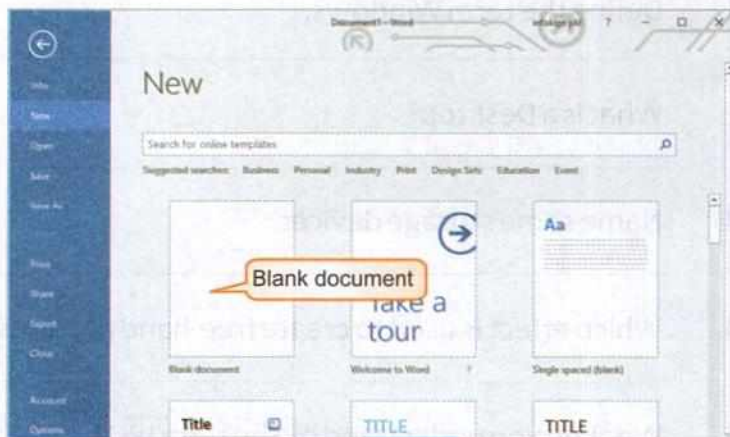


Figure 5.1: Backstage View of Word 2016



- The small blinking vertical line that you notice on the screen is known as the **Cursor**. It is the insertion point and indicates the position where the next typed character will appear.
- As you start typing, the cursor automatically shifts to the right. We can enter text on the same screen or create a new document.

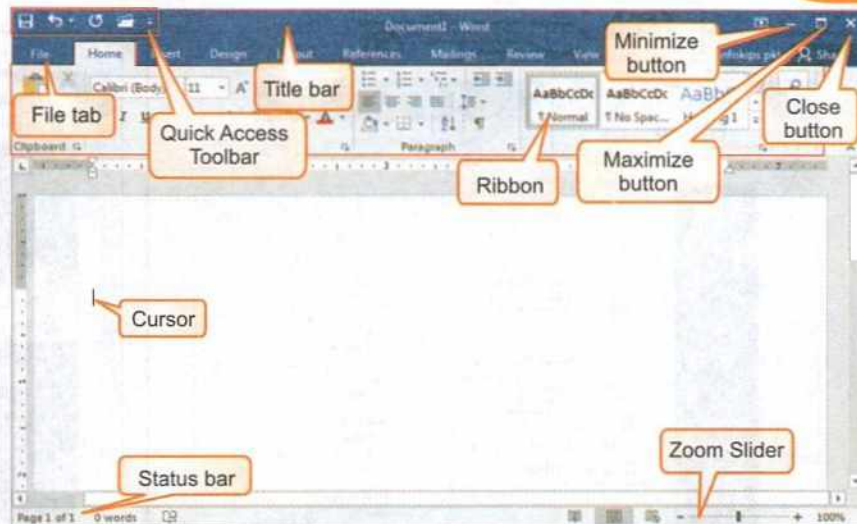


Figure 5.2: Word 2016 Document Window

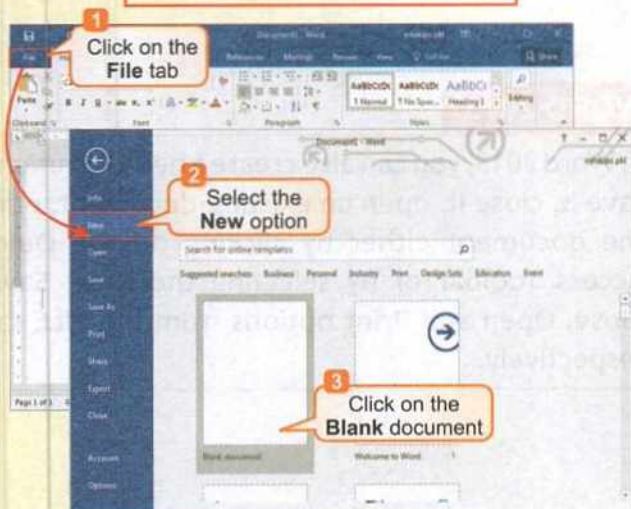
## ➤ ENTERING THE TEXT

While typing in a Word document, you will observe that Word wraps the text automatically. Wrapping the text means that if the text does not fit in the current line then Word shifts it to the next line by default. Type the following text and observe the wrap effect:

Learning is like eating food. It is not how much you eat that matters. What counts is how much you digest. The beautiful thing about learning is that no one can take it away.

Before proceeding further, let us have a quick glimpse of how to create, save, open, close, and print a document in Word 2016, which we have already discussed in the previous class.

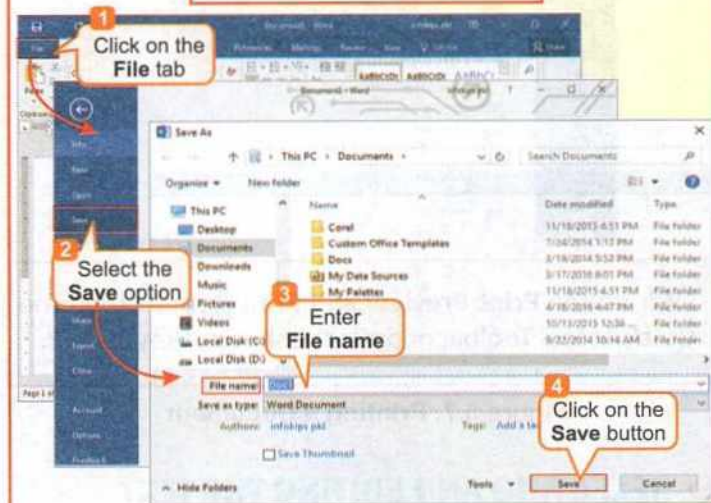
### Creating a New Document



Click on the **New** button  on the **Quick Access Toolbar** or press the shortcut key **Ctrl + N**.

Figure 5.3: Creating a New Document

### Saving a Document



Click on the **Save** button  on the **Quick Access Toolbar** or press the shortcut key **Ctrl + S**.

Figure 5.4: Saving a Document

## Closing a Document

1 Click on the File tab

2 Select the Close option

Press **Ctrl + W** to close the document.

Figure 5.5: Closing a Document

## Opening a Document

1 Click on the File tab

2 Select the Open option

3 Enter File name

4 Click on the Open button


Click on the **Open** button  on the Quick Access Toolbar or press the shortcut key **Ctrl + O**.

Figure 5.6: Opening a Document

## Printing a Document

1 Click on the File tab

2 Select the Print option


Click on the **Print Preview** and **Print**  button on the Quick Access Toolbar or press the shortcut key **Ctrl + P**.

Figure 5.7: Printing a Document



## WORD 2013

In Word 2013, you can also create a new document, save it, close it, open an existing document, print the document either by clicking on the **Quick Access Toolbar** or by selecting the **New, Save, Close, Open** and **Print** options from the **FILE** tab respectively.

## ➤ SELECTING AND EDITING THE TEXT

After typing the text in a document, you may want to make some changes in the text. Making changes in a document is called **Editing**.

Before performing any action, like copying, moving, finding and replacing, deleting, or formatting the

text, we need to select the text. The selected text is displayed on the screen in a highlighted bar.

To select a block of text, we can use the 'Selection Area', which is the blank area in the left margin of the document. We can select the text in a variety of ways.

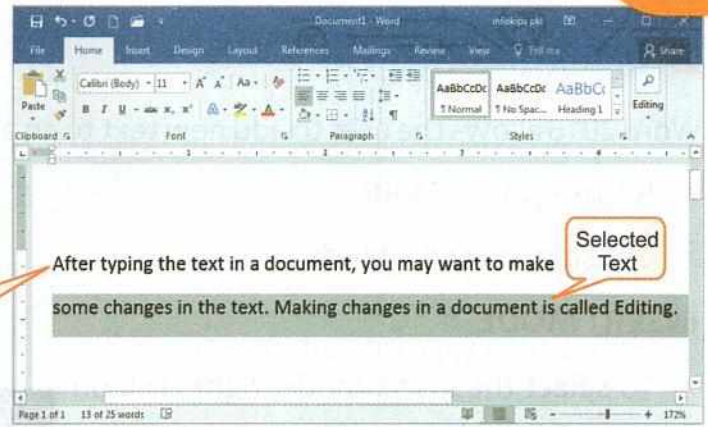


Figure 5.8: Displaying the Selection Area

## SELECTING THE TEXT USING MOUSE

Text to Select	Method
A word	Double-click on the word.
A sentence	Hold down the <b>Ctrl</b> key and click anywhere on the sentence.
A paragraph	Triple-click anywhere in the paragraph, or double-click in the left margin of the paragraph.
A large block of text	Click at the beginning of the text. Press the <b>Shift</b> key and without releasing it, click at the end of the text.
Entire document	Click anywhere in the selection area while holding down the <b>Ctrl + A</b> key or triple-click in the Selection area.

## SELECTING THE TEXT USING KEYBOARD

You can select the text on a document by using the following Shortcut keys:

Text to Select	Shortcut Key
One character to the left	Shift + ←
One character to the right	Shift + →
One line up	Shift + ↑
One line down	Shift + ↓
Beginning of the current line	Shift + Home
End of the current line	Shift + End
Beginning of the current document	Shift + Ctrl + Home
End of the current document	Shift + Ctrl + End

### WORD 2013

The above given methods and shortcut keys can also be used to select the text in Word 2013.

## ➤ INSERTING THE TEXT

Word 2016 allows the user to add new text to an already existing document in two different ways:

- By using Insert Mode
- By using Overtyping Mode

### INSERT MODE

- To select the insert mode, right-click on the Status bar. The **Customize Status Bar** menu appears.
- Click on the **Overtyping** option. The **Insert** option appears on the Status bar which shows that the **Insert** mode is selected.
- Now to enter the text, place the pointer to the right of the character where you want to insert new text.
- Type the new text and observe the change.

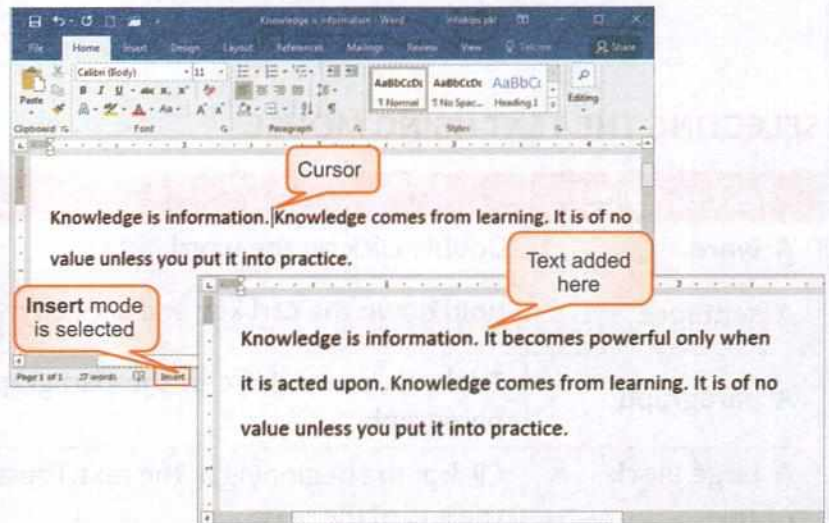


Figure 5.9: Insert Mode is Selected

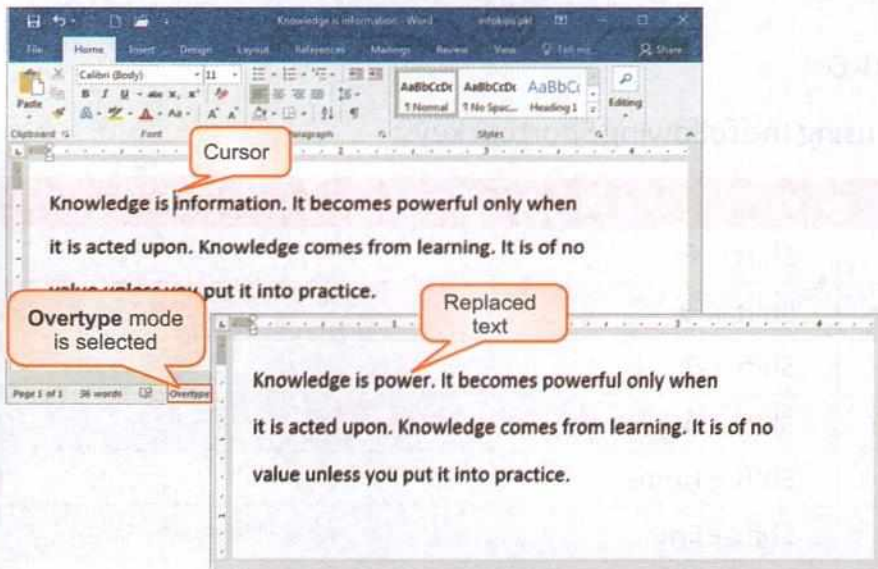


Figure 5.10: Overtyping Mode is Selected

### OVERTYPING MODE

You can replace the existing text by typing the new text on it. To enable the Overtyping mode:


- Click on the **Insert** option on the Status bar. It will change the existing mode into **Overtyping** mode.
- Now place the cursor before the letter and start typing.
- The existing text will be replaced with the new one.

## WORD 2013

In the same way you can add new text in an existing text in Word 2013 by selecting the **INSERT** or **OVERTYPING** options on the Status bar.

## ➤ MOVING THE TEXT

This feature is used to move the text from its original location to a new location.

- Select the text you want to move. Click on the **Cut** button  in the **Clipboard** group on the **Home** tab or press **Ctrl + X**.
- The text disappears from the document and is temporarily placed on the clipboard.

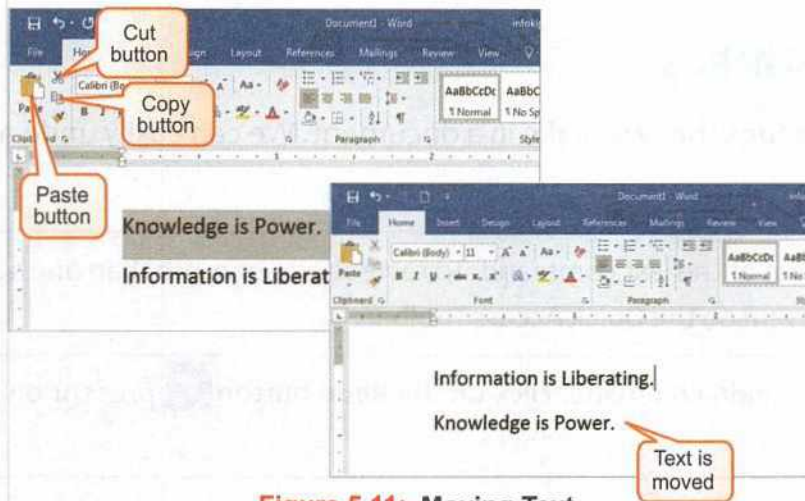



Figure 5.11: Moving Text

- Position the cursor at the location where you want to place the selected text.
- Click on the **Paste** button  or press **Ctrl + V**. The selected text appears at the desired location as shown in Figure 5.11.

### WORD 2013

In Word 2013 **Cut**, **Copy** and **Paste** buttons are present in the **Clipboard** group on the **HOME** tab.

## ➤ COPYING THE TEXT

Copy and Paste options are used to duplicate the text. We can copy the text not only from one location to another within a document, but also from one document to another. This feature helps in reducing our time and effort in typing. The only difference between Copy/Paste and Cut/Paste features is that the Copy feature copies the text but does not remove the text from its original place as the Cut feature does.

### Let's Know More

#### Tell me what you want to do

It is a new feature, which can be used to get quick help on topics that you are looking for or the commands that you want to use in your document.

### Know the Fact

**Clipboard** is a temporary storage area in Windows that allows you to store, cut, copy, and paste data while switching between the applications. Upto 24 multiple text and graphical items could stay on the Office Clipboard until you exit Office applications. After exiting the Office applications, the last item that you copied stays back in the Clipboard.

### Quick View

To create a shortcut of Word 2016, drag its icon to the Desktop.

### Let's Know More

**Ribbon Display Options** button  present next to the **Sign in** button. When you click on this button it reveals the following three options:

- Auto-hide Ribbon
- Show Tabs
- Show Tabs and Commands

## ➤ DELETING THE TEXT



Word 2016 provides the facility to erase the text. Follow these steps:

- 1 Select the text
- 2 Press the **Delete** key
- 3 The selected text will be removed

You can also delete text by using the **Backspace** key. It removes the character to the left of the cursor position. To delete a block of the text, select the text and then press either the **Delete** key or the **Backspace** key.

## ➤ USING UNDO AND REDO COMMANDS

Word 2016 keeps track of all the changes that we make in a document. We can easily undo any change and restore the original text.

<b>UNDO</b>	This option reverses the effect of the last command. To reverse one or more than one action, click on the <b>Undo</b> button  present on the <b>Quick Access Toolbar</b> .
<b>REDO</b>	To reverse the action of the Undo command, click on the <b>Redo</b> button  present on the <b>Quick Access Toolbar</b> .

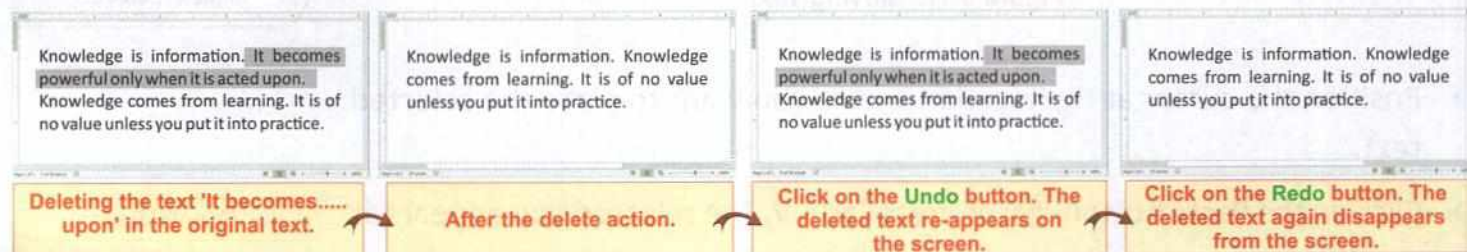


Figure 5.12: Use of Undo and Redo Buttons

### WORD 2013

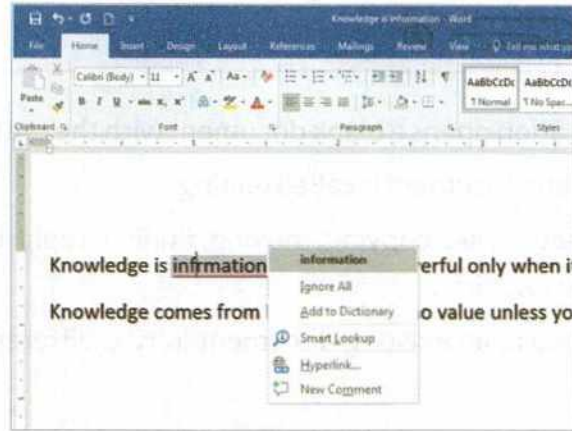
Similarly, in Word 2013, you can find the **Undo** and **Redo** options on the **Quick Access Toolbar**.

## ➤ CHECKING SPELLINGS AND GRAMMAR

Word 2016 has a built-in dictionary and a set of grammatical rules to check the spellings and grammar of the text document. Incorrectly spelt words are displayed with a single **red wavy line** under them. The grammatical errors are indicated with a **blue wavy line**. The spell check starts from the position of the cursor and checks the complete document. A simple method to check the spelling of any word is as follows:

- Right-click on the word with a red wavy line.
- A Shortcut menu opens, displaying various suggestions.

- Select the correct spelling from the suggestions list.
- Word 2016 automatically replaces the incorrect spelling with the selected option.



**Figure 5.13: Checking Spelling and Grammar**

### Let's Know More

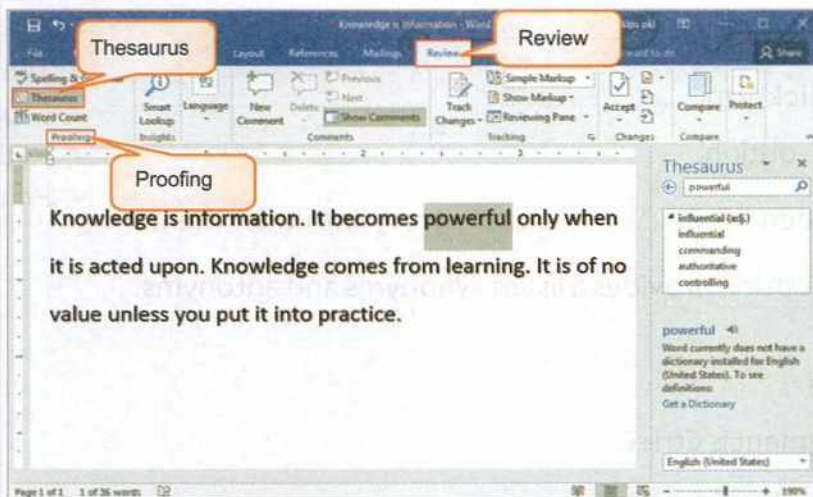
We can also click on **Spelling & Grammar** button in the **Proofing** group on the **Review** tab to correct the spellings and grammar in the document.

The **Spelling** task pane appears on the right side, highlighting the wrong spelling in red and displaying the list of suggestions.

## ➤ USING THESAURUS

**Thesaurus** helps to improve our vocabulary by providing a list of synonyms (words with similar meaning), for any word. Follow these steps to use Thesaurus:

- Select the word for which you want to find synonyms.
- Click on the **Review** tab. Select the **Thesaurus** option in the **Proofing** group.
- The **Thesaurus** task pane opens on the right side of the document window, displaying the list synonyms.
- Move the mouse pointer to the suitable word. Click on the drop-down button and select the **Insert** option. The existing word will be replaced with the new one.



**Figure 5.14: Using Thesaurus**



### Quick View

Press **Ctrl+Delete** and **Ctrl+Backspace** key combinations to delete one word to the right or left respectively.

### Quick View

The shortcut keys for **Undo** and **Redo** commands are **Ctrl+Z** and **Ctrl+Y** respectively.

## WORD 2013

To activate the thesaurus option in Word 2013, click on **REVIEW** tab and select the **Thesaurus** option from the **Proofing** group.

## RECAP

- Word 2016 application opens a blank document with the temporary name Document1.
- Making changes in a document is called editing.
- To perform any action, like copying, moving, finding, replacing, deleting or formatting the text, we need to select the text first.
- You can insert data in an existing document in two different ways– Using Insert Mode and Using Overtyping Mode.
- Copy and Paste options are used to duplicate the text.
- The shortcut keys for Undo and Redo commands are Ctrl + Z and Ctrl + Y respectively.
- Incorrectly spelt words are indicated with a red wavy line under them.
- Grammatical errors are indicated with a blue wavy line.



**BRAIN  
DEVELOPER**

### SECTION - A

#### A. Fill in the blanks.

1. The ..... is a blank area in the left margin of a document.
2. The ..... is a reserved place that stores data temporarily.
3. Making changes in the document is called .....
4. To print the document, click on ..... tab> ..... option.
5. Incorrectly spelt words can be seen with ..... wavy line under them.
6. The ..... option provides a list of synonyms and antonyms.

#### HINTS

- Editing
- Selection Area
- File
- Thesaurus
- Clipboard
- Red
- Print


#### B. State True or False.

1. The shortcut key to close a document is Ctrl+C.
2. In MS Word you can share documents on the internet.
3. The shortcut key to jump to the end of the current document is Shift + Ctrl + End.
4. To select a sentence, hold down the Shift key and click anywhere on the sentence.
5. To select a paragraph, double-click anywhere in the paragraph.



### C. Match the following.

Ctrl+A	Copies the text from one place and pastes it at another place
Shift+Home	Selects the entire text
Ctrl+X, Ctrl+V	Selects the text from current position to the beginning of a line
Ctrl+C, Ctrl+V	Deletes one word to the right
Ctrl+Delete	Cuts the text and places it at a new place



### D. Application-based questions.

- Raman has made a project, but he does not know how to check the spellings and grammatical mistakes in a document. What steps will you suggest him?  
.....
- Sonam has added some extra paragraphs in her document. The teacher has asked her to delete them. How will you help her to do this?  
.....

## SECTION - B

### A. Multiple-choice questions.

- In how many ways you can insert text in an existing document?  
a. 3                                      b. 2                                      c. 4
- Grammatical errors are indicated with a .....  
a. Red wavy line                      b. Green wavy line                      c. Blue wavy line
- Which among the following shortcut keys is used to select one character to the right?  
a. Shift + →                              b. Shift + ←                              c. Shift + ↑
- Which is the shortcut key for Undo command?  
a. Ctrl+Y                                      b. Ctrl+U                                      c. Ctrl+Z

**B. Answer in one word or one sentence.**

1. Which shortcut key is used to check spelling and grammar in Word document?

.....

2. Which command is used to reverse the action of the Undo command?

.....

3. Name the mode that is used to replace the existing text in a document.

.....

4. Write the shortcut key to delete one word to the left.

.....

**C. Answer the following questions.**

1. List any three features of a word processing software.

.....  
.....  
.....

2. What do you understand by Editing? How can you insert text in a document?

.....  
.....  
.....

3. Explain the use of Thesaurus option in Word 2016.

.....  
.....  
.....

4. Differentiate between moving and copying the text.

.....  
.....  
.....

# ACTIVITY SECTION

## LAB SESSION

### Perfection Through Practice



Everyday is a perfect gift for us to use,  
Hours waiting to be felled in any way we choose.  
Each morning brings a hope that rises with sun,  
Each evening brings the sweet content that comes with work done.

- Type the above lines and save the document as 'The Perfect time' using the **File** tab > **Save** option.
- Press **Ctrl + O** key combination to open the document 'The Perfect time'. Make corrections in it.
- Now using the **Insert** mode, add the text 'of time' before 'for us to use' in the first sentence.
- In the second sentence, place the cursor before the letter 'e' of 'felled' and replace 'e' with 'i' using the **Overtyp**e mode. Likewise correct the spelling of 'choose' with **Spellings & Grammar** option.
- Insert the word 'quite' in the third sentence, before the word 'hope'. Similarly add 'well' before the word 'done' in the fourth sentence.
- Select the word 'content' in the last sentence and replace it with word 'comfort' using **Thesaurus** option.
- Save your document again by using the **Ctrl + S** key combination.
- Close the Word application by clicking on the **File** tab > **Close**.

## ONLINE LINKS

### Looking For More

To know more about Office 2016, visit the following websites:

- <http://www.gcflearnfree.org/office2016/word2016/1>
- <http://www.gcflearnfree.org/office2016/word2016/3>
- <http://www.gcflearnfree.org/office2016/word2016/5>



# FORMATTING A DOCUMENT

## LEARNING IN THIS CHAPTER

- Changing Font Type, applying Bold, Italic, and Underline effects
- Changing Text Colour, Text Case, and Text Alignment
- Applying Superscript and Subscript effects
- Creating Bulleted or Numbered list
- Applying Borders and Shading
- Applying Drop Cap effect

Formatting means changing the appearance of a document to make it attractive. We can create and design appealing documents by:

- Changing font and its size
- Highlighting certain words
- Adjusting line spacing
- Setting margins and tabs
- Aligning text on a page
- Creating bulleted/numbered lists
- Changing text case
- Applying border
- Changing text styles and colour

Formatting effects can be applied using the **Home** tab, which contains: font formatting commands (**Font** group), paragraph options (**Paragraph** group), text styles commands (**Styles** group), copying and moving commands (**Clipboard** group), finding, replacing, and selecting commands (**Editing** group).

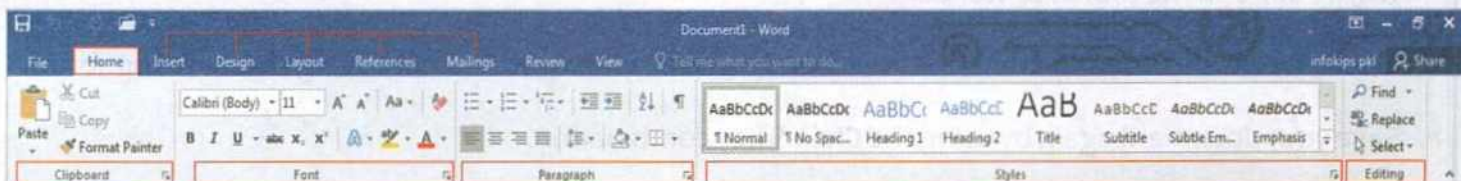


Figure 6.1: Groups Selected on the Home tab

## WORD 2013

The ribbon of Word 2013 looks similar to that of the Word 2016 ribbon, except that the menu names appear in capital letters.



## ➤ CHANGING THE FONT TYPE

The characters of a specific size and design used for typing the text are called **Fonts**. Word 2016 provides various types of font options. When you open Word, the text appears in default font type that is, **Calibri (Body)** with **11** point size.

To change the font type:

- Select the text. Click on the **Home** tab.
- Click on the drop-down arrow next to the **Font** box in the **Font** group. A list of fonts appears.
- Choose the desired font from the displayed font list. Observe the change.

**NOTE** Starting from 2007 onwards, the default font in Microsoft Word has been set to **Calibri** with **11** point size, whereas, in the previous versions, it was **Times New Roman**.



Figure 6.2: Changing Font Type

### Let's Know More

**Font Size** refers to the overall size (generally height) of the letters. To change the size of font, click on **Font Size** 12 drop-down list in the **Font** group on the **Home** tab and select any font size from the displayed list.



## ➤ APPLYING BOLD, ITALIC, AND UNDERLINE EFFECTS

The font style options, such as Boldface, Italic, and Underline are used to emphasise the text and catch the reader's attention.

**Bold** : It makes the selected word darker than the rest of the text.

**Italic** : This effect emphasises the text by slanting it to the right.

**Underline** : It emphasises text by placing a line under it. We can underline a word or sentence along with spaces.

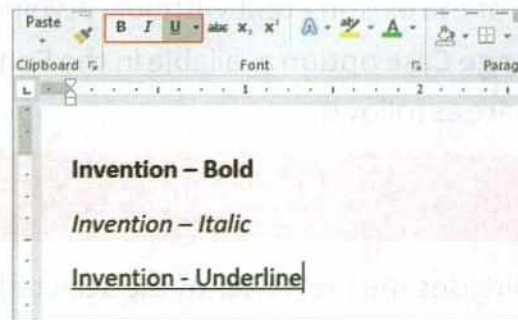


Figure 6.3: Applying Font Style Effects

### Let's Know More

On selecting text, a small pop-up window appears, which has the basic formatting command buttons.



To apply any font style effects:

- Select the text.
- Click on the button **B** or **I** or **U** in the **Font** group on the **Home** tab.

Word 2016 provides a variety of formatting options, which can be selected from the **Font** dialog box on the **Home** tab. Simply click on the **Font** dialog box launcher in the **Font** group.

### Word 2013

In Word 2013, you can also bold, italic, underline the text by selecting **B**, **I**, **U** effects in the **Font** group on the **HOME** tab.

### Quick View

Press the shortcut keys to apply and remove the given effects:


**Ctrl+B** for bold

**Ctrl+I** for italic

**Ctrl+U** for underline

## ➤ CHANGING TEXT COLOUR

Word 2016 provides an option to change the colour of the text.

- Select the text and click on the **Home** tab.
- Click on the drop-down arrow next to the **Font Color** button on  the **Home** tab. Select the desired colour from the displayed **Font color** menu.

**NOTE** You can also make customised colours by selecting the **More Colors** option.

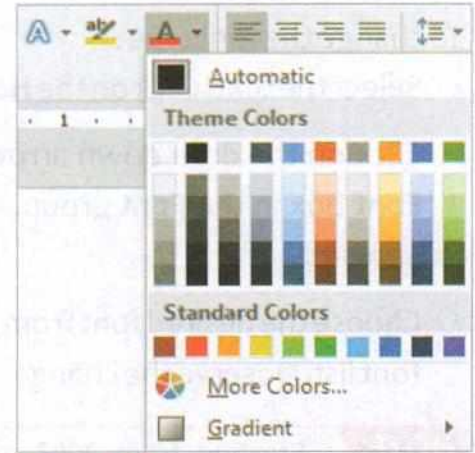


Figure 6.4: Changing Colour of Text

### Word 2013

Similarly in Word 2013, you can change the colour of the text by selecting the **Font Color** button on the **HOME** tab in the **Font** group.



## ➤ CHANGING TEXT CASE

You can change the case of the existing text without retyping it in Microsoft Word. To do so, select the text and choose the **Change Case** option available in the **Font** group. Word 2016 provides five types of case conversions, which are as follows:

Font Case	Explanation	Example
<b>Sentence case</b>	Capitalises the first letter of the selected sentence.	This is a test document.
<b>lowercase</b>	Converts the selected text to lowercase.	this is a test document.
<b>UPPERCASE</b>	Converts the selected text to uppercase.	THIS IS A TEST DOCUMENT.
<b>Capitalize Each Word</b>	Changes the first letter of each selected word to uppercase.	This Is A Test Document.
<b>tOGGLE cASE</b>	Converts the case of every selected character in reverse manner, i.e., a capital letter will convert into lowercase and vice versa.	tHIS IS a tEST dOCUMENT.

### Word 2013

In Word 2013 also, you have similar font cases to format the text.

## ➤ CHANGING TEXT ALIGNMENT

Alignment refers to the positioning of text on a page. It is always better to set the alignment before typing. We can also select an entire document and then change the alignment of text.

Word 2016 provides four types of alignments, which are as follows:

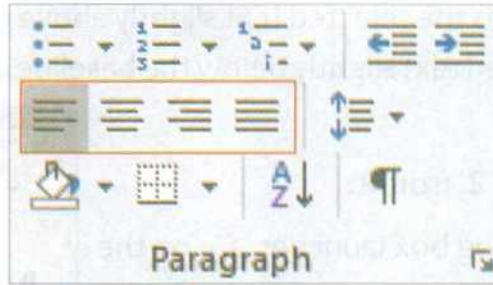






Figure 6.5: Alignment Buttons

	<b>ALIGN LEFT:</b> It places the selected text towards the left margin. By default, the text is aligned to the left margin.
	<b>CENTER:</b> It sets the text in the center of the left and right margins. This alignment is mostly used for titles/headings.
	<b>ALIGN RIGHT:</b> This aligns the selected text towards the right margin. It is often used for placing dates or reference in a document.
	<b>JUSTIFY:</b> It places the text evenly between the left and the right margins. It is mainly used for designing books, magazines, and newspapers.

### How to align the text?

- Select the text. Click on any desired alignment button in the **Paragraph** group on the **Home** tab.
- Observe the change in the alignment.

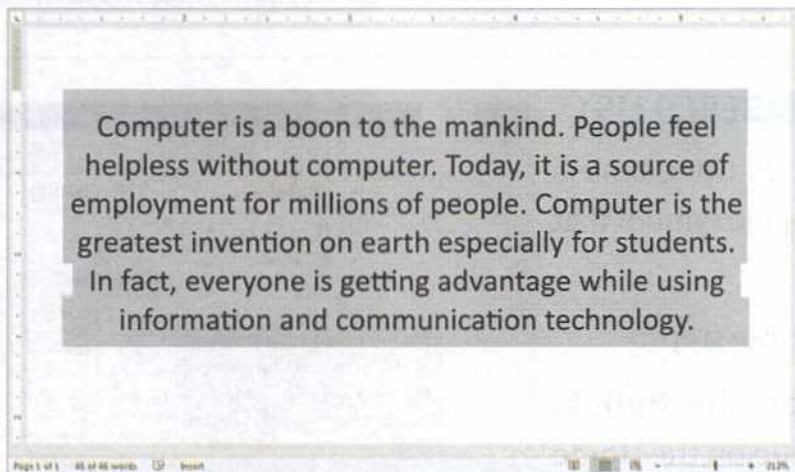



Figure 6.6: Applying Center Text Alignment

### Word 2013

To change the alignment of the text, select any of the above given options in the **Paragraph** group on the **HOME** tab.

### Let's Know More

The **Redo** button  on the **Quick Access Toolbar** can also be used as a 'Repeat Typing' tool to rewrite a previously typed word.



### Quick View

Press **Shift + Enter** to insert blank lines in the bulleted or numbered list.




### Quick View

On which group do you find the **Change Case** option?

## ➤ APPLYING SUPERSCRIPIT AND SUBSCRIPT EFFECTS

**Superscript** option places the selected text slightly above the baseline. On the contrary, the **Subscript** option places the selected text slightly below the baseline and makes it appear smaller than the rest of the text.

- Type 'M2' and select '2' from it.
- Click on the **Font** dialog box launcher  on the **Home** tab. The **Font** dialog box appears.
- Select the **Superscript** check box under the **Effects** section. Click **Ok**.
- You will notice that '2' will be placed above the baseline.

Similarly, you can apply the **Subscript** effect to the text.

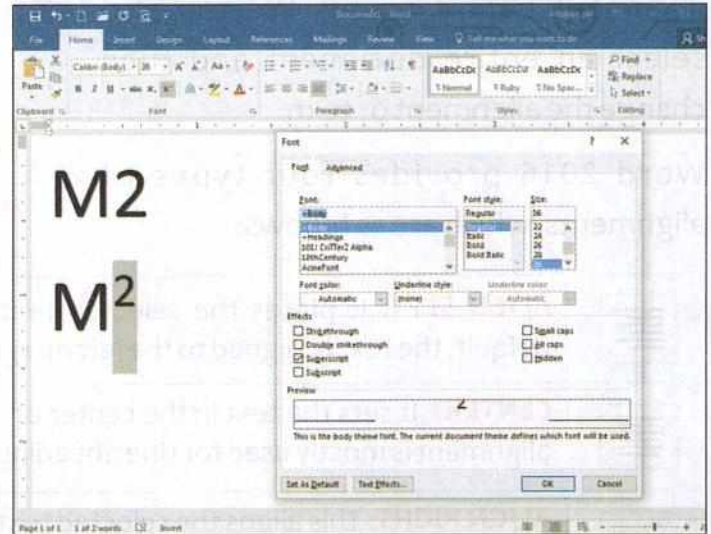





Figure 6.7: Applying Superscript Effect



- Click on the **Superscript**  or **Subscript**  button present in the **Font** group on the **Home** tab to apply the respective effects on the selected text.
- To apply other special effects on the selected text, click on the **Font** dialog box launcher . Select the required font effect in **Effects** section, like **Strike through**, **Small caps**, **All caps**, **Hidden**, etc.


### Word 2013

In Word 2013, also you can apply various formatting effects to the text by following the same steps as we have mentioned above.

## ➤ CREATING BULLETED OR NUMBERED LIST

We can format lists in a document by using bullets and numbers. A bullet is a small graphic symbol that is added before an item in a list.

To apply bullets to the text, follow these steps:

- Select the text and click on the **Bullets** button  in the **Paragraph** group on the **Home** tab. Select the bullet style of your choice.
- You will find that the selected text is bulleted and the indents are automatically adjusted to separate the text from the bullets.

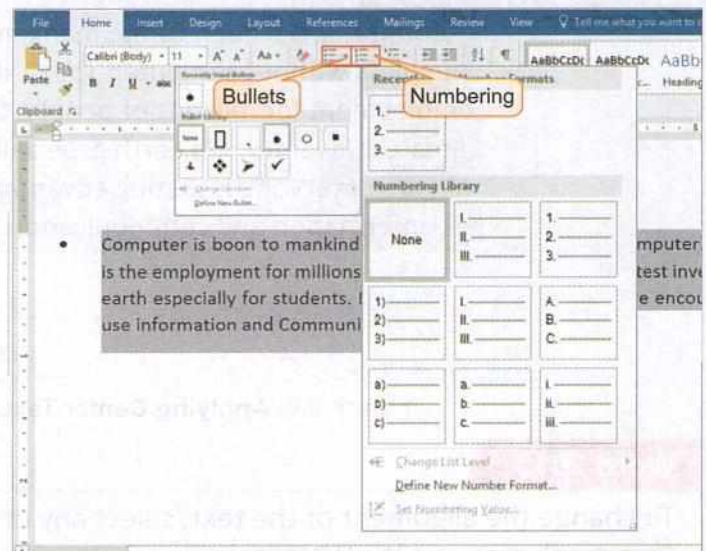


Figure 6.8: Creating Bulleted or Numbered List



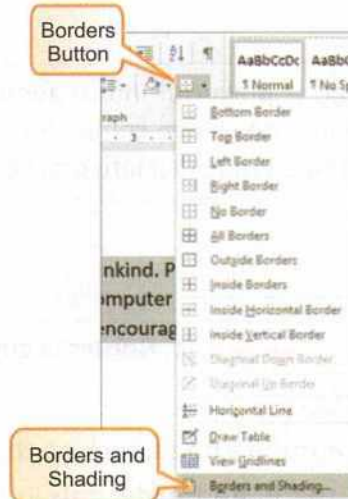
Similarly, you can apply a numbered list to the text. To apply the numbering effect on the text.

- Click on the **Numbering** button  in the **Paragraph** group and select any list style of your choice.

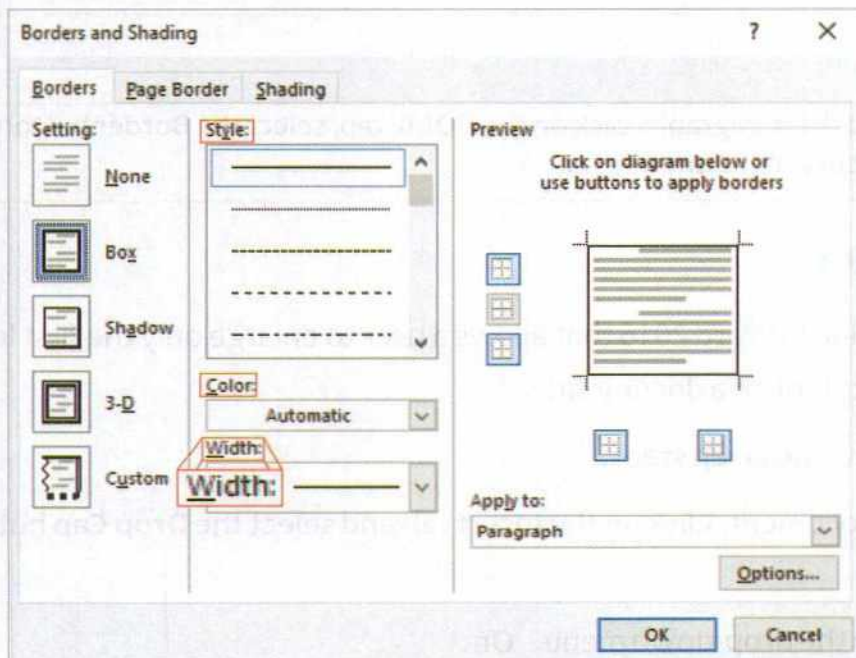
## ➤ APPLYING BORDER AND SHADING

To improve the appearance and legibility of the text, we can add a variety of border and shading effects to the paragraphs and the entire page.

- Select the text. Click on the drop-down arrow next to the **Borders** button in the **Paragraph** group on the **Home** tab.
- Select the **Borders and Shading** option from the displayed list.
- The **Borders and Shading** dialog box appears as shown in Figure 6.10.
- Now, set the border style.
- Choose the **Box** option under the **Setting** section and select the border style. Select the line style under the **Style** list box.



**Figure 6.9:** Selecting Borders and Shading Option



**Figure 6.10:** Borders and Shading Dialog Box

### Quick View


The shortcut key to apply/remove the Subscript effect is **Ctrl +=**. Press **Ctrl+Shift+=** to apply/remove Superscript effect.



### Let's Know More

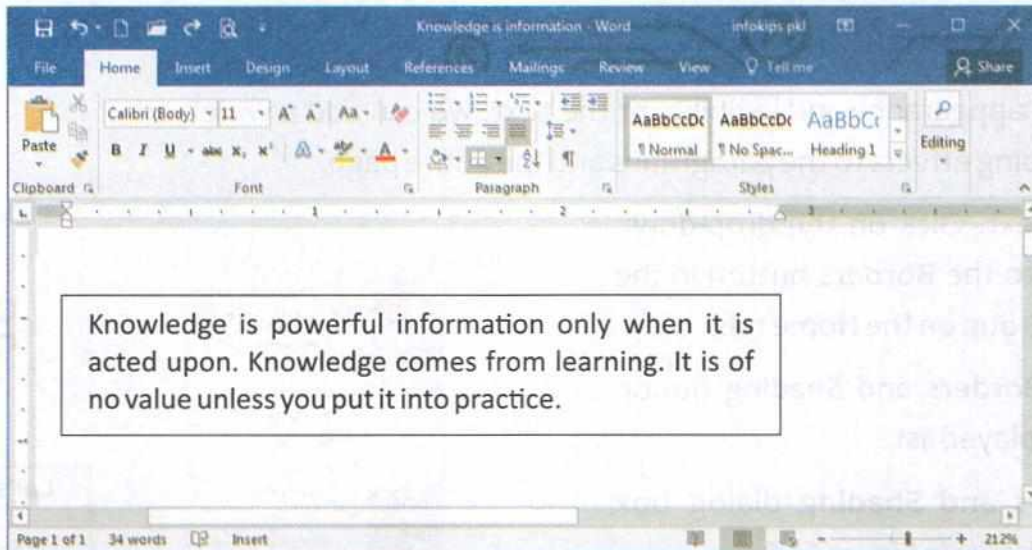
You can also use a picture, symbol or a font as a bullet by clicking the drop-down arrow of **Bullets** button and selecting **Define New Bullet** option. To apply picture as bullet, select **Picture** tab from the **Define New Bullet** dialog box and pick any picture from the file.

### Know the Fact

To highlight text, select it then click on the **Text Highlight Color**  tool. Choose the desired colour and observe the change.



- Click on the drop-down list of **Color** and select any colour of your choice.
- Choose the line width from the **Width** section.
- Click on the drop-down list of **Apply to** section and select the **Paragraph** option.
- Click **OK** and observe the change.




**Figure 6.11: Border is applied to the Paragraph**

**NOTE**

To apply a border around a page, click on the **Borders** drop-down arrow and select the **Borders and Shading** option. Select the **Page Border** tab in the **Borders and Shading** dialog box. Choose the desired **Setting, Style, Color,** and **Width** of the border. Click **OK**. The defined border will be applied around the page.


**Word 2013**

To apply the border and shading to the paragraphs click on the **HOME** tab, select the **Border** button  in the **Paragraph** group and follow the above mentioned steps.

➤ **APPLYING DROP CAP EFFECT**

Drop Cap is a text formatting option in Word 2016 that allows a user to enlarge only the first letter of a paragraph. It is used to give a fancy look to a document.

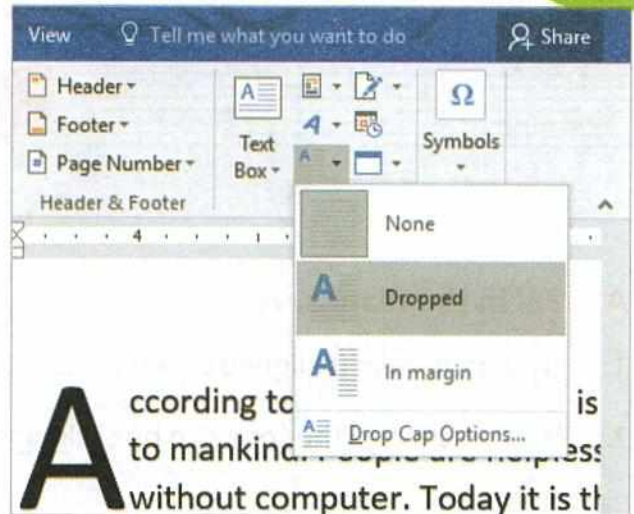
To apply the drop cap effect, follow the given steps.

- Select the first word of your document. Click on the **Insert** tab and select the **Drop Cap** button  in the **Text** group.
- Select the desired option from the drop-down menu. Or  
Select the **Drop Cap Options** from the list.

- The **Drop Cap** dialog box appears. Select the **Dropped** option.
- Select the options, if necessary. Click on **OK** button.
- Observe the change.

### Word 2013

In Word 2013, click on the **INSERT** tab and choose the **Drop Cap** option in the **Text** group to enlarge only the first letter of a paragraph. Its application is exactly the same as in Word 2016.



**Figure 6.12:** Using Drop Cap Effect

## RECAP

- Formatting means changing the appearance of a document to make it attractive.
- Fonts are the characters of a specific size and design used for typing the text.
- Bold effect makes the selected word darker than the rest of the text.
- Italic effect emphasises the text by slanting it to the right.
- Underline effect places a line under the selected text along with spaces.
- Alignment refers to the positioning of the text on a page.
- Superscript option places the selected text slightly above the baseline.
- Subscript option places the selected text slightly below the baseline and makes it appear smaller than the rest of the text.
- A bullet is a small graphic symbol that is added before an item in a list.
- Border button is used to apply borders around the selected text, paragraph, and the entire page to improve the appearance of the text.
- The Drop Cap effect enlarges the first letter of a paragraph.





**SECTION - A**

**A. Fill in the blanks.**

1. By default, text is aligned to the ..... margins.
2. We can change the font size by clicking on the Font Size drop-down button on the ..... tab.
3. To select the Drop Cap option, click on the ..... tab.
4. A ..... is a small graphic symbol that is added before an item in a list.
5. .... option places the selected text slightly above the baseline.

**HINTS**

- Home • Left • Insert • Superscript • Bullet

**B. State True or False.**

1. By default, Word 2016 sets the font to Calibri (Body).
2. Justified alignment means that the text is aligned with the left margin.
3. We can apply bullets to a text document by selecting the Bullets button.
4. The Bold button is used to display the text in a darker shade than the rest of the text.
5. The drop cap effect reduces the first letter of a paragraph.
6. A word or a sentence can be underlined along with spaces.

**C. Application-based questions.**

1. Ritika has designed a colourful Birthday card. The teacher has advised her to apply Border and Shading effect around the card. Help Ritika to apply the effect.  
.....
2. The Science teacher of Madhav has asked him to create a list of the students of his class and enter their marks into it. Which option should be use to create a numbered list?  
.....

## SECTION - B

### A. Multiple-choice questions.

- ..... alignment is used to set the text evenly between the left and the right margins.  
a. Left                      b. Center                      c. Justify
- The Font Size box is available on the ..... tab.  
a. Insert                      b. Font                      c. Home
- What is the shortcut key to apply/remove the Subscript effect?  
a. Ctrl +=                      b. Ctrl + Shift +=                      c. Ctrl + Shift
- Which among the following commands is used as Repeat Typing tool?  
a. Undo                      b. Redo                      c. Paste

### B. Answer the following questions.

- What does Formatting mean?

.....  
.....

- How will you change the font in your document?

.....  
.....  
.....

- List the various change case options available in Word 2016. Explain any two.

.....  
.....  
.....

- Define the term text alignment. Name the types of alignments available in Word 2016.

.....  
.....  
.....

- What is the difference between Superscript and Subscript option?

.....  
.....  
.....

# ACTIVITY SECTION



## MY ACTIVITY

### Learning While Playing

The hint box with various formatting terms is given on the left. Find and colour these words in the given letter grid.

Formatting

Alignment

Line Spacing

Italic

Fonts

Bold

Justify

Bullets



I	R	O	B	A	K	E	F	Y	R	A
E	D	B	U	L	L	E	T	S	D	L
W	R	U	Q	N	Z	W	G	J	T	I
L	I	N	E	S	P	A	C	I	N	G
F	O	R	M	A	T	T	I	N	G	N
A	K	T	Y	T	G	E	Y	O	A	M
J	U	S	T	I	F	Y	F	D	N	E
N	Z	K	X	J	U	B	O	L	D	N
E	S	I	A	F	I	O	N	F	S	T
R	M	B	O	D	D	M	T	X	M	D
I	T	A	L	I	C	Q	S	X	K	L

## LAB SESSION

### Perfection Through Practice



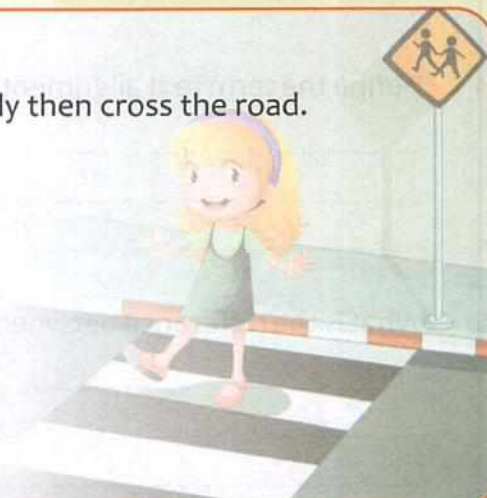
Type the following text on **Safety Rules** without applying any formatting effects. Later on, apply the formatting effects by following the instructions given below. Save the file with the name, 'SAFETY'.

### SAFETY ON THE ROAD

- While crossing the road, look on both sides and if it is clear, only then cross the road.
- Do not play on the road.
- Use Zebra Crossing or Subway to cross the road.
- Cross the road carefully.

### What do Traffic Lights signify?

1. Red means Stop.
2. Green means Go.
3. Yellow means wait.



## INSTRUCTIONS

- Select the heading, 'SAFETY ON THE ROAD', change its **Font** to **Impact** and **Font Size** to **16**.
- Click on **Underline** and **Bold** buttons in the **Font** group on the **Home** tab and center align the heading.
- Click on the **Font Color** drop-down list. Select the heading and apply red colour to it.
- Select all the points and change their **Font** to **Arial Black**, **Font Size** to **12**, and apply **Italic** effect to them. Click on the **Bullets** button in the **Paragraph** group and observe the change.
- Select the text, 'Zebra Crossing' and 'Subway', change their **Font Size** to **14** and apply green colour to it.
- Select the heading 'What do Traffic Lights signify?'. Underline the heading and center align it as given in the figure.
- Highlight the last three points with yellow colour and apply **Numbering** effect to them.
- Save the file using **Ctrl+S** key combination.

## PROJECT WORK

### Using Creativity

Write a letter to your Mother and convey thanks to her for allowing you to go for picnic. Format the document by applying the effects you have learnt so far.



## ONLINE LINKS

### Looking For More

To learn more about Word 2016, visit the following websites:

- <https://support.office.com/en-us/article/Format-a-document-in-Word-2016-780772c6-9506-4081-afd1-aff9aab19f5f>
- <http://www.gcflearnfree.org/word2016/6>



## WORKING WITH PAINT 3D

### LEARNING IN THIS CHAPTER

- Paint 3D
- How to Open Paint 3D?
- Components of Paint 3D window
- Drawing a 2D circle
- Drawing a 3D sphere
- Working with the Brushes tool
- Erasing a drawing
- Saving a drawing

Students, look around your classroom. Observe carefully all the objects kept in the class. What do you see? You will see different objects in different shapes, sizes, and colours.

Take out your notebook and pencil and draw the following objects:



Note that all these objects have only length and breadth properties. In other words, they are flat. Such objects that have only two dimensions, i.e., length and breadth properties are called 2D or two-dimensional objects.

Next, take out the following objects from your school bag. What do you see now?



GEOMETRY BOX

PENCIL

ERASER

You can see that all these objects have an additional property which is **height**, along with length and breadth. Can you pick the picture that you have drawn? No! But can you hold the objects which you took out from your bag? Yes!

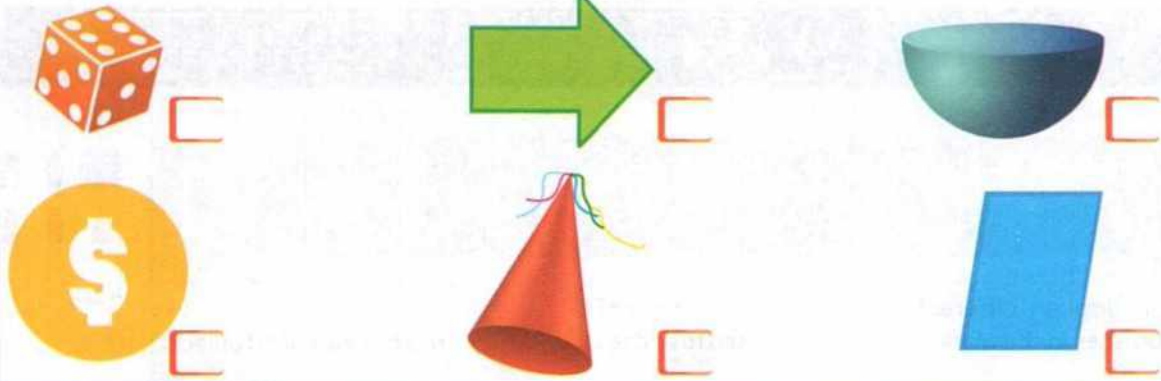
Such objects which you can hold are called 3D objects. These objects that have height, length, and breadth properties are called 3D or three-dimensional objects.

From the above exercise you have learnt the difference between 2D and 3D shapes, i.e., 2D objects are the objects that have only length and breadth properties while 3D objects have height, length, and breadth properties.



## Activity Zone

Look at the pictures given below. Put a tick mark in the given box only if you see a 3D object.



A computer has a Paint 3D program that helps us to make colourful drawings.

### ➤ PAINT 3D

Paint 3D is a wonderful tool designed by Microsoft for drawing different types of 3D Objects. The earlier version called MS Paint, is still significantly used for creating 2D shapes. Along with the ease of using, Paint 3D also has a vast library of 3D objects and tools to draw pictures.

### ➤ HOW TO OPEN PAINT 3D?

- To open Paint 3D, type **Paint 3D** in the search box.
- Select **Paint 3D App** option, from the list of results.
- Open Paint 3D and select **New** option to open a new project.

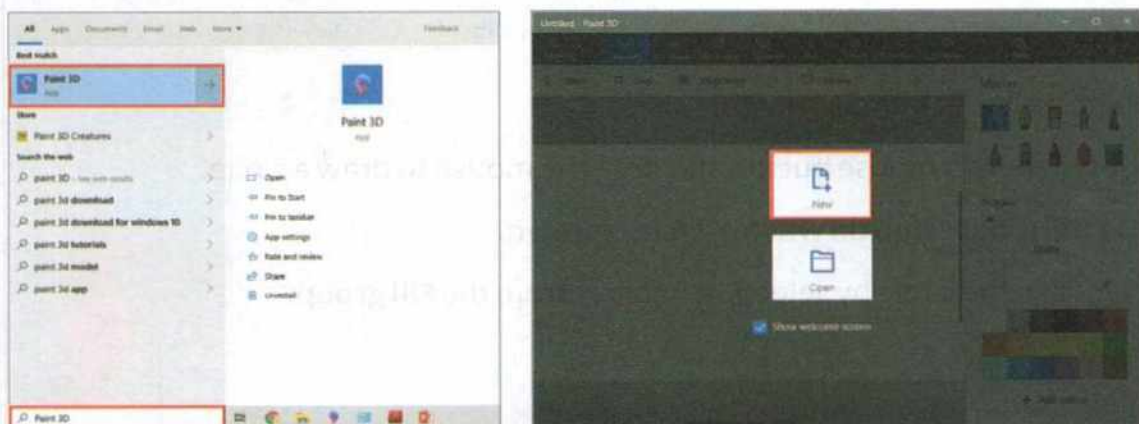


Figure 7.1: Starting Paint 3D

## ➤ COMPONENTS OF PAINT 3D WINDOW

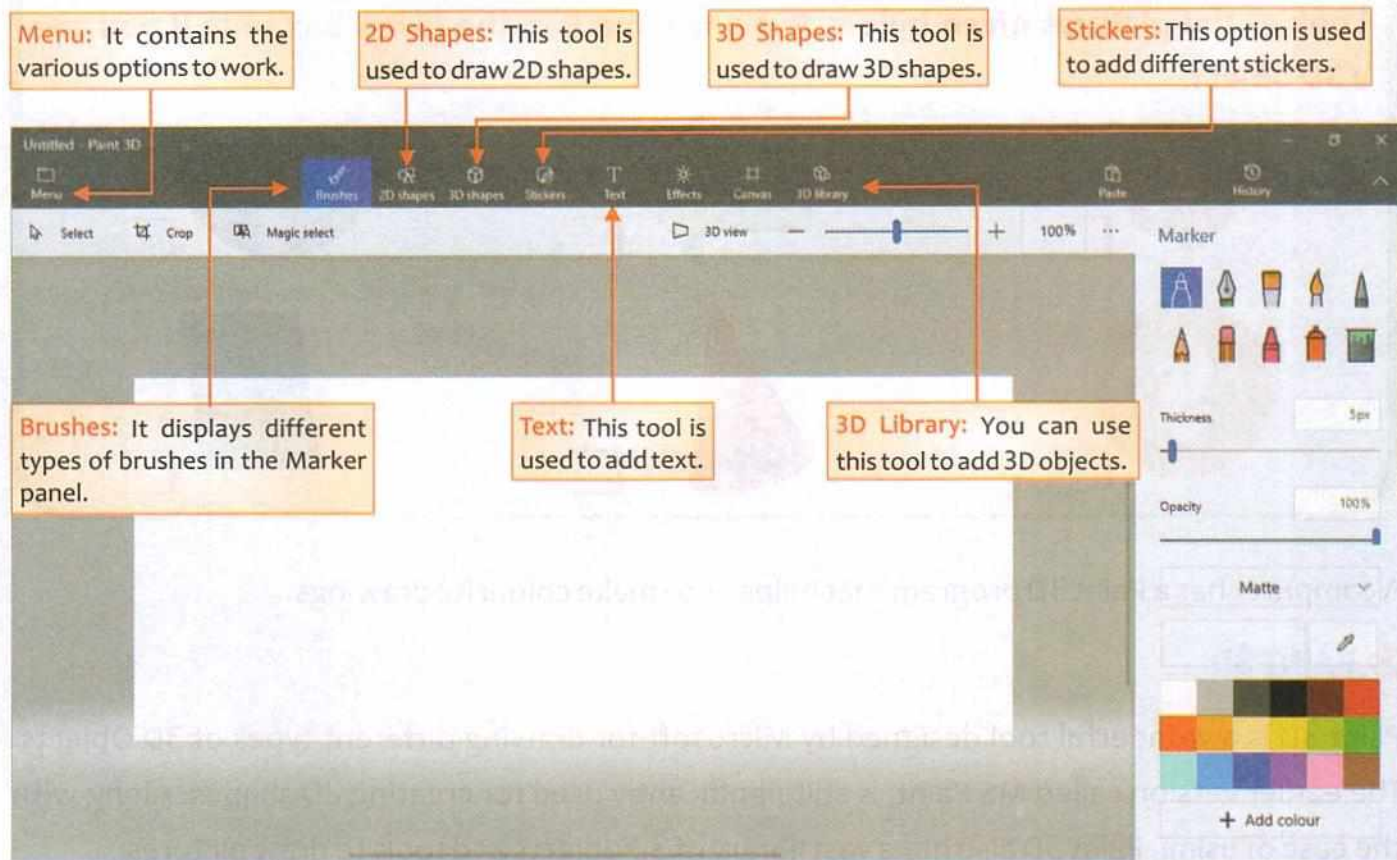



Figure 7.2: Components of Paint 3D Window

## ➤ DRAWING A 2D CIRCLE

- Click on the **2D shapes** option.
- Select the **Circle** tool  from the 2D shapes panel.
- Move the mouse pointer to the canvas area.
- The pointer changes into a '+' sign.
- Hold down the left mouse button and drag the mouse to draw a circle.
- Release the mouse button when a circle is drawn.
- Add colour to the circle by selecting a colour from the **Fill** group.

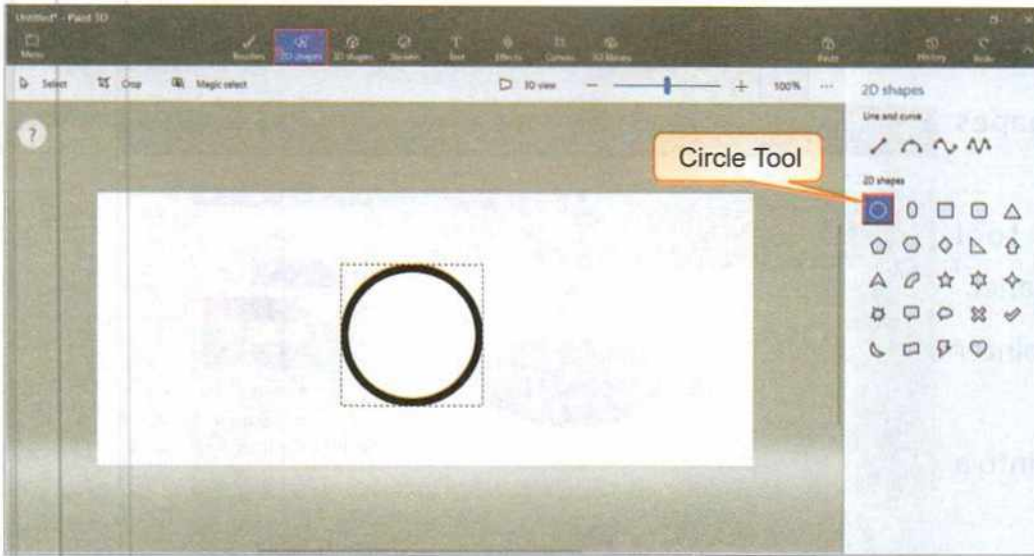



Figure 7.3: Drawing a Circle

### Let's Know More

Shortcuts like Ctrl+A, Ctrl+C, and Ctrl+V work quite well when it comes to selecting, shifting or removing any unwanted objects in Paint 3D.

## FILLING AN OBJECT WITH COLOUR

- To fill an object with any colour, click on the **Brushes** option.
- Select the **Fill** tool  and then select the colour of your choice from the colour palette.
- Move the mouse pointer to the object that you want to fill.
- Click the left mouse button. The selected colour will be filled in the object.

### Let's Know More

When you launch the 3D Paint app, the area where you draw is called Canvas.

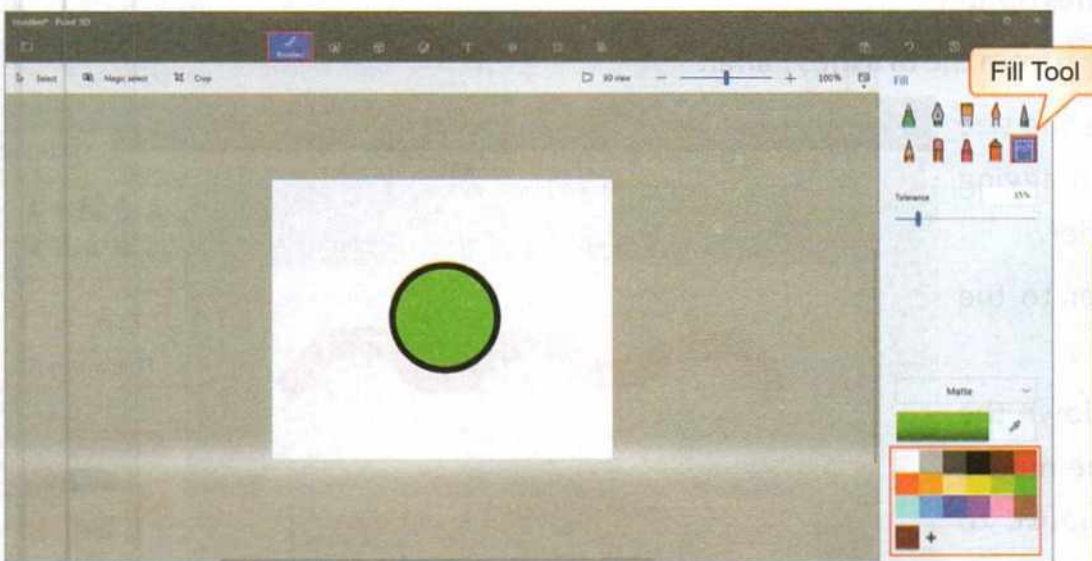


Figure 7.4: Filling Object with Colour

### Quick View

- If you want to reverse your last actions, use Undo command or Ctrl+Z.
- Redo command is used to reverse the effect of Undo command or you can also use Ctrl+Y key combination.

## ➤ DRAWING A 3D SPHERE

- Click on the **3D shapes** option.
- Select the **Sphere** tool from the **3D shapes** panel.
- Move the mouse pointer to the Canvas area.
- The pointer changes into a '+' sign.
- Hold down the left mouse button and drag the mouse to draw the sphere.
- Release the mouse button when the sphere is drawn.
- Add colour to the sphere by selecting the **Edit colour** option from the **3D selection** panel.

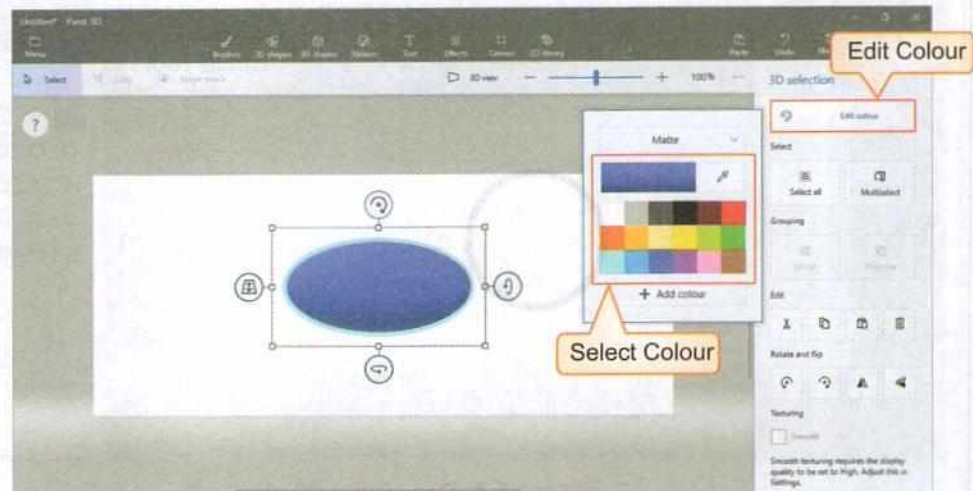


Figure 7.5: Drawing 3D Sphere

### NOTE

To draw a perfect sphere, press the Shift key while using the **Sphere** tool.

## ➤ WORKING WITH THE BRUSHES TOOL

- Click on the **Brushes** option.
- Select **Oil Brush** from the **Brushes Panel**.
- You can increase the size of the brush by dragging the **Thickness** slider.
- Move the pointer to the Canvas area.
- Press and hold down the left button of the mouse and drag the mouse to draw different lines.

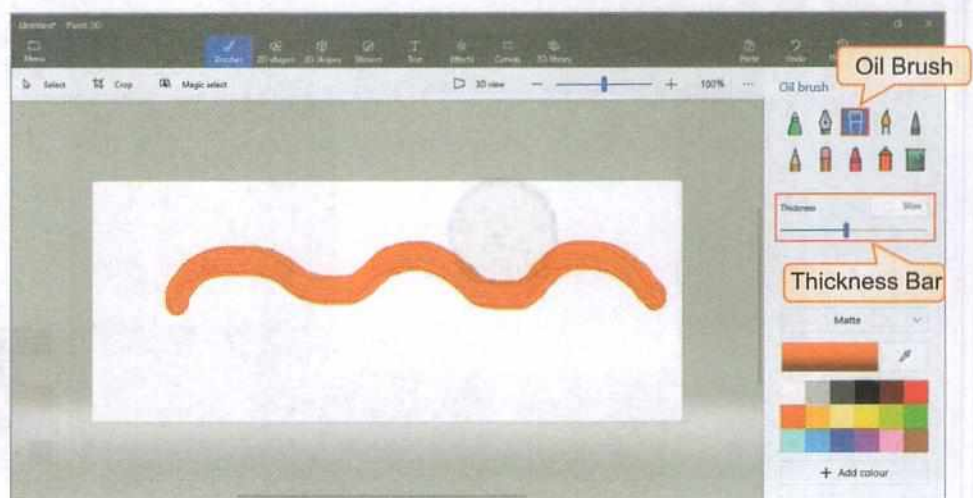



Figure 7.6: Using Brush Tool

## ➤ ERASING A DRAWING

- The **Eraser** tool is used to erase any part of a drawing.
- Select the **Eraser** tool  from the **Brushes** panel.
- Change the size of the Eraser by dragging the **Thickness** slider.
- A square will appear in the Drawing area. Hold down the left mouse button, and move it on the area you want to erase.

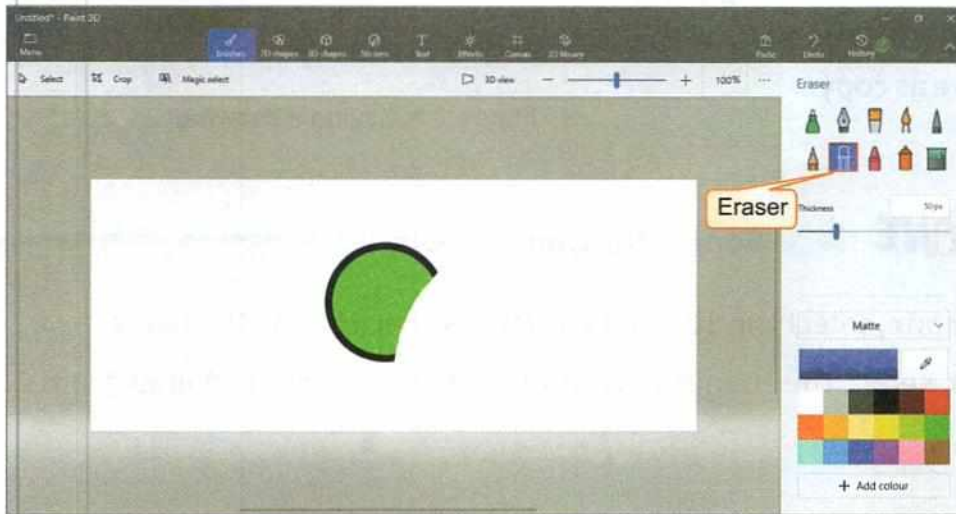


Figure 7.7: Using Eraser Tool

## ➤ OPENING A PROJECT IN PAINT 3D

If you want to work on any old drawing that you had saved previously, the first step will be to open that file. To open a saved project, follow the given steps:

- Click on the **Menu** icon and select the **Open** option.
- The **Open** panel will display a list of projects saved in Paint 3D.
- Select the desired project from the **Saved Projects** list.

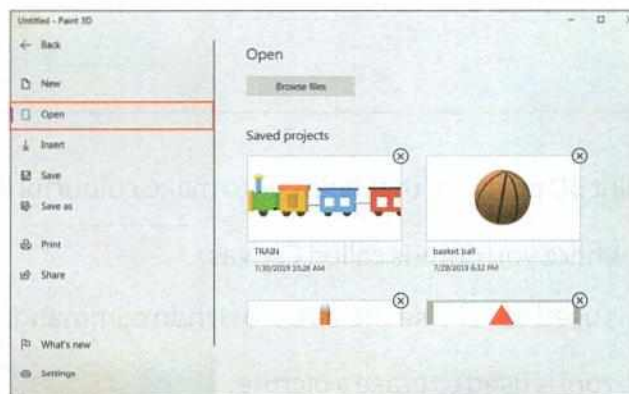


Figure 7.8: Opening a Project in Paint 3D

### Let's Discuss

Erase tool  
and  
Brush Tool

### Let's Know More

If you want to clear all the objects from the drawing area, select all the objects and click on the **Delete** button.

### Let's Know More

When an object gets selected, the handles at the right, top, and bottom let you rotate the object.

### Quick View

You can use the **F12** key to save a Paint 3D drawing for the first time.

## ➤ SAVING A DRAWING

It is important to save your drawing after finishing the work. Once it is saved, you can reuse it any time.

- Click on the **Menu** option in the side bar. Select **Save as** option.
- To save your drawing, select the **Image** option under **Save as copy**.

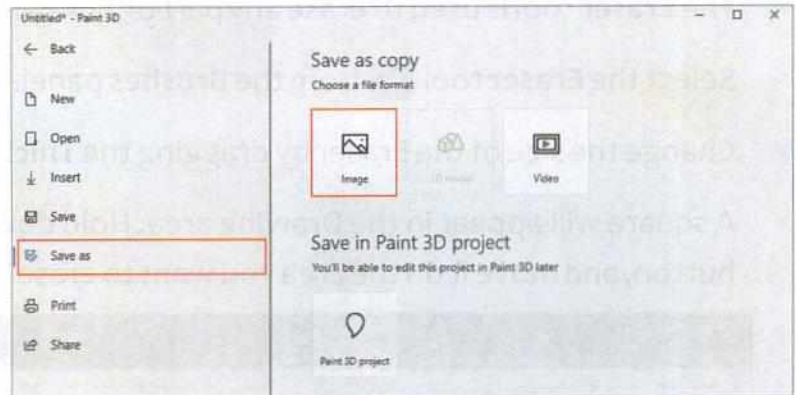


Figure 7.9: Saving a Drawing

## ACTIVITY ZONE ➤➤ For Better Concept Clarity

- To draw an icecream cone, select the 3D Cone and Hemisphere from 3D objects.
- To draw an umbrella, select the Hemisphere tool from 3D objects and lines from 2D objects.



## RECAP

- A computer has a Paint 3D program that helps us to make colourful drawing.
- In Paint 3D, the area where you draw is called Canvas.
- The Redo command is used to reverse the effect of Undo command.
- In Paint 3D, the Erase tool is used to erase a picture.
- The F12 shortcut key is used to save a Paint 3D drawing.



**SECTION - A**

**A. State True or False.**

- 1. The 3D objects are used to draw 2D shapes.
- 2. The Eraser tool is used to erase any part of a drawing.
- 3. You can increase the size of the Brush by dragging the Thickness slider.


**B. Rearrange the jumbled letters to make a meaningful words.**

R S H U B	<input type="text"/>
O T S L O	<input type="text"/>
R O C O L U	<input type="text"/>
E A S E R R	<input type="text"/>

**SECTION - B**

**A. Multiple-choice questions.**

- 1. Which 3D tool is used to draw a sphere?
  - a. Pencil
  - b. Eraser
  - c. Sphere
- 2. Which tool is used for adding colours to an object?
  - a. Fill
  - b. Thickness Slider
  - c. Oil Brush Tool
- 3. Name the area where you draw in Paint 3D.
  - a. Canvas
  - b. Sketch
  - c. Window
- 4. Which option is used for adding stickers?
  - a. 3D Library
  - b. 2D Objects
  - c. Stickers

**B. Answer in one word.**

- 1. Which slider is used to change the thickness of any object? .....
- 2. Which tool will you use to draw a ball? .....
- 3. Which option is used to start a New Project? .....
- 4. Where will you find the different types of brushes in Paint 3D? .....

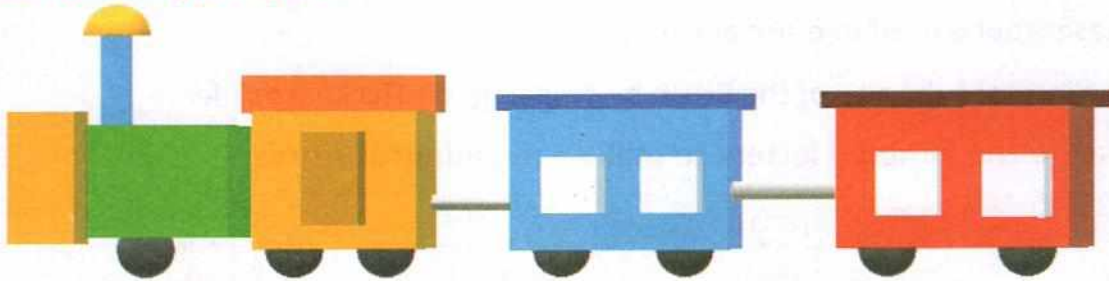
# ACTIVITY SECTION

## LAB SESSION

### Perfection Through Practice



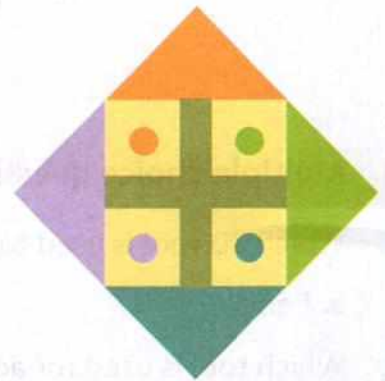
#### 1. Draw the following 3D Figure:



- Use the 3D Sphere, Hemisphere, 3D Cube, and Capsule tool.
- To draw uniform windows, use Copy and Paste options.

#### 2. Draw the given 2D Figure:

- Use the Rectangle, Line, and Oval shapes to make the inner pattern. Use the Polygon shapes to make triangles.
- Save the file.



## GROUP DISCUSSION

### For Concept Clarity

Discuss the following topic with the students.

- 3D vs 2D objects



## PROJECT WORK

### Using Creativity

Using 3D and 2D tools make an attractive Birthday Card for your Mother.





# INTRODUCTION TO SCRATCH

## LEARNING IN THIS CHAPTER

- Scratch - A simple language
- Starting Scratch
- Main components of Scratch
- Moving a Sprite
- Drawing a colourful circle
- Making a duplicate copy of Sprite
- Saving a Scratch project
- Opening a Saved project

Students! How do you express your feelings to your family and friends? Through language, isn't it?

A language is a medium to talk or write. You may speak different languages, like Hindi, English or any other regional language, but to talk to any person, you need a common language, which both of you can speak and understand.

In the same way, if you want to give instructions to a computer, you need to learn the language that a computer understands. A computer does not understand the language that we speak. It understands only few special languages of its own. These are known as **Programming Languages**.

**A programming language has a set of instructions, using which you can make a computer do any activity that you want.**

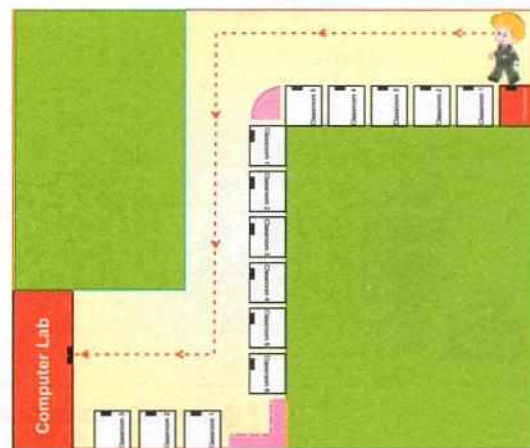
## ➤ SCRATCH - A SIMPLE LANGUAGE

Scratch is one of the easiest computer languages. Students can use Scratch to create their own games, animated stories, and projects with great ease.

Any task that we perform includes many steps. It should be completed, step-by-step, in a particular sequence.

Suppose Kabir's teacher asks him to bring notebooks of his class from the Computer lab. As he is new in the school, she guides him how to reach the Computer lab. She gives the following instructions to Kabir:

- Move to the left from the class and go straight.
- After crossing five classes, take a left turn.
- Then, move forward and after crossing six classes, take a right turn.
- After crossing three classes, you will reach the Computer lab.



Likewise, a computer also follows step-wise instructions to complete any task. These step-wise instructions are known as a **Program**.

## ➤ STARTING SCRATCH

To start Scratch, follow the steps given below:

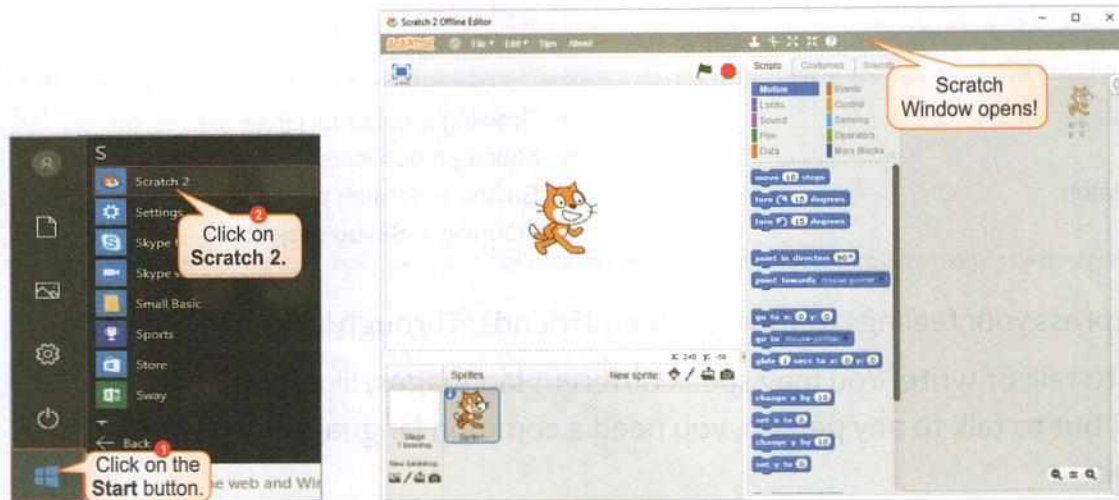


Figure 8.1: Starting Scratch

## ➤ MAIN COMPONENTS OF SCRATCH

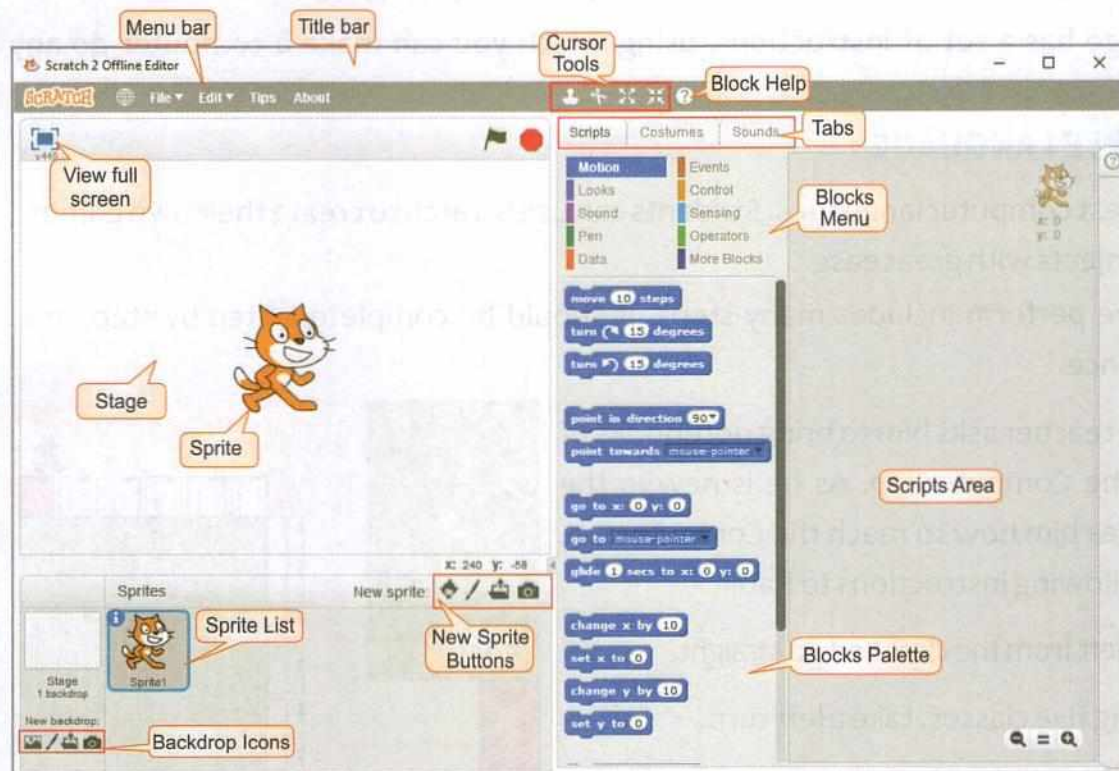


Figure 8.2: Components of Scratch Window

### SPRITE

Sprite is a small graphic character that performs actions in a Scratch project. Scratch provides a number of in-built Sprites. Cat is the default Sprite in Scratch.

### Fact File



Scratch was developed by the Lifelong Kindergarten Group at the MASSACHUSETTS INSTITUTE OF TECHNOLOGY(MIT) Media Lab, led by Mitchel Resnick in 2003.

### Let's Know More

Scratch 3.0 is the latest version of Scratch. It comes with a lot of exiting new features such as, dozens of new sprites, backgrounds and sound. It was released on 2nd January 2019.

### Know the Fact

Scratch is used in more than 150 countries and available in 40 different languages.

### Know the Fact

Scratch can easily run on different operating systems, including Windows, Mac OS, and Linux.

### Know the Fact

The official website of Scratch is : [www.scratch.mit.edu](http://www.scratch.mit.edu)

## STAGE

It is the main working area where the Sprite moves and performs actions, as per the given instructions. Here you can watch stories, play games, and run Scratch projects that you have created.

## BLOCKS PALETTE

The Blocks palette contains the set of blocks, which is used to program the Sprite and give actions to it. Each block performs specific tasks in a project. It is used to create scripts in Scratch. The blocks connect with each other just like a jig-saw puzzle.

## SCRIPT

A script is a collection of step-wise instructions that are given to a Sprite to do a specific task. A script consists of at least two blocks.

## SCRIPTS AREA

The Scripts Area is the place where you create a script for a Sprite to do a particular task. The script is created by dragging the instructions from the blocks palette and dropping them step-wise one below the other. A script is also called a **Program**.

Let us learn how to drag and drop the blocks in the Scripts Area:

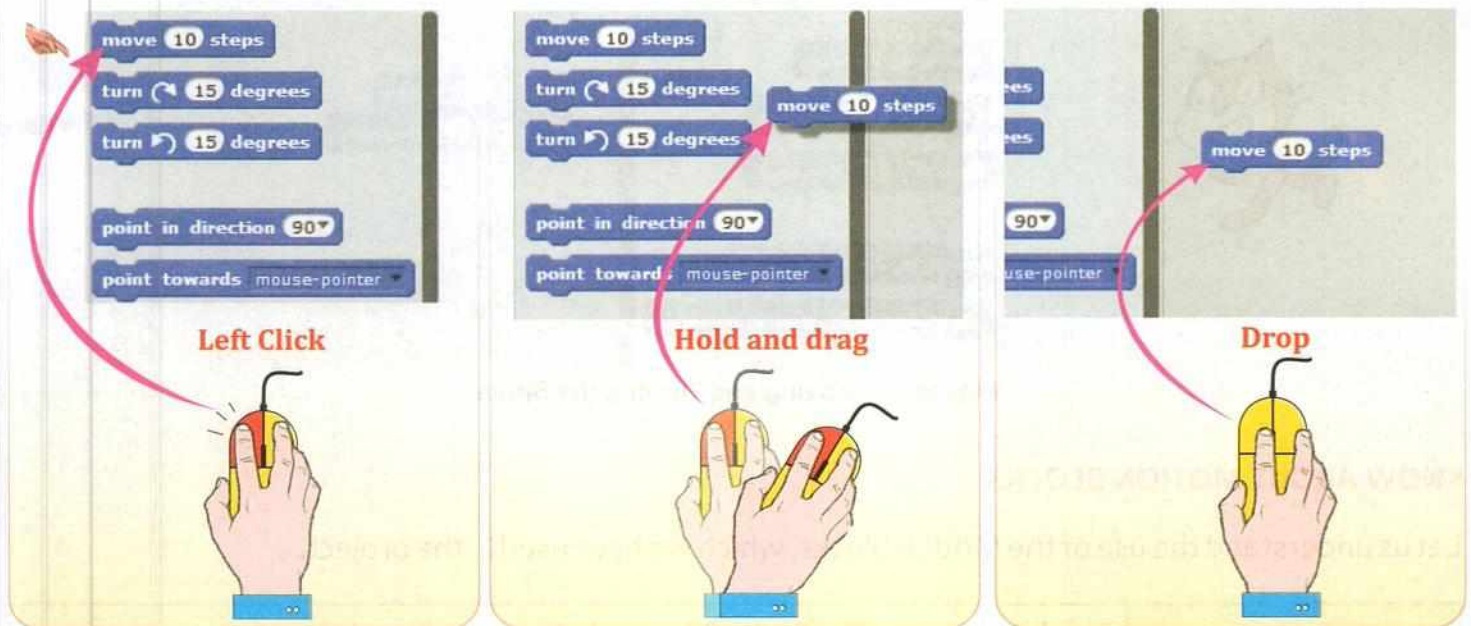


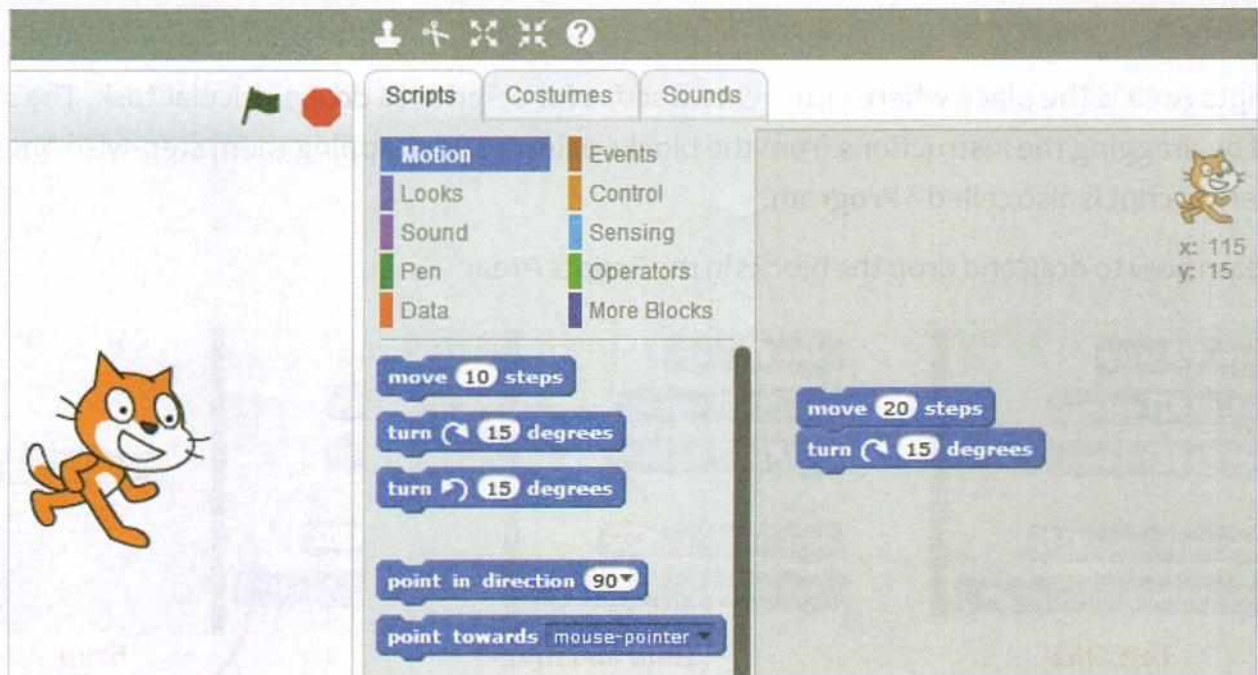
Figure 8.3: Scripts Area

## ➤ MOVING A SPRITE

All the instructions related to the movement of a Sprite are given under the **Motion** block menu.

Let us create a Scratch project to move the Sprite in circular motion.




- Open the Scratch window.
- By default, the **Motion** block palette is displayed on the left side of the Scratch window.
- Click on the **move 10 steps** block and drag it to the Scripts Area. Change the step number from 10 to 20 by typing in the number box. Click on the block. You will notice that the Sprite moves the specified number of steps.
- Click on the **turn 15 degrees** block. Now, drag and drop it on the Scripts Area. Place it below the **move 20 steps** block.
- Keep clicking on any block in the Scripts Area.
- Observe that the Sprite is moving 20 steps forward and turning 15 degrees in a circular motion on the stage.



**Figure 8.4: Moving and Turning the Sprite**

## KNOW ABOUT MOTION BLOCKS

Let us understand the use of the Motion blocks, which we have used in the project.

	<p>This block moves the Sprite 20 steps in forward direction.</p> <p>To move the Sprite in backward direction, type the number with a preceding (-) minus sign. For example, -20.</p>
	<p>This block is used to turn the Sprite in clockwise direction. To turn the Sprite in anti-clockwise direction, use  block.</p>

## ➤ DRAWING A COLOURFUL CIRCLE

The blocks in the **Pen** block menu allow the Sprite to draw lines on the stage, change the colour, and the thickness of lines. Let us add some more blocks to the previous Scratch project. Observe the movement of the Sprite on the stage.

- Click on the **Pen** block menu.
- Select the **pen down** block from the **Pen** block palette.
- Drag out the block and place it underneath the **turn 15 degrees** block.
- Now, click and pull the **set pen size to 1** block onto the Scripts Area. Place it below the **pen down** block. Change the value from 1 to 10.
- Drag out the **change pen color by 10** block from the **Pen** block palette and drop it at the end. Change the value from 10 to 20.
- Keep clicking on any of the blocks in the Scripts Area till the Sprite completes its colourful circle.



Figure 8.5: Drawing a Colourful Circle

## KNOW ABOUT PEN BLOCK

Let us understand the use of Pen blocks that we have used in the project.

	This block draws a line as the Sprite moves on the stage.
	This block is used to set the thickness of the pen to a specific number. You can change the thickness of the pen by typing in the number box.
	To change the colour of the pen, use  block.

## ➤ MAKING A DUPLICATE COPY OF SPRITE

To create a duplicate copy of the Sprite, the **stamp** block is used.

- Drag out the blocks from the **Motion** and **Pen** blocks palette as shown in Figure 8.6. Snap the blocks together onto the Scripts Area.

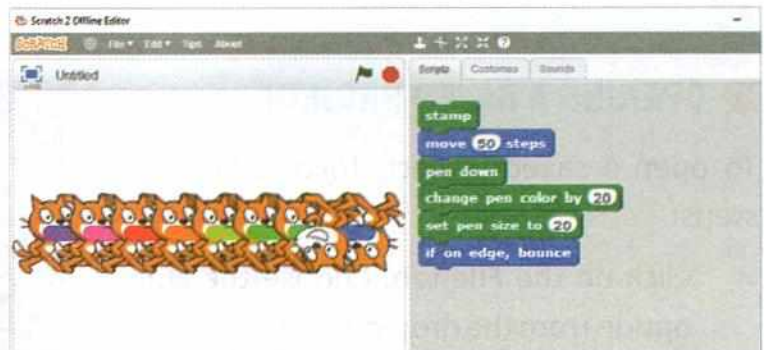


Figure 8.6: Making Duplicate Copies of Sprite

- Change the values of the blocks as given in Figure 8.6.
- Click on any of the blocks to create the duplicate copy of the Sprite.
- Notice, as the Sprite reaches the edge of the Stage, it will bounce back and change its direction.

if on edge, bounce

The **if on edge, bounce** block is in the **Motion** block menu. It is used to turn the Sprite in the opposite direction as it reaches the edge of the stage.

## ➤ SAVING A SCRATCH PROJECT

Once you finish the project, always save it before closing the Scratch window.

To save the project, follow the given steps:

- Click on the **File** menu in the Menu bar. Select the **Save** option from the drop-down list.
- The **Save Project** dialog box appears.
- Choose the desired location where you want to save your Scratch project.

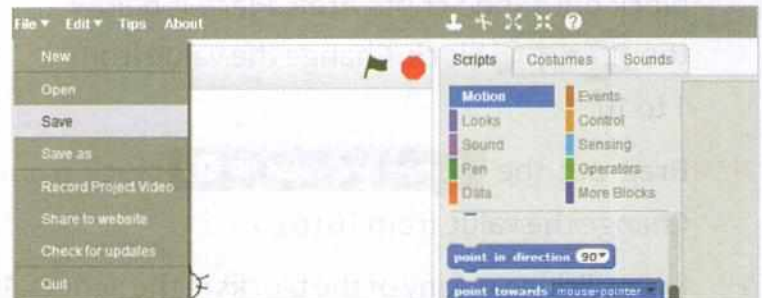


Figure 8.7: Saving a Project

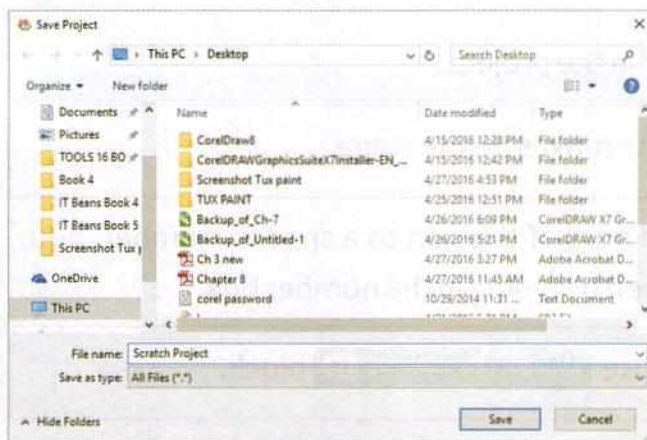


Figure 8.8: Save Project Dialog Box

- Assign a name to your project in the **File name** text box.
- Click on the **Save** button.
- Your Scratch project will be saved. You can open it whenever required.

### NOTE

Scratch 2.0 projects are saved with the extension **.sb2**.

## ➤ OPENING A SAVED PROJECT

To open a saved project, follow the given steps:

- Click on the **File** tab. Choose the **Open** option from the drop-down list.

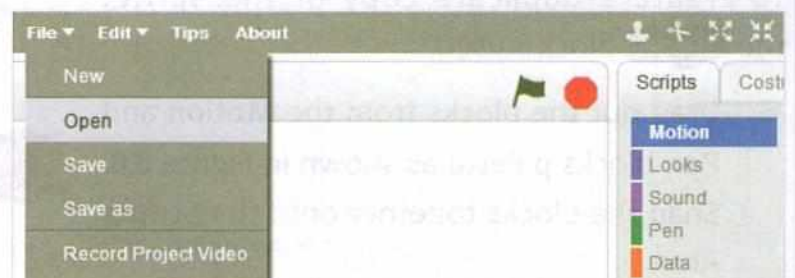
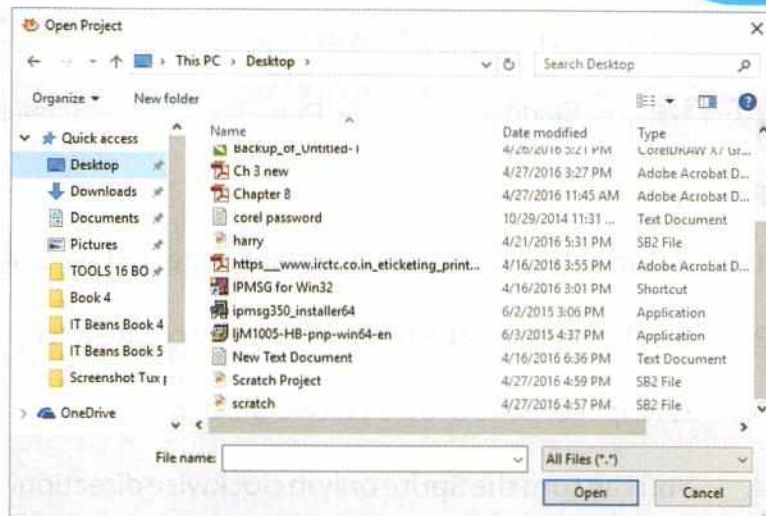


Figure 8.9: Opening the Scratch Project

- The **Open Project** dialog box appears.
- Select the project that you want to open.
- Click on the **Open** button.
- The selected project opens in the Scratch window.



**Figure 8.10: Open Project Dialog Box**

## RECAP

- A computer understands only a few special languages of its own. These are known as programming languages.
- Scratch is one of the easiest computer languages.
- Students can use Scratch to create their own games, animated stories, and projects with great ease.
- Sprite is a small graphic character that performs actions in a Scratch project.
- Script is a collection of step-wise instructions that are given to Sprite to do a specific task.
- Scripts Area is the place where you create a script for a Sprite to do a particular task.
- All the instructions related to the movement of Sprite are given under the Motion block menu.
- The blocks in the Pen block menu allow the Sprite to draw lines on the stage, change the colour, and the thickness of lines.



### SECTION - A

#### A. Fill in the blanks.

- ..... is one of the easiest computer languages.
- A computer follows step-wise instructions to complete any task, which is known as .....
- ..... is a graphic character which moves on the stage.
- The blocks in the ..... block allow the Sprite to draw lines on the stage, change the colour, and the thickness of lines.

5. In Scratch, the Sprite moves on the ..... when you run a program.

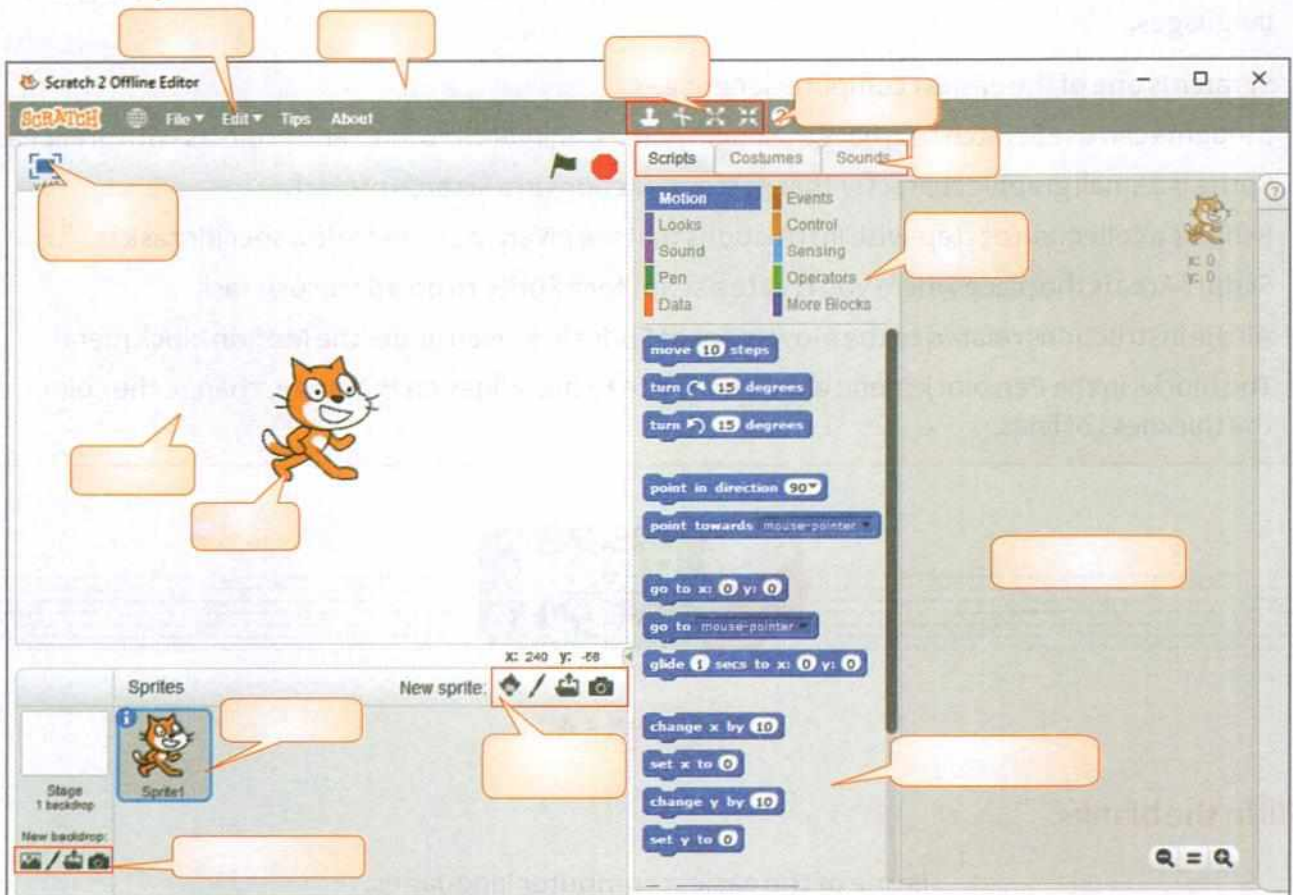
**HINTS**

- Stage
- Pen
- Scratch
- Program
- Sprite

**B. State True or False.**

1. A computer understands the language that we speak.
2. Blocks Palette is the place where you create a script for the Sprite to do a specific task.
3. A script consists of at least two blocks.
4. You can turn the Sprite only in clockwise direction.
5. Scratch 2.0 projects are saved with the extension .sb2.

**C. Label the parts of the Scratch window.**



**D. Application-based questions.**

1. Aarav wants to make a Scratch project wherein he wants to move the Sprite in forward direction by 20 steps. Suggest him the appropriate block to perform this action.






2. Shreya wants to change the thickness of the pen while drawing a trail behind the Sprite. Suggest her the right block that she can use.

.....

**SECTION - B**

**A. Multiple-choice questions.**

1. Scratch 2.0 was officially released on ..... 2013.  
a. July 4                      b. May 9                      c. June 2
2. .... contains the set of blocks, which is used to program the Sprite.  
a. Blocks Palette              b. Stage                      c. Scripts Area
3. .... block draws a line as the Sprite moves on the stage.  
a.               b.               c. 
4. Who is the founder of Scratch?  
a. James Gosling              b. Tim Berners-Lee              c. Mitchel Resnick

**B. Answer the following questions.**

1. What do you know about Scratch?  
.....  
.....
2. What is a Sprite?  
.....  
.....
3. Explain any two main parts of the Scratch window.  
.....  
.....  
.....
4. What is the use of Pen block?  
.....  
.....

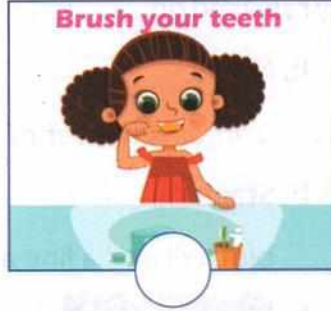
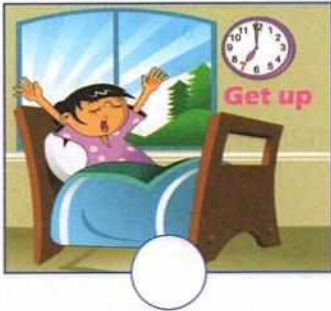
# ACTIVITY SECTION



## MY ACTIVITY

### Learning While Playing

The teacher asked the students to make a chart, displaying their daily routine of work, in correct sequence. Number the steps in the order in which they are done.



## LAB SESSION

### Perfection Through Practice



A. Practice the following programs and see the change in the Sprite's movement.

```

move 200 steps
turn ⤴ 180 degrees
pen down
change pen color by 20
set pen size to 10
    
```

```

stamp
move 100 steps
turn ⤴ 150 degrees
    
```

```

move 10 steps
if on edge, bounce
pen down
change pen color by 10
    
```

```

move 50 steps
turn ⤴ 50 degrees
pen down
change pen color by 20
set pen size to 10
    
```

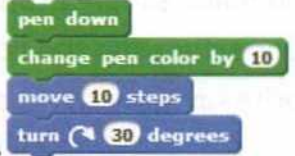
B.

(1) Drag the following blocks in the Scripts Area of the Scratch window and save the project.

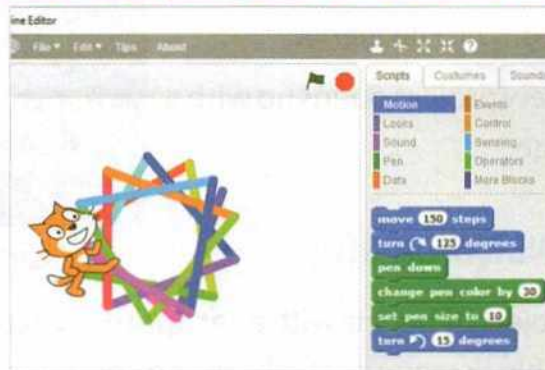


Modify the following blocks in your script and observe the difference while running the program again.

- Decrease the steps in **move 100 steps** block to 10.
- Remove **change pen size by 10** and **if on edge, bounce** blocks from the script.
- Add the block **turn 30 degrees** after **move 10 steps** and change the degrees to 30.

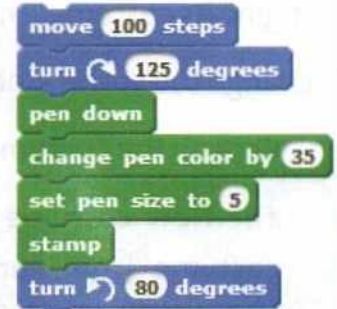


(2) Drag the following blocks in the Scripts Area of the Scratch window and save the project.



Modify the following blocks. Run the script again and observe the difference.

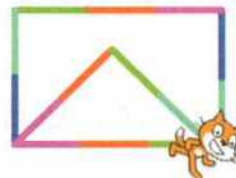
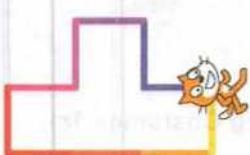
- Decrease the steps in **move 150 steps** block to 100.
- Increase the degrees in **turn 15 degrees** block to 80.
- Change the pen size to 5 in **set pen size to 10** block.
- Add **stamp** block after the **set pen size to 5** block.



## PROJECT WORK

### Using Creativity

Draw the given images in Scratch with a colourful Pen style.



# SIMPLE MOVEMENT OF SPRITE

## LEARNING IN THIS CHAPTER

- Creating a New project
- Changing the appearance of Sprite
- How to make a Sprite say something?
- Repeating actions
- Adding sound

Students! In the previous lesson you learnt about the components of Scratch, i.e., how to open Scratch and make simple projects using blocks from Motion and Pen block menu. In this lesson, we will learn about changing the appearance of Sprite, changing its colour and size, repeating actions, making the Sprite say something, and adding sound effects to a project.

### ➤ CREATING A NEW PROJECT

- Open Scratch window. Click on the **File** menu.
- Choose the **New** option. A new project opens up with a default cat Sprite on the stage.

### ➤ CHANGING THE APPEARANCE OF SPRITE

When you start a new Scratch project, it begins with a cat Sprite. You can edit the looks of the Sprite by changing its costume. The **Looks** block menu controls the look of the Sprite.

To change the Sprite's look, follow the given steps.




- Click on the **Costumes** tab to see and edit the Sprite's costume.
- The **New costume** options are displayed as shown in Figure 9.2. These options are: **Choose costume from library** , **Paint new costume** , **Upload costume from file** , and **New costume from camera** . Here, we will learn the method to choose a costume from the library.
- Click on **Choose costume from library** button. The number of choices will appear in the **Costume Library** dialog box.
- Select the **Animals** option from the **Category** section.



Figure 9.1: Opening a New Project



Figure 9.2: Selecting Costumes Tab

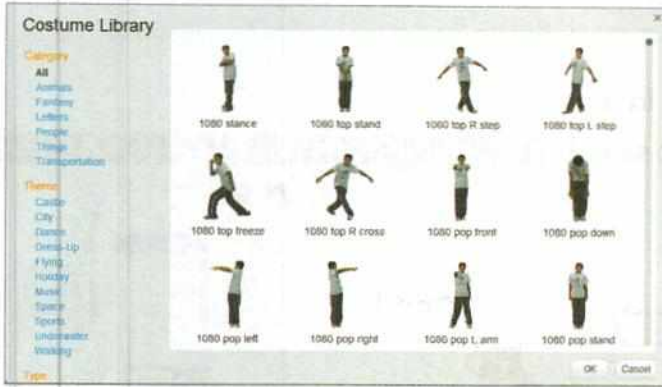


Figure 9.3: Costume Library Dialog Box

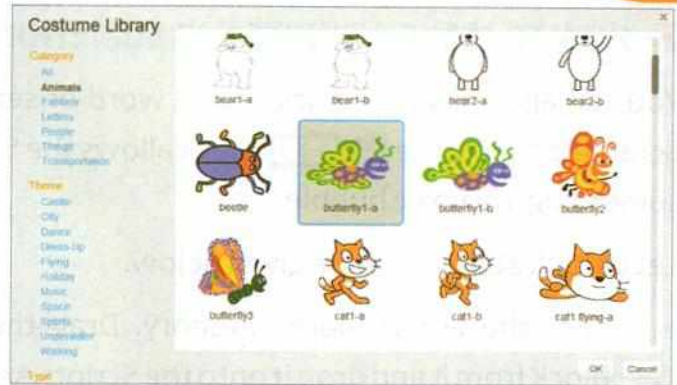


Figure 9.4: Selecting Animals Category

- Select **butterfly1-a** Sprite and click **OK**.
- Observe that the new costume will be added under the **Costumes** list as well as displayed on the stage.
- Select the **Scripts** tab and click on the **Motion** block.
- Drag out the **move 10 steps** block from the **Motion** category and drop it on to the Scripts area. Click inside the number box and change the steps value from 10 to 20.
- Now, select the **Looks** block category. Click and pull out the **change color effect by 25** block onto the Scripts Area. Place it below the **move 20 steps** block.



Figure 9.5: Sprite Costumes List



Figure 9.6: Sprite Changing its Appearance

**NOTE** The **change color effect by 25** block changes the colour and other graphical effects applied to the Sprite by the specified number.

- Now, pick the **next costume** block and snap it below the **change color effect by 25** block in the script.
- Click on any of the blocks to run the block stack. Observe the Sprite changing its costume and colour.

**NOTE** Notice that the **Scripts** tab and the **Costumes** tab share the same space. You can move back and forth by clicking on each tab at the top.

## ➤ HOW TO MAKE A SPRITE SAY SOMETHING?

You can also make the Sprite say a word or sentence in a Scratch project. The **say Hello!** block allows the Sprite to say something in a voice bubble.

Let us look at the example given below.

- Click the **Looks** block category. Drag the **say Hello!** block from it and drop it onto the Scripts Area.
- Now, click on the **Control** block and drag the **wait 1 secs** block to the Scripts Area. Snap these two blocks together. This block makes the Sprite wait for the specified number of seconds before moving to the next block of the script.
- Again, select the **Looks** block category and place the **say How are you? for 2 secs** block beneath the **wait 1 secs** block. This block allows the Sprite to say something for the specified number of seconds.
- Type in the message: 'How are you?' inside the text space of the block.
- Drag out the **say Hello!** block again and drop it at the end of the script. Change the text of the block to 'I am good'.
- Click on any of the blocks to run the block stack.



Figure 9.7: Sprite Saying a Message

## KNOW MORE ABOUT THE LOOKS BLOCK

**change size by 10** : This block is used to change the size of the Sprite by the specified amount.

Let us make a Scratch project using blocks that have been explained to you. Place the blocks one by one as shown in Figure 9.8. Now, click on the script and observe the Sprite changing its colour and size.





## ➤ REPEATING ACTIONS

Repeat instructions help in controlling the execution of the program. You can repeat the actions of the Sprite as many times as needed. You will get various blocks to repeat the actions in the **Control** block category. Blocks held inside the **repeat 10** block are repeated for the specified number of times mentioned in the block.



Figure 9.8: Changing the Size of the Sprite

Let us learn to use the repeat block in the next example.

- Pick the  block and place it onto the Scripts Area. Change the value from 10 to 15.
- Drag the  block and  block from the **Motion** block palette and drop them onto the Scripts area.
- Change the value in both the blocks to 30.
- Now, place them inside the  block as shown in Figure 9.9.

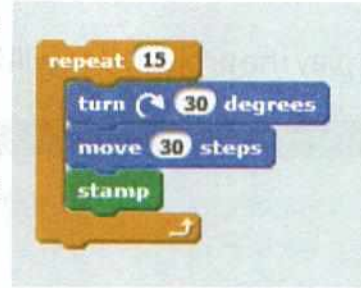


Figure 9.9: Stack

### Know the Fact

A loop is a sequence of instructions that is repeated until a certain condition is satisfied.

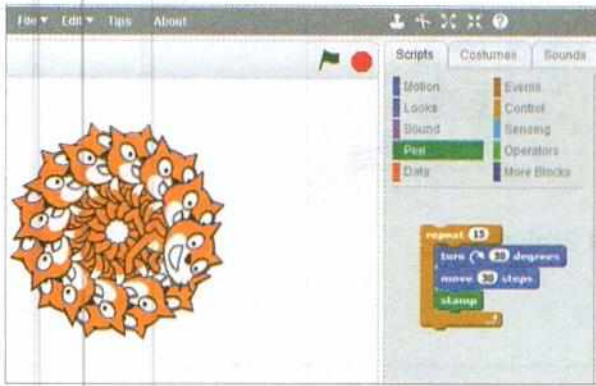




Figure 9.10: Sprite Repeating Actions






- Select the **Pen** block menu. Drag out the  block and drop it below the  block.
- Click on any block to run a stack and observe the repeated actions.

### Let's Know More

#### Stop button

The **Stop** button is placed on the top-right corner of the stage. It is red in colour and used to stop the project at any time during execution.

## KNOW MORE ABOUT THE CONTROL BLOCK

	<p>The blocks held inside this block will be in a loop that never ends, unless the <b>Stop</b> button  is clicked.</p>
<p><b>TO RUN A SCRIPT</b></p> 	<p>The  block is in the <b>Events</b> block and the most used block in Scratch. The image of a flag shows how the block is connected with the actual green flag. The scripts that begin with this block will run once the Green flag  has been clicked.</p>

**NOTE** To move a block of commands anywhere in the Scripts Area, click on the top block of the script and drag the stack to the place where you want to place it.

## ➤ ADDING SOUND

There are many ways to add sound to your Scratch project. Here, we will discuss the blocks present in the **Sound** block menu that are used to add sound.



### Let's Know More

#### Green flag

It is a tiny icon placed at the top-right corner of the stage screen. Clicking on the green flag will run the script.

- Make the script by dragging out the blocks as shown in Figure 9.11 and stack them on top of each other.
- Click on the Script to play the project. You will hear the sound of a cat, i.e., 'Meow' and drum beats.

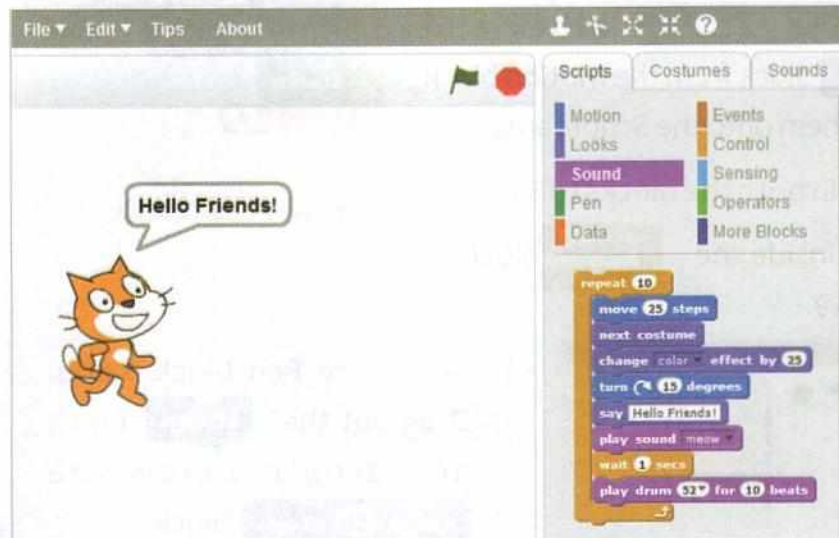


Figure 9.11: Adding Sound in a Project

## KNOW MORE ABOUT SOUND BLOCKS

	<p>This block will play the specified sound. The script will pause until the sound has finished playing.</p>
	<p>This block plays a drum sound for a specified number of beats. You can change the drum type by clicking on the drop-down arrow next to the number and the number of beats by changing the value in the box.</p>

## RECAP

- To change the Sprite's looks, we can use the Costumes tab.
- There are four options to change the costume of a Sprite—Choose costume from library, Paint new costume, Upload costume from file, and New costume from camera.
- The **say Hello!** block allows the Sprite to say something in a voice bubble.
- The **when clicked** block is in the Events block, and is designed to start a script.
- The Stop button is used to stop the project at any time during execution.
- The Sound block contains many blocks to play sound in your Scratch project.
- The Control block category includes various blocks to repeat the actions of the Sprite.





**SECTION - A**

**A. Fill in the blanks.**

1. When you start a new Scratch project, it begins with a ..... Sprite.
2. The ..... block allows the Sprite to say something in a voice bubble.
3. The Stop button is placed on the ..... right corner of the Stage.
4. The ..... block allows the Sprite to wait for the specified number of seconds.
5. The ..... block will play the specified sound, pausing the script until the sound has finished playing.

**HINTS** • Top • play sound ( ) until done • say ( ) • Cat • Wait ( ) secs

**B. State True or False.**

1. You can make a Sprite say something in a voice bubble.
2. You can not change the costume of the Sprite with the help of Costumes tab.
3. The Sound block menu contains blocks to play sound in your Scratch project.
4. The Stop button is of green colour.
5. You can repeat the actions of a Sprite as many times as needed.

**C. Application-based questions.**


1. Vansh wants to make a Scratch project where he wants to use different costumes of the Sprite. Suggest him the correct block to do this.  
.....
2. Prakhar wants to stop the Scratch project before it ends. Suggest the correct button to stop the Scratch project any time during the execution.  
.....

**D. Match the following.**

**SECTION - B**

**A. Multiple-choice questions.**

- The ..... block controls the looks of a Sprite.  
a. Looks                                      b. Sound                                      c. Control
- The Scripts tab and the Costumes tab share the ..... space.  
a. Same                                      b. Different                                      c. Entire
- The  block allows the Sprite to say something in a voice .....  
a. Line                                      b. Bubble                                      c. Circle
- To move a block of commands anywhere in the Scripts area, click on the ..... block of the script.  
a. Top                                      b. Bottom                                      c. Left

**B. Answer in one word or sentence.**

- Name the block that allows the Sprite to change the costume.  
.....
- Which block allows the Sprite to say something for the specified number of seconds?  
.....
- Which option do we use to choose Sprite's costume from the library?  
.....

4. Name the block that makes the Sprite wait for some seconds. Where can you find this block?

.....

5. Name the block that is used to run the script, again and again. Mention the block category where it is found.

.....

**C. Answer the following questions.**

1. Name any two blocks from the Looks block menu in Scratch.

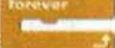
.....

.....

2. Name the options that are available for changing the costume of a Sprite.

.....

.....

3. Briefly explain the use of  block in Scratch.


.....

.....

4. Which block should be used to play the sound of a Sprite?

.....

.....

5. What is the purpose of using the  block?

.....

.....

.....



# ACTIVITY SECTION



## LAB SESSION

## Perfection Through Practice

A. Make the following projects in Scratch to create different patterns.

1

```

move 200 steps
turn 45 degrees
wait 1 secs
pen down
set pen size to 8
set pen color to
repeat 10
  move 100 steps
  wait 0.2 secs
  turn 90 degrees
  move 100 steps
  wait 0.2 secs
  turn 90 degrees
  move 100 steps
  wait 0.2 secs
  turn 90 degrees
  move 100 steps
  wait 0.2 secs
  turn 90 degrees
  move 100 steps
  wait 0.2 secs
  turn 90 degrees
move 100 steps
say I did it!!!!
  
```

2

```

pen down
change pen color by 10
set pen size to 8
repeat 1
  move 150 steps
  turn 90 degrees
  wait 1 secs
  move 150 steps
  turn 90 degrees
  wait 1 secs
  move 300 steps
  turn 90 degrees
  wait 1 secs
  move 300 steps
  turn 90 degrees
  wait 1 secs
  move 150 steps
  turn 90 degrees
  wait 1 secs
  move 150 steps
  turn 90 degrees
  
```



3

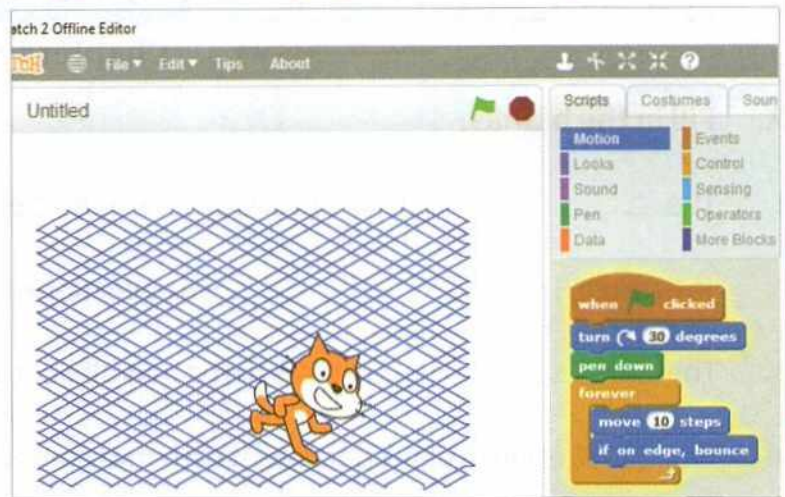
```

say Let us make a Zig-Zag! for 2 secs
pen down
move 150 steps
turn 90 degrees
move 150 steps
wait 1 secs
turn 180 degrees
pen down
set pen size to 5
change pen color by 10
repeat 7
  move 200 steps
  wait 0.2 secs
  turn 90 degrees
  move 20 steps
  wait 0.2 secs
  turn 90 degrees
  move 200 steps
  wait 0.2 secs
  turn 90 degrees
  move 20 steps
  wait 0.2 secs
  turn 90 degrees
move 200 steps
wait 1 secs
say I did it!
  
```

## B. Make the following project in Scratch using the blocks displayed on the Scripts Area.

After creating the project, modify the script as per the instructions given below:

- Change the colour of pen
- Increase the number of steps
- Let the Sprite say something
- Replace the  block with  block



### GROUP DISCUSSION

For Concept Clarity

Discuss the topic **Different ways of changing the look of a Sprite** with the students.

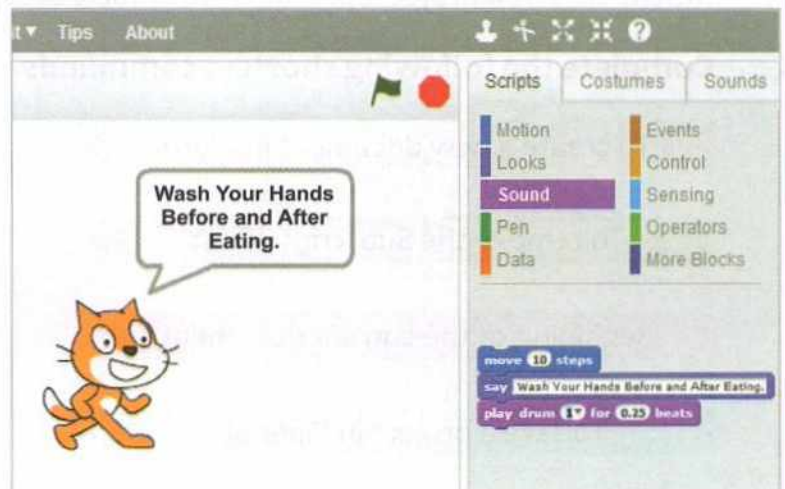


### PROJECT WORK

Using Creativity

The teacher asked Priya to make a Scratch project, describing the **Health Hygiene Habits**. Suggest some of the suitable blocks to display the following sentences on the stage. The first one has been done for you.

- Wash your hands before and after eating.
- Take a bath every day.
- Brush your teeth in morning and evening.
- Avoid eating junk food.
- Trim your nails regularly.



### HINTS

Add creativity to your project by changing the appearance of the Sprite and adding new costumes while displaying a new habit. Also, add some sound effects to your project.

**A. Fill in the blanks.**

- The ..... tool is used to add 3D objects in your drawing.
- In Scratch, ..... is a collection of step-wise instructions given to a Sprite.
- The ..... refers to the overall size (generally height) of the letters.
- Word 2016 opens a blank document with the temporary name .....
- A ..... is a sequence of instructions that is repeated until a certain condition is satisfied.

**HINTS**

• Document1

• Script

• Loop

• Font size

• 3D Library

**B. State True or False.**

- We should not press the Enter key at the end of each line.
- The Open panel displays a list of projects saved in Paint 3D.
- Scratch is one of the easiest computer languages.
- Justified alignment means that the text is aligned with the left margin.
- In Scratch, a new project opens up with default Cat Sprite on the stage.

**C. Complete the following shortcut commands.**

To create a new document in Word

..... + S

To remove the Subscript effect

Alt + .....

Beginning of the current document

Ctrl + .....

To save a project in Paint 3D

Shift + ..... + Home

To close the Word application

Shift + .....

One character to the left

..... + N

**A. Choose the right answer.**

- Where can you find the Eraser tool?
  - Brushes panel
  - 2D shapes
  - 3D shapes
- The ..... is a small graphic character that performs actions in a Scratch project.
  - Sprite
  - Stage
  - Script
- To move a block of commands anywhere in the Scripts Area, click on the ..... block of the script.
  - Top
  - Bottom
  - Left
- The ..... button is used to halt the Scratch project during execution.
  - Halt
  - Stop
  - Green flag
- How many scroll bars are there in Word 2016?
  - 1
  - 4
  - 2

**B. Answer in one word.**

- Which block has all the instructions related to movement? .....
- Name the tool to add text in your drawing in Paint 3D. ....
- Which extension is given to the drawing saved in Scratch? .....
- Name the block that controls the looks of the Sprite. ....

**C. Answer the following questions.**

- Which tool in Paint 3D is used to increase the size of the brush?  
.....
- What is the green flag button used for?  
.....
- Name any two blocks present in the Control block menu.  
.....
- What do you understand by Editing?  
.....
- Define the term 'alignment'. Name the types of alignments available in Word 2016.  
.....  
.....

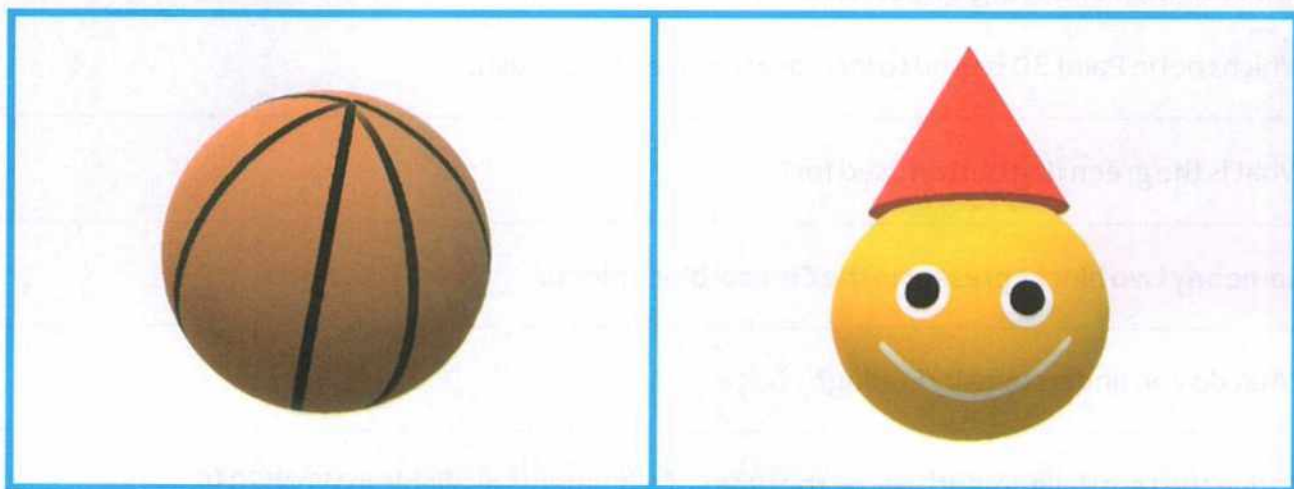
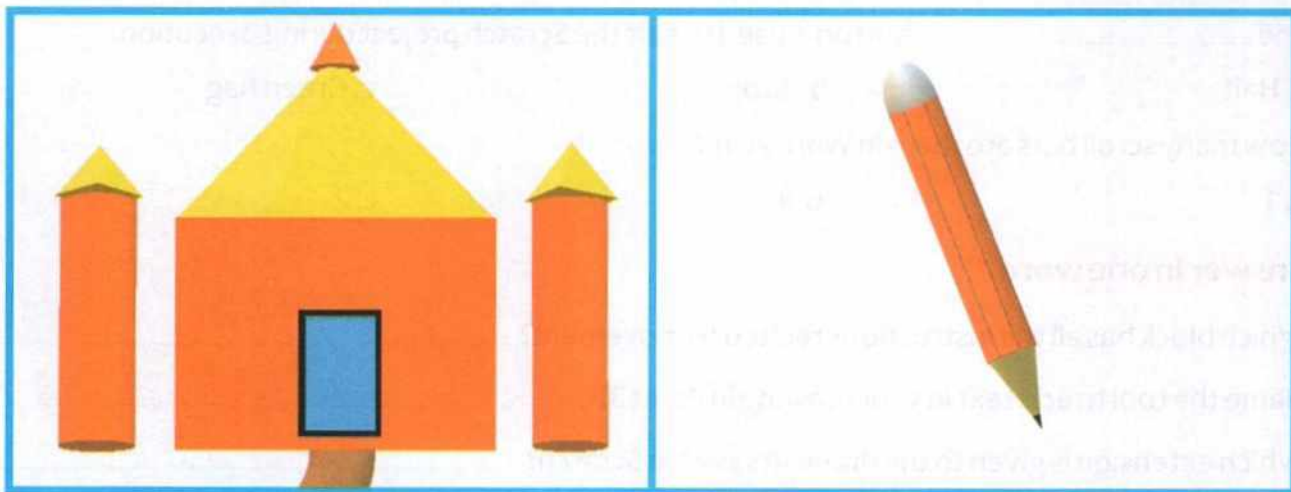
# PROJECT WORK

## ➤ PAINT 3D



Students! You have learnt how to draw in Paint 3D using various tools. Let us make beautiful and colourful drawings with it.

**Project 1:** Create these drawings in Paint 3D.







**Project 1:** Open MS Word and make a poster on **Good Manners**. Set it on your desktop as a wallpaper and take a printout of the poster.

## GOOD MANNERS



- ◆ Always respect your elders.
- ◆ Greet your elders with respect.
- ◆ Always throw garbage into the dustbin.
- ◆ Never scribble on walls.
- ◆ Wash your hands before and after every meal.
- ◆ Never eat uncovered food.
- ◆ Always clean the table after taking meals.
- ◆ Avoid eating junk food, like chips, burger, pizza, etc.

### INSTRUCTIONS

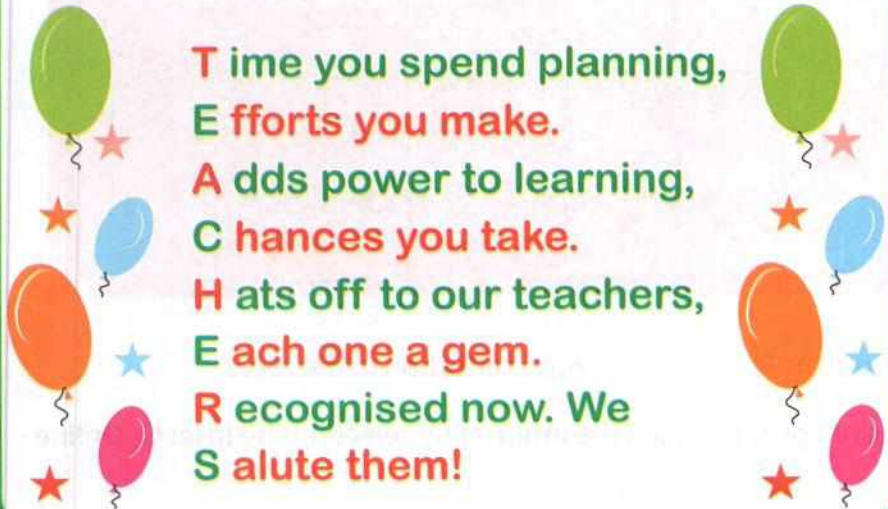
- ◆ Heading Font - Showcard Gothic
- ◆ Font Size - 20
- ◆ Colour - Red
- ◆ Text Font - Chaparral Pro
- ◆ Font Size - 14
- ◆ Text Colour - Black
- ◆ Font Style - Bold

### HINTS

Make the faces of children, balloons, and stars in **Paint 3D**. Bring them in the **MS Word** document by using the **Cut** and **Paste** commands.

**Project 2:** Create a poster on **Happy Teacher's Day** in MS Word.

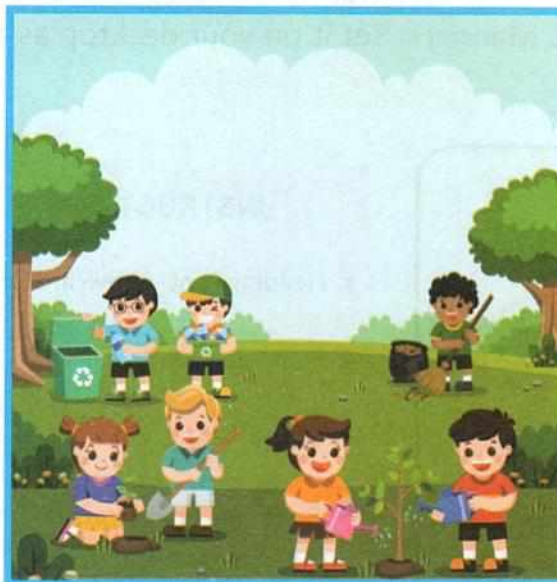
## Happy Teacher's day



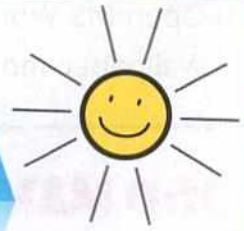
### INSTRUCTIONS

- ◆ Heading Font - Skinny
- ◆ Font Size - 36
- ◆ Colour - Blue
- ◆ Text Font - Arial Rounded MT Bold
- ◆ Font Size - 16
- ◆ Text Colour - Green and Red

**Project 3:** Open MS Word and make a beautiful poster on **Clean India**.



# CLEAN INDIA



Clean up the Clutter,  
Shun the Litter.  
Join each one of us,  
To make **INDIA** Glitter!

**Project 4:** Open MS Word and make a beautiful poster on the **Important Factors to be Disciplined**.



## IMPORTANT FACTORS *to be Disciplined*



- ◆ Wake up early in the morning.
- ◆ Do not be late to school.
- ◆ Do not make the classroom dirty.
- ◆ Speak politely.
- ◆ Be obedient to your elders.
- ◆ Do your homework regularly.

### HINTS

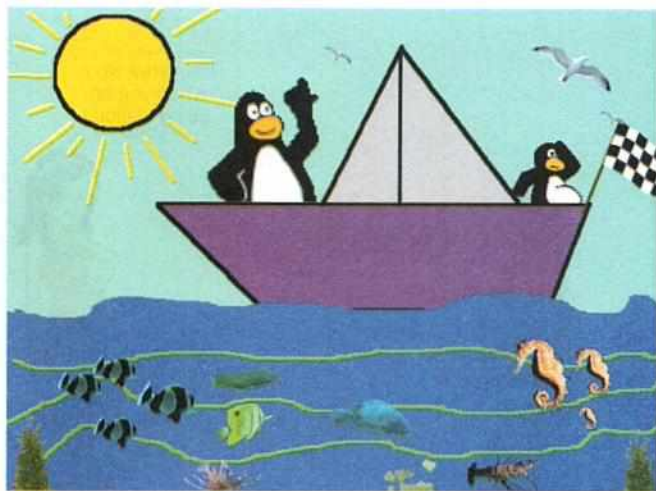
- Use Text Effects from the Font group to add a reflection to the text.
- Download the desired pictures from the Internet by selecting the **Insert > Online Pictures** option.



**Project 1:** Draw a **Forest Scene** in Tux Paint.



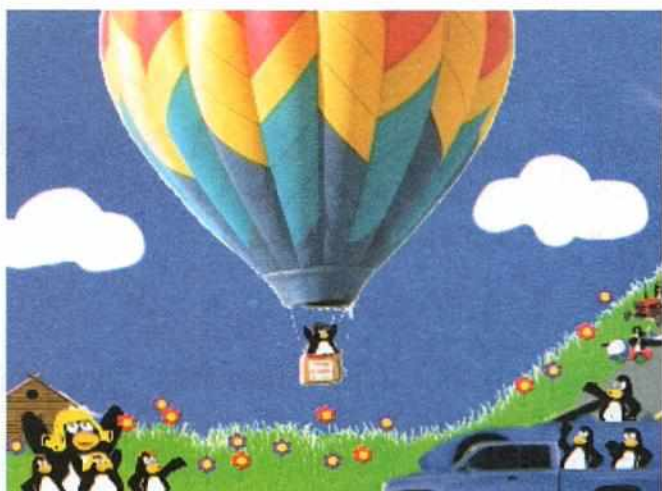
**Project 2:** Create a beautiful **Sea Scenery**.



**Project 3:** Draw the **Road View** by using the tools that you learnt in Tux Paint.



**Project 4:** Create the **Hot Air Balloon Scenery**.



**HINTS**

We used various tools, like Lines tool, Paint tool, Stamp tool, Brush tool, and Magic tool to make these paintings in Tux Paint.

**Project 1:** Create a project and let the Sprite say the following points in voice bubbles. Add movement to the Sprite and change its costume with each new sentence.



### HABITS OF HIGHLY EFFECTIVE STUDENTS

- Plan your work. when you are going to study.
- Set a regular time and place to study.
- Never put off your study session due to lack of interest in the subject.
- Start with the most difficult subject.
- Study with a focused mind and avoid distractions.
- Avoid rote learning but study with understanding.
- Rewrite the important key points in your own words.

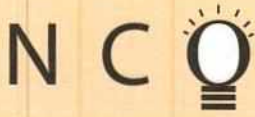
**Project 2:** Create a project on **Steps to prevent Global Warming** in Scratch. Add movement to the Sprite and change the costume with each new sentence.



## Steps to prevent Global Warming

- ◆ Plant more trees.
- ◆ Conserve water.
- ◆ Use eco-friendly fuels, like solar energy, CNG, etc.
- ◆ Use recyclable things.
- ◆ Turn off lights when not in use.
- ◆ Replace bulbs with CFLs and LEDs.

# NATIONAL CYBER OLYMPIAD



Total Questions : 35

Time : 1 hr.

SOF NATIONAL CYBER OLYMPIAD

## SYLLABUS

**Section 1 :** Patterns, Analogy and Classification, Coding-Decoding, Mirror Images, Embedded Figures, Alphabet Test, Ranking Test, Grouping of Figures, Figure Matrix, Geometrical Shapes, Days and Dates & Possible Combinations.

**Section 2 :** Fundamentals of Computer, General Information about Computers, Storage Devices, Parts of Computer, Uses of Computer, Input and Output Devices, Introduction to Internet, MS-Paint, Introduction to MS-Word (Opening, Closing, Saving and Printing a Word document, Components of MS-Word window, Editing commands like Cut, Copy, Paste, Undo and Redo, Moving in a document using Home and End Keys), Latest Developments in the field of IT.

**Section 3 :** Higher Order Thinking Questions - Syllabus as per Section 2.

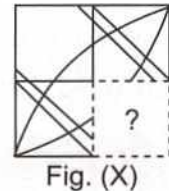
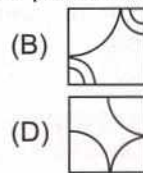
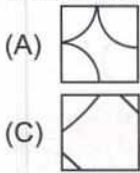
Questions are based on Windows 7 and MS-Office 2010.

PATTERN & MARKING SCHEME			
Section	(1) Logical Reasoning	(2) Computers & IT	(3) Achievers Section
No. of Questions	5	25	5
Marks per Ques.	1	1	2

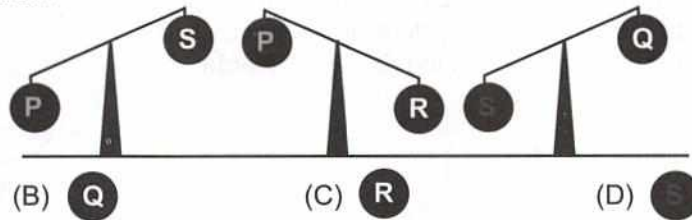
Visit [www.sofworld.org](http://www.sofworld.org) for more details.

## LOGICAL REASONING

1. Which of the following options will complete the pattern in Fig. (X)?



2. Which is the heaviest ball?



3. If  $\oplus$  is coded as +,  $\odot$  is coded as -,  $\perp$  is coded as > and  $\bar{\cap}$  is coded as <, then which of the following is NOT true?



## COMPUTERS AND INFORMATION TECHNOLOGY

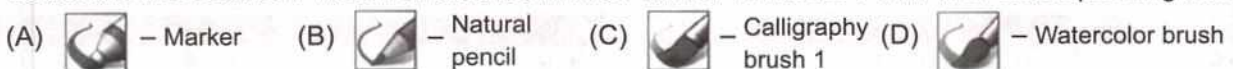
4. Which of the following icons is used to draw circle in MS-Paint of Windows 7?




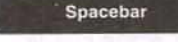

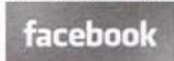




5. Which of the following is an input device?



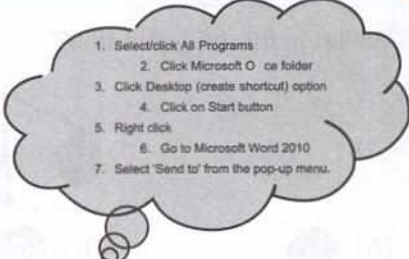
6. Select the INCORRECT match of brushes in MS-Paint of Windows 7 with their corresponding names.



7. Select the odd one out.  
 (A) Google (B) Bing (C) Yahoo (D) Internet Explorer
8. Which of the following statements about a computer is NOT correct?  
 (A) You can watch movies on it. (B) You can solve your sums on it.  
 (C) You can play games on it. (D) You can cook food with it.
9. The key that erases characters towards the left is \_\_\_\_\_.  
 (A)  (B)  (C)  (D) 
10. Find the odd term out.  
 (A) Keyboard (B) Mouse (C) Monitor (D) Joystick
11. The control unit of the computer controls the \_\_\_\_\_.  
 (A) Working of the computer keyboard (B) Flow of electricity within the computer  
 (C) Flow of data in the computer (D) Performance of all arithmetic and logical operations
12. MS-Paint is a Windows program that is used for \_\_\_\_\_.  
 (A) Calculations (B) Writing letters  
 (C) Drawing purposes (D) Preparing presentations
13. Which of the following is NOT an example of search engine?  
 (A)  (B)  (C)  (D) 

### ACHIEVERS SECTION

14. Alia wants to create a shortcut for MS-Word 2010, so that she can quickly access it. But she does not know the correct sequence of steps required to follow to create a desktop shortcut. Help her by rearranging the given steps in the CORRECT order.  
 (A) 4 > 1 > 2 > 6 > 5 > 7 > 3  
 (B) 1 > 2 > 4 > 7 > 3 > 6 > 5  
 (C) 4 > 3 > 2 > 7 > 1 > 5 > 6  
 (D) 6 > 1 > 5 > 7 > 2 > 4 > 3

- 
1. Select/Click All Programs
  2. Click Microsoft Office folder
  3. Click Desktop (create shortcut) option
  4. Click on Start button
  5. Right click
  6. Go to Microsoft Word 2010
  7. Select 'Send to' from the pop-up menu.

15. Identify the following.
- It is a device that converts textual data into spoken sentences.
  - It is used to read the text information to blind persons.
  - It translates the entered text into spoken words.



SPACE FOR ROUGH WORK

### ANSWERS

NCO 1. (C) 2. (C) 3. (D) 4. (B) 5. (B) 6. (C) 7. (D) 8. (D) 9. (A) 10. (C) 11. (C) 12. (C) 13. (B) 14. (A) 15. (A)