



### Hardware and Software

### LEARNING OUTCOMES

In this chapter, you will learn about :

• What is Hardware?

What is Software?

A computer system is made up of two parts— Hardware and Software.

#### WHAT IS HARDWARE?

The physical parts of the computer that we can touch or feel are called hardware. There are some computer parts such as the keyboard, mouse and monitor which you can see. However, there are some other components of computer which we cannot see. They are present inside the CPU box.

The hardware components that make a computer system are as follows:

- Input devices
- Output devices
- Components inside the CPU box

#### **Input Devices**

These devices help to enter data into the computer. Some of the common input devices are as follows:

Keyboard: A keyboard is the most commonly used input device. We can enter or type data and instructions into the computer by pressing various keys on the keyboard. The letters on





the keyboard are unorganised. The keyboards generally used are also known as **QWERTY** keyboards. The keys on the keyboard are broadly divided into the following groups :

- Alphabet keys
- Number keys
- Special keys

- Function keys
- Navigation keys

Mouse: Mouse is also a commonly used input device. It is used to select and open things on a computer with the help of a mouse pointer. As we move the mouse, the pointer also moves in the same direction. A mouse has two or more buttons that perform



different functions. We can perform four different actions using a computer mouse.

Single-click

Double-click

Right-click

Drag and drop

Scanner: A scanner reads images, pictures, documents, etc. directly and gives the same as input to the computer. There are various types of scanners.



Flatbed scanner



Sheet-fed scanner



Drum scanner



Handheld scanner



Slide scanner

Trackball: A trackball can be used in place of a mouse. It is similar to a mouse. It has a ball on its top which is rolled by fingers to move the cursor around the screen. A track ball requires less space than a mouse for operation because the whole device is not moved for moving the cursor.







Microphone: A microphone is used to input sound

into a computer. It helps in recording our voice or other sounds.

Joystick: A joystick is used to move objects or a pointer on the screen. Joysticks are

popularly used for playing video games.

Light Pen: A light pen is used for drawing



images and selecting objects on the display screen by directly pointing to the objects with the pen. It is mostly used by engineers, architects, designers, etc. It is used to select an option on the screen by simply pointing at it.

BCR: BCR stands for Barcode Reader. It is used to read barcodes. A barcode is a set of lines of different thicknesses that represent a number. A barcode reader recognizes the information from the thickness and spacing of bars and sends the information into the computer system. Nowadays, we find barcodes on many products.



Local Knowledge

### Fact to Know

An **Optical Mark Reader (OMR)** is an input device which read marks made by pencil on a printed form and transfers these into a computer.

MICR: MICR stands for Magnetic Ink Character Recognition. It is used by the banking industry for faster processing of the large volume of cheques. The number codes at the bottom of the cheques are written using a special ink called magnetic ink. MICRs are used to read these characters.





#### **Output Devices**

These devices show the result after computer completes the work. Some of the common output devices are as follows:

Monitor: A monitor is the most commonly used output device. It is known as the VDU (Visual Display Unit). It is similar to a TV screen and can display both text and pictures. The images that we see on a monitor are made up of tiny dots called pixels. The image's clarity depends on the number of dots on the screen. The output that we get on a monitor is called soft copy. There are three types of monitors. They are:



Cathode Ray Tube (CRT)



Liquid Crystal Display (LCD)



Light Emitted Diode (LED)

Printer: A printer transfers the information that you see on a monitor onto a paper. The printed information on the paper is called the printout. The output given by a printer is also known as hard copy. Some printers can print only in black and white while others can print in any colour.

Printers can be classified into two broad categories:

impact printers and non-impact printers.

Impact Printers: It is a printing device in which 0 the printing surface strikes the paper. These printers are slow, noisy and are not used for Dot-matrix Printer high-quality printing. Ball printers and dotmatrix printers are examples of impact printers.

Non-impact Printers: It is a printing device in 0 which the images are created without being struck onto the paper and hence generate less





Laser Printer



noise. These printers are faster than impact printers. Laser printers and inkjet printers are examples of non-impact printers.

### Fact to Know

Local Knowledge

The printing speed of the printer is measured in **CPS**, i.e. Character **P**er **S**econd or **PPM**, i.e. **P**ages **P**er **M**inute.

Speakers: Speakers are used to play music and sound on a computer.

Headphones: The headphones are known as earphones. They are used to listen to sound or music from a computer without disturbing other people.

Plotter: A plotter is a special type of printer used for producing high quality graphs or diagrams. Plotters are used by engineers, architects and map-makers to print plans of buildings, etc.

Projector: Projector displays the output on a screen. It uses whiteboard, a white cloth or even a plain white wall as a screen to show output. It is used for teaching, giving presentations, etc.

#### **Components Inside a CPU Box**

The various components present inside a CPU box are as follows:

#### **Motherboard**

It is the main board. It allows all the parts to receive power and communicate with one another.

#### **Processor or CPU**

It is the brain of the computer. It processes the data and instructions given by the input devices, then it sends the result of processing to the output devices. It is present on the motherboard.

#### **SMPS**

SMPS stands for Switched Mode Power Supply. It converts the incoming electricity into proper voltage and supplies it to other parts present inside the CPU box.

#### **Memory Chips**

Memory chips are one of the important components of computer hardware. There are two types of memory chips present on the motherboard RAM and ROM. This component of the CPU stores data and information permanently or temporarily while working on the computer.



#### **Disk Drives**

The disk drives in a computer are the devices that let you store and retrieve data and applications on and from storage devices such as the hard disk, CD and DVD.

#### **Ports**

Ports are used to plug various devices such as the mouse, keyboard or printer to the computer system. These days, most of the devices are connected to the computer through USB (Universal Serial Bus) ports.

#### WHAT IS SOFTWARE?

A computer is just a machine. The hardware components cannot do anything by themselves. So, instructions have to be given to the computer to get some work done by it. A group of instructions given to the computer to make it work is called software.

Unlike hardware, we cannot see or touch the software.

Different types of software are used for different types of work. Software can be classified into the following categories:

#### **System Software**

System software is a collection of programs that controls the overall operation and working of the computer system. It can be classified into three categories: Operating System, Language Processors and Utility Software.

1. Operating system: It controls the overall activities of a computer. It acts as an interface between the user and the hardware and enables them to work together. Various types of operating systems are Windows, UNIX, LINUX, Mac, etc.



#### **Functions of an Operating System**

The main functions of an operating system are:

- It controls the working of all input and output (I/O) devices.
- It provides security by means of passwords to prevent misuse of a computer.



- It lets us create and manage files and folders for storing information in a computer efficiently.
- It allocates memory to various programs whenever required. It also frees the memory when it is not in use.
- 2. Language processor: Software is written by computer programmers using computer languages. There are many computer languages such as C, C++ and Java. The programs written in these languages cannot be directly understood by a computer.

A computer is an electronic device which can understand only the machine language which consists of 0's and 1's.

A language processor converts a program written in a computer language into the machine language so that it can be understood by a computer.

#### There are three types of language processors namely:

- AssemblerInterpreterCompiler
- 3. Utility software: The primary job of utility software is to perform maintenance on a computer system in order to ensure its smooth functioning.

Some of the examples of utility software are Disk Cleanup and Antivirus software.

#### **Application Software**

Application software is a set of programs, developed by programmers in order to perform specific tasks. They may be installed on a computer depending upon the user's requirements. Application software can further be divided into two categories: General Purpose Application Software and Specific Purpose Application Software.

1. General purpose application software: General purpose application software is developed keeping in mind the general needs of a large number of people. Some of the examples of such software are:



**Word Processing software :** This software helps 0 us to create text-based documents like letters, stories, essays, etc. We can edit, format and





print the text and graphics in a document. Examples of word processing software are MS Word, OpenOffice.org Writer, etc.

**Spreadsheet software :** This software helps us 0 to perform calculations and analyze data in the manner. Examples of spreadsheet software are MS Excel, OpenOffice.org Calc, etc.





Presentation software: It is used to present an idea or concept 0 lively. This software helps us to create and display slides on a computer for educational and business purposes. Examples of presentation software are MS PowerPoint, OpenOffice.org Impress.

**DBMS**: DBMS stands for Database Management System. This 0 software helps us to arrange and store a large amount of information in an organised way. Examples of Access, DBMS software are MS Oracle, OpenOffice.org Base, etc.

**DTP**: DTP stands for Desktop Publishing. This 0 software is used for creating designs and layouts of books, newspapers, brochures, magazines, etc. Examples of DTP softwares are Adobe Indesign, QuarkXPress, etc.





Graphics software: This software allows us to 0 create and edit images. Examples of graphics software are Adobe Photoshop, CorelDraw, etc.





Multimedia software: This software lets us combine 0 images, text, sound, animations and videos to create an interactive software. An example of multimedia software is Adobe Flash.





2. Specific purpose application software: Specific purpose application software is called customised software. This type of software is developed keeping in mind the specific requirements of an organisation or an individual. Examples of this type of software are billing systems used in supermarkets, reservation systems used in airports and railway stations, payroll systems and stock systems used by organisations, etc.

# Recollect the Chapter

- Hardware means the physical parts of the computer that you can touch or feel.
- The devices through which we enter data and instructions into the computer are called input devices.
- The devices through which we get the output from a computer are called output devices. •
- The various components present inside a CPU box are: motherboard, processor or CPU, SMPS, ports, disk drives and memory chips.
- Software is a set of instructions that tells a computer how to perform a specific task. Software is also referred to as a set of programs. Software is necessary to make the computer hardware work.



The CD / DVD drive is meant only for CDs and DVDs. Inserting any other object might damage it.



Α.	Tick	<b>(</b> / )	the	correct	answer	į
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1.	Which of the following is not an output device?					
	(a) Graphic Tablet	🔘 (b) Plotter	🔘 (c) Printer	$\bigcirc$		
2.	sof	tware helps us to create te	ext-based document	.S		
	(a) Presentation	(b) Word Processing	🔘 (c) DBMS	0		
3.	Which of the follow	ving is not an input device?	?			
	(a) BCR	(b) Biometric sensor	🔘 (c) Projector	$\bigcirc$		
4.		wing components present eive power and communication				
	(a) Processor	🔘 (b) Motherboard	🔘 (c) Ports	0		
		12 Computer-3				



В.	Writ	e 'T' for true and 'F' for false in the given circles :
	1.	Plotters are used by engineers, architects and map-makers to print plans of buildings, etc.
	2.	Software means the physical parts of the computer that we can touch or feel.
	3.	SMPS processes the data and instructions given by the input devices, then it sends the result of processing to the output devices. $\bigcirc$
	4.	BCR is used by the banking industry for faster processing of the large volume of cheques.
C.	Fill i	in the blanks :
	1.	is a set of instructions that tells a computer how to perform a specific task.
	2.	A can be used in place of a mouse.
	3.	and supplies it to other parts present inside the CPU box.
	4.	A is a special type of printer used for producing high quality graphs or diagrams.
D.	Ansv	wer the following questions :
	1.	State the difference between impact and non-impact printers.
	2.	What is the role of ports and SMPS inside the CPU of a computer system?
	3.	What do you mean by language processor?
	1	What is the difference between bordwere and coftwere?
	4.	What is the difference between hardware and software?
(re		What is the difference between hardware and software?  Art Integration
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Project Time Practical Skills

Prepare a list of software installed in your computer at home. Classify them as system software and application software. Further, classify the application software as general purpose application software and specific purpose application software.

### Experience-Based Questions

Higher Order Thinking Skills

- 1. Tanu wants to plug the mouse and the keyboard to her computer system. Which component of the CPU box will she use to connect them?
- 2. Aarohi works in a publishing company. She creates designs and layouts of books. Which software is used by her?

### Think & Answer

Life Skills & Values

If one of your friend is pulling the wires of the mouse then what will you do?

### Activity Work

Cutting & Making Skills

- 1. Prepare a collage on 'Hardware components that make up a computer system'.
- 2. Prepare a project file on 'Computer Software'.

Discussion

Communication

Find out how webcam made the conversations more interesting. Discuss in class.

#### Teacher's Help

- Demonstrate the uses of hardware components available in the computer lab to students.
- The teacher should explain to the students the concept of software by giving suitable examples of the programs used on a computer.







### Windows 10

### LEARNING OUTCOMES

#### In this chapter, you will learn about :

- Operating System
- Features of Windows 10
- Desktop

- Versions of MS Windows
- Starting Windows 10
- Components of a Desktop

#### **OPERATING SYSTEM**

An operating system is a very important part of a computer. A computer is of no use without an operating system. It is a software that tells a computer how to work. It controls the working of different hardware devices attached to the computer and also keeps a record of all the programs onto which you work.

Microsoft Windows, Linux and Macintosh OS are some of the examples of operating system.

#### **VERSIONS OF MS WINDOWS**

MS Windows has many versions. Some of the popular versions of Windows are Windows 98, Windows XP, Windows Vista, Windows 7, Windows 8, Windows 10 and Windows 11. Windows 11 is the latest version of Windows. We will learn Windows 10 in this chapter.



#### **FEATURES OF WINDOWS 10**

The features of Windows 10 are as follows:



- The Start Menu was removed from the desktop in Windows 8, but it is back in Windows 10.
- It includes the best features of Windows 7 and Windows 8.
- Windows 10 comes with great built-in Store that helps you stay in touch, and it has many apps, songs, games and entertainment than ever before—many free.
- It is more interesting and has many new themes, icons and pictures.
- It has a new search tool called Cortana. It will help you find things and get things done easily. The information can be searched by talking to Cortana.
- Windows 10 has the Task View button to the right of the Search button. It will show you all the opened windows on your desktop.

#### **STARTING WINDOWS 10**

As we switch on the computer, the Windows operating system gets loaded into the memory automatically. While loading, the picture of Windows flag appears on the screen. After few seconds, the screen appears.

In the same way, a computer checks if we have permission to use the computer or not. The

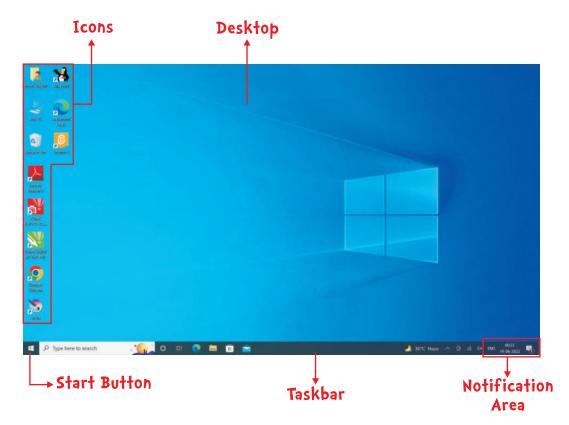


computer compares the username entered by us, with the names of the users that have been stored on it.

Each username has a key which is called a password.

After entering the correct username and password, welcome screen appears. After the welcome message, we will see a screen called desktop given ahead.





#### **DESKTOP**

The first screen that appears after loading the operating system with labelled pictures on it is called Desktop.

The desktop is just like your study table, where we keep all useful and frequently used things like pens, pencils, notebooks, etc. In the same way, a computer's desktop contains all the useful and frequently used programs.

#### **COMPONENTS OF A DESKTOP**

#### **Icons**

The small labelled pictures on the desktop are called icons. The icons may represent a file, folder or a program. Icons are used to open specific programs. To open any icon, just double-click on it.





Some of the commonly used icons on the desktop are :

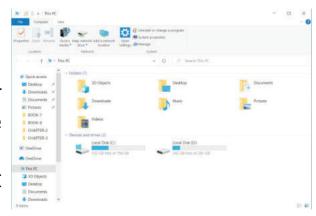
This PC

Recycle Bin



### This PC

A computer stores the data in Hard disk, CD, DVD, Pen drives or any other storage devices and this data can be accessed from the icon This PC. When we double-click on this icon, we will get the This PC window like this:



The different icons can be seen within the computer window. In the figure given, Local Disk (C), New Volume (D), and New Volume (D), and New Volume (E), icons show the space on the hard disk divided into different sections called partitions. They are usually denoted by letters such as C:, D:, E:, F:, etc. to store and access data from computer.

### Recycle Bin 🧕

The Recycle Bin icon is just like a dustbin in our house. It keeps the file or a folder we deleted till we empty it.

If we delete any file or a folder by mistake, then we can restore it from the Recycle Bin. Double-click on the Recycle Bin icon to open it and then right-click on the file or folder we want to restore. Then, select the Restore option from the shortcut menu. But, if we delete the files or folders from the Recycle Bin, these will be deleted permanently from the computer.



### Fact to Know

Local Knowledge

To delete a file or a folder permanently, select it and press the Shift + Delete keys together.

#### **Taskbar**

This is the bar at the bottom of the screen. It contains the start button



on the left corner and clock on the right corner. It also shows the program that is being used.



### Start Button **#**

The Start button appears at the leftmost corner of the taskbar. It is known as the key to use windows. When we click on the Start button, the list of options or programs called Start menu appears.

The Start menu of Windows 10 is the combination of Windows 7 Start menu and Windows 8 Start screen. On the left of the Windows 10 Start menu, the middle shows section the most and many recent used added apps and programs. can also find File Explorer, Settings and can



perform common tasks, like starting a program, shutting down the computer, searching a file or a folder, etc.

To show all the apps installed in a system, select the All apps option. All the installed apps or programs are shown here in an alphabetical order.

Whereas, on the right side of the Start menu, we have Windows 10 Tiles. It displays information that are useful at a glance without opening an app. For example, the Weather tile displays the forecast while the News tile displays headlines. We can rearrange, resize and move these tiles to make them work better for you.

### Fact to Know

Local Knowledge

We can also press the Windows key on the keyboard to open Start menu.

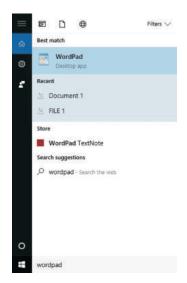


#### **Search Box**

The Search box is used to search a program or app on the computer quickly. For example, to open WordPad, we can type the word Wordpad in the Search box.

#### Task View Button

The Task View button is present to the right side of the search box. It is a quick way to see every window on our desktop at once, and then we quickly select the one we want to work with.



### Fact to Know

Local Knowledge

To activate the **Task View** button, press the **Windows** + **Tab** keys together.

#### **Notification Area**

It is present at the right corner of the taskbar. It has a clock and some small icons. It tells the status and important notifications about the programs running on your computer.

At the end of the notification area, there is a Peek button. When you click on this button, it minimizes all the open windows and shows the desktop.

### Fact to Know

Local Knowledge

We can also minimize the opened windows by pressing the **Windows + D** keys together.

#### To move the taskbar, follow these steps:

- Step 1. Click on the blank area of the taskbar.
- Step 2. Hold down the left mouse button, and then drag the mouse pointer to the place on the screen where you want to move the taskbar. For example, you may want the taskbar to be



positioned vertically on the right side of your screen.

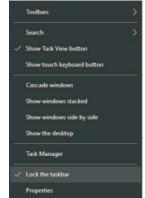
After you move the mouse Step 3. pointer to the position on your screen where you want the taskbar. release the mouse button.



The taskbar will be moved to the desired position. If the taskbar of your computer is not moving, it means it is locked. To unlock the taskbar, follow these steps:

- Right-click on the blank area of the taskbar. 1.
- Select the Lock the taskbar check mark option from the shortcut menu to hide the check mark.





# Recollect the Chapter

- An operating system is a set of programs which manages all the jobs of a computer and make it run. It tells a computer how to work.
- The first screen that appears after loading the operating system with labelled pictures on it is called Desktop. The desktop consists of icons and taskbar.
- The small labelled pictures on the desktop are called icons. The icons may represent a file, folder or a program. Icons are used to open specific programs.
- A file is a collection of data. Each file has a different name and is represented by different icon. **()**
- A folder is just like a bag. It is used to store a group of files. We can organize your work by • keeping similar files in one folder.
- The Start button appears at the leftmost corner of the Taskbar. When we click on the Start button, the list of options or programs called Start menu appears.

### Computer MANNER



It is a good idea to keep the monitor, CPU and the keyboard covered while the computer is not in use. Good quality covers protect them against dust and dirt, enabling them to function properly for a long time.





Α.	Tick	Tick (✓) the correct answer :						
	1.	A is a collection of data.						
		(a) Folder (b) Icon (c) File						
	2.	The icon keeps the file or a folder we deleted till we empty it.						
		(a) Recycle Bin (b) This PC (c) None of these						
	3.	Which of the following is the latest version of Windows operating system?						
		(a) Windows 8 (b) Windows 10 (c) Windows 11 (						
	4.	'''						
		(a) Peek button (b) Notification area() (c) Start button ()						
В.	Write 'T' for true and 'F' for false in the given circles:							
	1.	To open any icon, just single-click on it.						
	2.	We cannot move the taskbar to any of the four sides of the						
	_	screen.						
	3.							
	4.	The Start menu of Windows 10 is the combination of Windows 7 Start menu and Windows 8 Start screen.						
C.	Fill	in the blanks :						
	1.	An is a set of programs which manages all the jobs of a computer and make it run.						
	2.	Windows 10 has a new search tool called						
	3.	A is used to store a group of files.						
	4.	At the end of the notification area, there is a						
D.	Ans	wer the following questions:						
	1.	What do you mean by an operating system?						
	2.	Define desktop.						
	3.	What are icons?						
	4.	Write any two features of Windows 10.						



Draw and colour the logo of Windows 10 on a chart paper.

Project Time Practical Skills

#### Visit your computer lab and perform the following tasks:

- Double-click on the This PC icon and see the contents of the hard disk.
- Delete an unwanted file and then restore it from the Recycle Bin.
- Change the position of the taskbar.
- Lock and unlock the position of the taskbar.

### Experience-Based Questions

Higher Order Thinking Skills

- 1. Piya wants to move the taskbar to the top of the screen. But, she is not able to move it. Suggest her a way to move the taskbar.
- 2. Arushi is working on many applications. She wants to see every window on her desktop at once, and then quickly selects the one she wants to work with. Suggest her a button to complete her task.

### Activity Work

Cutting & Making Skills

Find out some more features of Windows 10 and prepare a chart on 'Features of Windows 10'.

Discussion

Discuss the different features of Windows 10 in class in detail.

#### Teacher's Help

• The teacher should give enough practice to the students on how to restore files from Recycle Bin and how to change the position of the taskbar.





## Working with MS Word 2019

### LEARNING OUTCOMES

#### In this chapter, you will learn about :

- Features of MS Word
- Creating a New Document
- Selecting Text in Word
- Changing the Style, Size and Colour of the Text
- Closing a Document in Word

- Starting MS Word 2019
- Entering Text in Word
- Deleting Text in Word
- Saving a Document in Word
- Opening an Existing Document in Word

MS Word is one of the most popular products of Microsoft company. It is a word processing program. It is used to write letters, stories, poems, invitations, etc.



#### **FEATURES OF MS WORD**

MS Word is a part of Microsoft Office package. Some of the features are as follows:

- (i) We can type a document and save it.
- (ii) We can edit the document easily.
- (iii) We can use the saved document in future.
- (iv) We can check the spelling and grammar.
- (v) We can insert pictures and change the way text appears.

#### **STARTING MS WORD 2019**

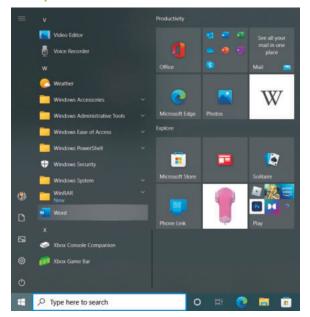
To start MS Word 2019, follow these steps:

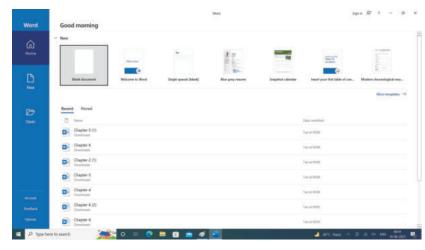
- Step 1. Click on the Start button.
- Step 2. Click on the Word.



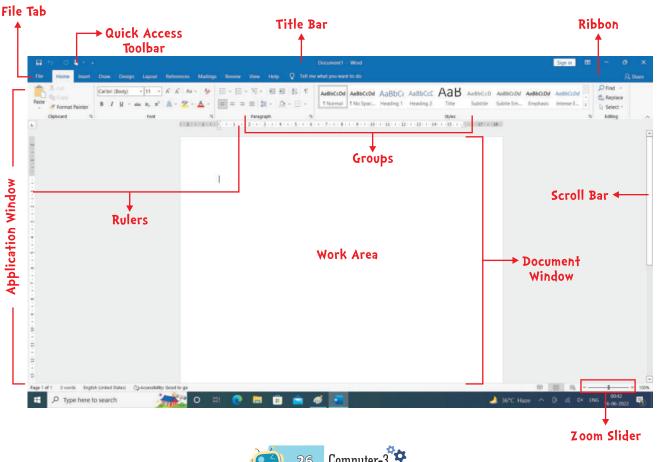
When we open Word 2019, the Word Start Screen will appear. From here, we'll be able to create a new document, choose a template, or access your recently edited documents.

Step 3. Click on the Blank document to create a new document.





Microsoft Word window will appear, named Document1. The various parts of Word 2019 window are as follows:





#### Ribbon

A Ribbon is designed to respond to your current task. It contains multiple tabs: File, Home, Insert, Draw, Design, Layout, References, Mailings, Review, View and Help, each with several groups of commands. You will use these tabs to perform the most common tasks in Word.

#### **Quick Access Toolbar**

It is present at the left-most corner of the Word window. It contains frequently-used commands. By default, it shows the Save, Undo and Repeat commands. We can add other commands depending on our preference.

- Save button is used to save your document.
- Undo button is used to undo the previous action.
- Repeat option is used to repeat the previous action.

#### **Collapse the Ribbon Button**

We can collapse the ribbon if we need to see more of the document we are creating. To collapse the ribbon, click the arrow at the bottom right. When we click on this button, it will minimize the ribbon, only the tab names get displayed.

#### **Title Bar**

It is present at the top of the Word window. It shows the name of the document followed by the program name. There are five buttons on the right side of the title bar. They are Microsoft Word Help, Ribbon Display Options, Minimize, Restore Down/Maximize and Close.

- We can search for online help or from the local computer using the Microsoft Word Help button.
- We can choose to minimize the Ribbon if we find that it takes up too much screen space using the Ribbon Display Options button.



- The Minimize button reduces a window to a small icon on the taskbar.
- The Maximize button displays the full-screen view of the window.
- The Restore Down button appears when the window is maximized. It changes the window to its original size.
- The Close button is used to close the window.

#### Work Area

It is the area where we can type text, insert pictures, tables, etc. A cursor is present in the work area which shows the position at which text appears when we type.

#### **Dialog Box Launcher**

It is the small icon that appears in some groups. If we click on this icon, a dialog box related to that group opens. It may contain many options that we can select as per our choice.

#### **Scroll Bars**

By default, the Vertical scroll bar and Horizontal scroll bar are shown. We can hide scroll bars if we want to display more of the document.

- The Vertical scroll bar is present to the right of the document window. We can drag the vertical scroll bar up and down to see parts of a document that are currently not visible.
- The Horizontal scroll bar is present at the bottom of the document window. We can also drag the horizontal scroll bar left and right.

#### **Rulers**

The Ruler makes easier to adjust our document with precision. If we want, we can hide the Ruler to create more screen space. There are two rulers: Horizontal ruler and Vertical ruler.

• The Horizontal ruler is present at the top of the document window. It is used to set the left and right margins.



 The Vertical ruler is present at the left of the document window. It is used to set the top and bottom margins.

#### Status Bar

It appears at the bottom of the Word window. It provides information such as the current page number, number of pages and words in the document on its left side. The View button and the Zoom slider are present on its right side.

- The View buttons are a feature that lets us change how the document appears. We can choose to view our document in Read Mode, Print Layout, or Web Layout. These views can be useful for various tasks, especially if we're planning to print the document.
- The Zoom slider is available for zooming in and out of documents quickly and easily.

### Fact to Know

Local Knowledge

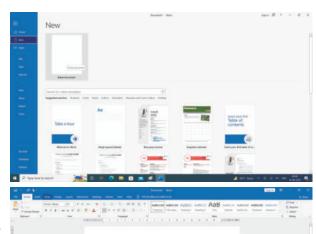
On clicking the File tab, the Backstage view appears. The Backstage view gives us various options for saving, opening a file, printing and sharing your document.

#### **CREATING A NEW DOCUMENT**

To create a new document, follow these steps:

- Step 1. Click on the File tab. The Backstage view will appear.
- Step 2. Select New option.
- Step 3. Click on the Blank document.

  A new blank document window will appear on the screen.



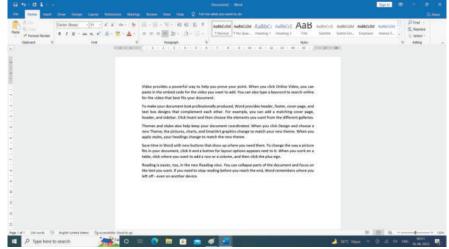


We can press the **Ctrl+N** keys to create a new document.

#### **ENTERING TEXT IN WORD**

The insertion point or cursor is the blinking vertical line in our document. It indicates where we can enter text on the page. When a new blank document opens, the insertion point is located in the top-

left corner of the page. Do not press the Enter key when you reach at the end of the line. As you type the text, the insertion point automatically shifts to the next line as needed. This feature is called Word Wrap. Press the Enter key only to start a new line.



We can insert text to an existing document. Use the mouse to move the insertion point to a specific place in our document. Simply click the location in the text where we want to insert text. Now start typing the text. The existing text which is placed after the cursor will be shifted to the right side and new text will be inserted.

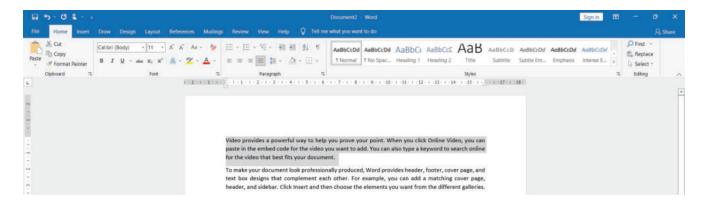
#### **SELECTING TEXT IN WORD**

To select text in Word, follow these steps:

- Step 1. Place the cursor before the text you want to select.
- Step 2. Now, keeping the mouse button pressed, drag the mouse over the text to be selected. Then, release the mouse.

  You have selected the text. A highlighted box will appear over the selected text.





#### **DELETING TEXT IN WORD**

To delete the text in Word, follow these steps:

- Step 1. Select the text you want to delete.
- Step 2. Press the Delete or Backspace key.

The selected text will be deleted.

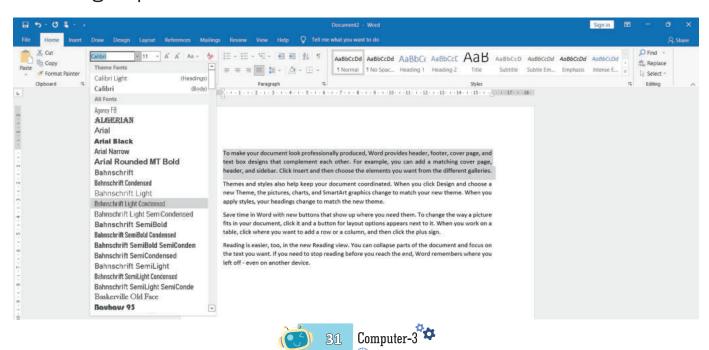
#### CHANGING THE STYLE, SIZE AND COLOUR OF THE TEXT

We can change the style, size and colour of the text.

#### **Changing the Font of the Text**

To change the font of the text, follow these steps:

- Step 1. Select the text.
- Step 2. Click on the down arrow next to the Font box in the Font group on the Home tab.



Step 3. Select the desired font.

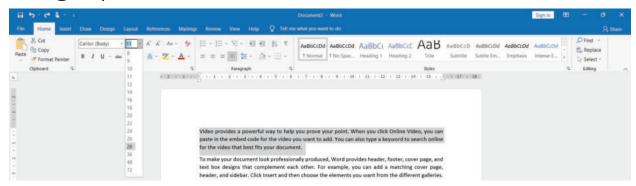
Notice that the font of the selected text changes.

Always choose a font which is clear and easy to read. It is not easy to read, if you mix different types of fonts in the same sentence.

#### **Changing the Size of the Text**

To change the font size of the text, follow these steps:

- Step 1. Select the text.
- Step 2. Click on the down arrow next to the Font Size box in the Font group on the Home tab.



Step 3. Select the desired font size.

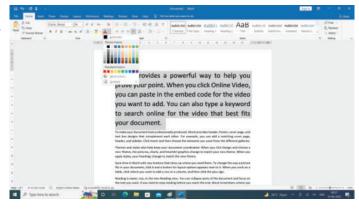
The size of the selected text will be changed.

#### **Changing the Colour of the Text**

To change the colour of the text, follow these steps:

- Step 1. Select the text.
- Step 2. Click on the down arrow next to the Font Color option in the Font group on the Home tab.
- Step 3. Select the desired font colour.

The colour of the selected text will be changed.

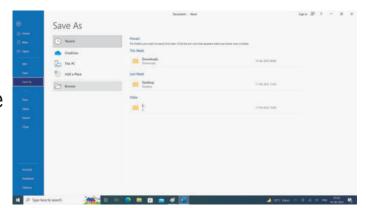




#### SAVING A DOCUMENT IN WORD

To save a document, follow these steps:

- Step 1. Click on the File tab. The Backstage view will appear.
- Step 2. Select the Save option.
- Step 3. Select the This PC option.
- Step 4. Click on Browse button.
- Step 5. Select the location where you want to save your file.
- Step 6. Type the file name.
- Step 7. Click on the Save button.



### Fact to Know

Local Knowledge

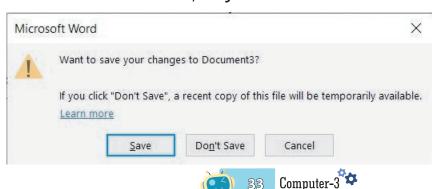
We can press the **Ctrl+S** keys to save the file in Word 2019.

The **Save As** command is used to create a copy of a document while keeping the original. When we use Save As, we will need to choose a different name and/or location for the copied version.

#### **CLOSING A DOCUMENT IN WORD**

To close a document, follow these steps:

- Step 1. Click on the File tab. The Backstage view will appear.
- Step 2. Select the Close option. Word will ask to save the changes, if there are changes in the document that have not been saved.
- Step 3. Click on the Save, if you want to save the changes.



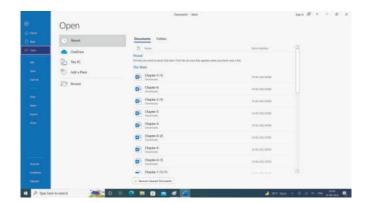


We can press the **Ctrl** + **W** keys together to close a document in Word.

#### **OPENING AN EXISTING DOCUMENT IN WORD**

To open an existing document, follow these steps:

- Step 1. Click on the File tab. The Backstage view will appear.
- Step 2. Select the Open option.
- Step 3. Select the This PC option.
- Step 4. Click on Browse button.
- Step 5. Select the file.
- Step 6. Click on the Open button.



### Fact to Know

Local Knowledge

We can press the Ctrl + 0 keys together to open an existing document in Word.



- Microsoft Word is the most popular word processing software.
- Microsoft Word (MS Word) is a part of Microsoft Office package. It is a word processing application that allows you to create a variety of documents like letters, flyers and reports.
- The Quick Access Toolbar is present at the left-most corner of the Word window. It contains frequently-used commands. By default, it shows the Save, Undo and Repeat commands.
- A Ribbon is designed to respond to our current task. It contains multiple tabs File, Home, Insert, Design, Page Layout, References, Mailings, Review and View.
- Status bar appears at the bottom of the Word window. It provides information such as the current page number, number of pages and words in the document on its left side. The View button and the Zoom slider are present on its right side.



Do not pull the wires of the keyboard and mouse.





Α.	Tick (✓) the correct answer :						
	1.	The scroll window.	oar is present t	to the right of the docum	nent		
		<b>A.</b> .	lorizontal	(c) None of thes	e 🔘		
	2.	Which of the following is displayed just below the title bar?					
		and the second s	tatus bar	🔘 (c) Ribbon	$\bigcirc$		
	3.	The Backstage view appears on clicking the tab.					
		(a) Home 💢 (b) F	ïle	(c) Design	$\Diamond$		
	4.	We can press thein Word.	keys to	gether to close a docun	nent		
		(a) Ctrl+S (b) C	ctrl+W	(c) Ctrl+0	$\bigcirc$		
В.	Writ	ite 'T' for true and 'F' for fals	se in the given	circles :			
	1.	We cannot change the colo	our of the text i	n Word 2019.	0		
	2.	The Save As command is used to create a copy of a document while keeping the original.					
	3.	To create a new document, press the Ctrl + N keys together.					
	4.	The Ruler makes easier to adjust our document with precision.					
C.	Fill	in the blanks :					
	1.	The is avaiout of documents quickly a		atus bar for zooming in	and		
	2.	The Font Size box is tab.	present in	the Font group on	the		
	3.	There are k	outtons in the r	ight side of title bar.			
	4.	The button taskbar.	reduces a wir	ndow to a small icon on	the		
D.	Ans	swer the following questions	:				

- 1. What is the use of title bar?
- 2. How many scroll bars are there in Word 2019? Name them.



- 3. Write any two features of Word 2019.
- 4. What are the various parts of the Word 2019 window?

### Creativity Skills



Art Integration

Draw and colour the logo of Word 2019 in the space given alongside :

Practical Skills

Project Time

#### Open Word 2019 and write five sentences about the following:

1. My Family

2. My Favourite Game

### Experience-Based Questions

Higher Order Thinking Skills

- 1. Rahul wants to change the font size and colour of the text. Suggest him the options to complete the task.
- 2. Anaya wants to save the document using the keys of the keyboard. Can you help her in completing the task?

#### Think & Answer

Life Skills & Values

What will you do if your friend leaves the computer lab without saving his/her document? Save the document or Close the document without saving? Justify your answer.

### Activity Work

Cutting & Making Skills

Prepare a chart on 'Parts of the Word 2019 window'.

Discussion

Communication

Discuss the different features of MS Word in class in detail.

#### Teacher's Help

• Give the students enough practice on using various options present under the File tab.













### Paint 3D

### LEARNING OUTCOMES

#### In this chapter, you will learn about :

- What is Paint 3D?
- Components of Paint 3D Window
- Working with 3D Shapes
- Erasing a Drawing
- Opening a Project

- Starting Paint 3D
- Using 3D Library
- Brushes
- Saving a Drawing

#### WHAT IS PAINT 3D?

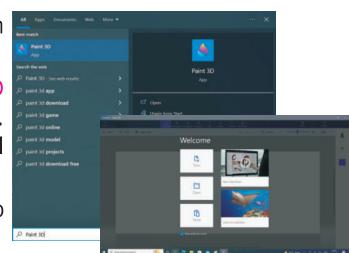
Paint 3D is a wonderful tool designed by Microsoft for drawing different types of 2D and 3D objects.

A simple Paint program was included with all earlier versions of Windows, still widely used for creating 3D shapes. In the latest update to Windows 10, Microsoft included Paint 3D having vast library of 3D objects and tools to draw pictures.

#### **STARTING PAINT 3D**

#### To open Paint 3D, follow these steps:

- Step 1. Simply type Paint 3D in the search box.
- Step 2. Now, click on the Paint 3D application from the list. The paint 3D window will appear.
- Step 3. Click on the New option to create a new project.





#### **COMPONENTS OF PAINT 3D WINDOW**

#### The components of Paint 3D window are as follows:

1. Title Bar : It displays the name of the current project.

2. Menu Button: It contains many options to work.

3. 2D Shapes : It is used to draw 2D shapes.

4. 3D Shapes : It is used to draw 3D shapes.

5. Stickers: It is used to add different stickers.

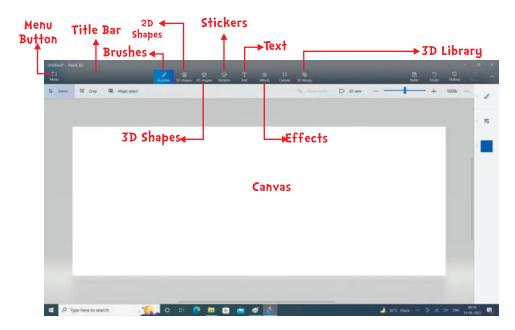
6. Brushes: It displays different types of brushes in the

Brushes panel.

7. Text : It is used to add text.

8. 3D Library : It is used to add 3D objects.

9. Canvas : It is the area where we draw in Paint 3D.



#### **USING 3D LIBRARY**

We can insert any ready-made 3D objects in our drawing from the 3D

library.

#### For this, follow these steps:

Step 1. Click on the 3D library option.

Step 2. Select a Category by clicking on it.



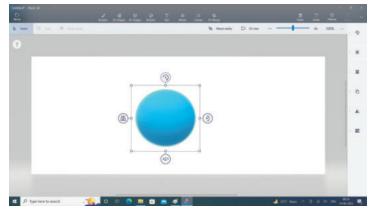
- Step 3. Select a 3D object and click on it to insert.
  - Rotate the image using the rotation handle, if required.
  - Slide it forward or backward using the Z-axis position button, if required.

#### **WORKING WITH 3D SHAPES**

To draw a 3D shape, follow these steps:

- Step 1. Click on the 3D shapes button.
- Step 2. Now, choose the tool sphere from the 3D shapes panel.
- Step 3. Then, move the mouse pointer to the canvas area. The pointer changes into a '+' sign. Hold the left mouse button and drag the mouse to draw the sphere. Release the mouse button.
- Step 4. Select the Edit Color option from the 3D selection panel to colour the sphere.

After completing, click anywhere outside the image.





#### TO DRAW A 3D CYLINDER

To draw a 3D cylinder, follow these steps:

- Step 1. Click on the 3D shapes option.
- Step 2. Select the Cylinder object from the 3D shapes panel.
- Step 3. Move the mouse pointer to the canvas area. Hold down the left mouse button and drag the mouse to draw the 3D cylinder.

  Release the mouse button and click outside the object, once done.



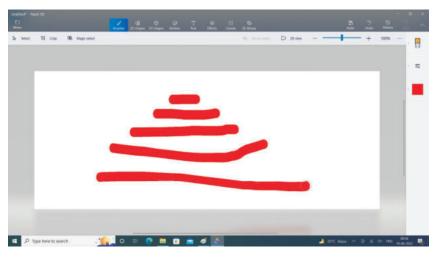
Step 4. Add colour of your choice to the 3D cylinder by using the Edit Color option.

#### **BRUSHES**

In Paint 3D, Brushes are used to colour and draw free-hand objects. There are various types of brushes in Paint 3D like Marker, Calligraphy pen, Oil brush, Watercolor, Pixel pen, Pencil, Crayon and Spray can.

#### To use a brush, follow these steps:

- Step 1. Click on the Brushes option.
- Step 2. Select the Oil Brush | from the Brushes panel.
- Step 3. Drag the Thickness slider to increase the size of the brush.
- Step 4. Now, 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.

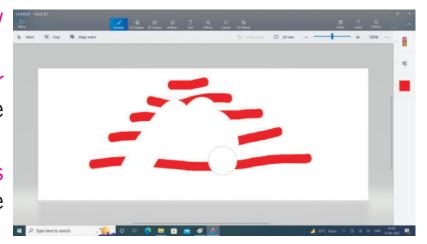


#### **ERASING A DRAWING**

The Eraser tool is used to erase any part of a drawing or a complete drawing.

To erase a drawing, follow these steps:

- Step 1. Choose the Eraser tool from the Brushes panel.
- Step 2. Drag the Thickness slider to change the size of the eraser.





Hold down the left mouse button and move it to the area you Step 3. want to erase.

# Fact to Know

Local Knowledge

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

#### SAVING A DRAWING

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

To save a drawing, follow these steps:

- Click on the Menu 🚃 Step 1. option and then select the Save option.
- Select the Paint Step 2. 3D project option. A dialog box appears.
- Enter the file name and Step 3. then click on the Save in Paint 3D button.



- If you want to save your drawing as an Image or 3D model, click 0 on Menu  $\rightarrow$  Save  $\rightarrow$  Image/3D model. Local
- The Save As dialog box appears. Fact to Know
- Enter the file name and click on Save.

F12 key can be used to save a Paint 3D drawing for the first time.

Knowledge

#### **OPENING A PROJECT**

To open an existing drawing, follow these steps:

- Step 1. Click on the Menu option and select the Open option.
- Step 2. The Open panel displays a list of projects saved in Paint 3D.
- Step 3. Select the desired project.





- Paint 3D is a wonderful tool designed by Microsoft for drawing different types of 2D and 3D objects.
- Brushes option displays different types of brushes in the Brushes panel.
- 3D library is used to add 3D objects.
- There are various types of brushes like Marker, Calligraphy pen, Oil brush, Watercolor, Pixel pen, Pencil, Crayon and Spray can.



Do not press the keys of the keyboard hardly.



			Lxercis	e			
Α.	Tick	⟨ ⟨ ✓ ⟩ ⟩ ⟩ ⟩ the correct ans	wer:				
	1.	Which option is use	ed to add 3D objects?	?			
		(a) Text	🔘 (b) 3D Library	🔘 (c) Canvas	0		
	2.	Which tool is used	to draw a cylinder?				
		(a) Sphere	(b) Cylinder	🔘 (c) Oval	$\bigcirc$		
	3.	is t	he area where we dra	aw in Paint 3D.			
		(a) Text	🔘 (b) Title Bar	🔘 (c) Canvas	$\Diamond$		
В.	Write 'T' for true and 'F' for false in the given circles :						
	1.	We can draw both	2D and 3D shapes ir	Paint 3D.	$\Diamond$		
	2.	There are two types	s of brushes in Paint	3D.	$\bigcirc$		
	3.	Paint 3D includes i	n the latest update of	f Windows 7.	$\bigcirc$		
	4.	We can save a proj	ect for the first time ι	using F12 key.	$\Diamond$		
C.	Fill	in the blanks :					
	1.	cor	ntains many options t	o work.			
	2.	is u	used to add different s	stickers.			
	3.	dis	plays the name of the	e current project.			
	4.	is t	used to add text.				
			Computer-3				

#### D. Answer the following questions:

- 1. What is the use of Eraser tool?
- 2. What is the use of Paint 3D program?
- 3. What is the use of Sphere and Cylinder tools?
- 4. What are brushes? Name any three brushes.

# Project Time

Practical Skills

Draw a Hemisphere.

# Experience-Based Questions

Higher Order Thinking Skills

- 1. Nisha wants to draw a hemisphere. Help her in completing the task.
- 2. Aman wants to use different types of Brushes in Paint 3D. Help him in completing the task.

# Think & Answer

Life Skills & Values

Your teacher has thought you a new application but you are unable to understand, then what will you do? Will you pretend that you have understood or ask your friend or teacher to make you understand it? Justify your answer.

# Activity Work

Cutting & Making Skills

Find out some differences between MS Paint and Paint 3D and write them on a chart paper.

## Discussion

Communication

Discuss the different components of Paint 3D window in class in detail.

## Teacher's Help

• Explain the different brushes to students in class in detail.







# Let's Code with KTurtle

# **LEARNING OUTCOMES**

#### In this chapter, you will learn about :

- How to Start KTurtle?
- Saving a Program
- Open an Existing File
- Setting Canvas Size and Colour

- KTurtle Commands
- Creating a New File
- Saving an Image
- Setting Pen Colour and Pen Width

KTurtle is a computer language useful for learning programming. It is very simple, interesting and easy to learn. It is used to draw figures and perform simple calculations. It uses a turtle for drawing.

The Turtle, originally a robotic creature that sat on the floor and could be directed to move around by typing commands at the computer. Soon the turtle migrated to the computer graphics screen where it is used to draw shapes, designs and pictures. The turtle is also known as Sprite.

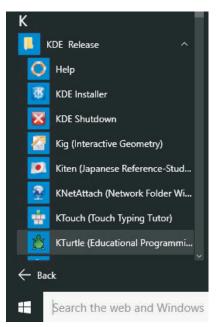
#### **HOW TO START KTURTLE?**

To start KTurtle, follow these steps:

Step 1. Click on the Start button.

Step 2. Click on All apps.



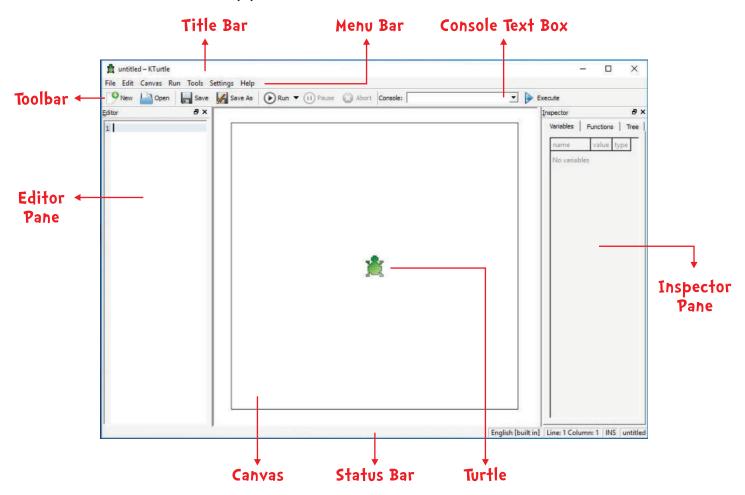




#### Step 3. Click on KDE Release folder.

#### Step 4. Select KTurtle (Educational Programming Environment).

We can also double-click on the icon on the desktop to start KTurtle. The KTurtle window appears.



The KTurtle window is divided into three main parts:

Editor PaneCanvasInspector Pane

#### **Editor Pane**

The Editor pane is present on the left where you type the commands or instructions.

#### **Canvas**

The Canvas is the space in the middle of the screen where the turtle moves to make your drawing.



#### **Inspector Pane**

The Inspector pane is present on the right side of the screen. It gives us information when our program executes.

The Editor and the Inspector panes can be attached to any sides of the KTurtle window. This can be done by placing the mouse on the title bar of the pane, pressing the left mouse button and then dragging it to one of the sides of the KTurtle window.

Besides these, we find the following on the screen:

#### **Toolbar**

This bar has buttons that allows us to quickly select the most used actions. It also has a Console text box that allows us to enter a one line command to test by pressing the Enter key or clicking the Execute button to run it.

#### Menu Bar

It is the bar from where all the actions can be reached. It consists of File, Edit, Canvas, Run, Tools, Settings and Help.

#### **Status Bar**

It is present at the bottom of the window where we will find feedback on the state of KTurtle. It shows the last action performed on the left side and the current location of the cursor (Line and Column number) and the current language being used for the commands on the right side of the screen.

#### **KTURTLE COMMANDS**

To type the commands in KTurtle, click inside the Editor pane after number 1 and type the first command. Now, press the Enter key. The cursor will move to the next line. Similarly, we can type the rest of the commands.

Always remember to press the Enter key after each command.



Then, click on the old button on the toolbar.

This will start the execution of the commands we have typed in the Editor pane.

On clicking the arrow button next to the command, a drop-down menu appears.



By default, the execution speed of the program is set to Full Speed. But, we can change the execution speed of the program by clicking one of the options from the menu of command. We can select any option. The check mark will appear to the left of the selected option.

We can also press the F5 key or click on the Run menu and select the Run option to run a program.

Let us learn some KTurtle commands to make the turtle move.

#### forward Command

The forward command is used to move the turtle in the forward direction. The short form of forward is fw. The steps for using the forward command are :

- Step 1. Type the forward or fw command.
- Step 2. Press the Spacebar key.
- Step 3. Type the number of steps.

Don't forget to give a single space between the command and the number. For example, if you type fw100, an error message "An unknown function named 'fw100' was called" will appear. Then click on the Hide Errors button and correct the error.

Write the command to move the turtle in forward direction by 100 steps.

Command (s) to be typed in editor pane	Output
forward 100	180
or	
fw 100	



#### backward Command

The backward command is used to move the turtle in the backward direction. The short form of backward is bw.

The steps for using the backward command are:

- Step 1. Type the backward or bw command.
- Step 2. Press the Spacebar key.
- Step 3. Type the number of steps.

We can also move the turtle in forward direction using the backward command by giving the negative input to the bw command. For example, bw -50 will move the turtle in forward direction by 50 steps.

Similarly, we can move the turtle in backward using the forward command by giving the negative input to the fw command. For example, fw –50 will move the turtle in backward direction by 50 steps.

Write the command to move the turtle in backward direction by 100 steps.

Command (s) to be typed in editor pane	Output
backward 100	
or	<b></b>
bw 100	<del></del>

#### turnright Command

The turnright command is used to turn the turtle towards its right, i.e. in the clockwise direction. While turning, the turtle rotates, but stays at the same position. The short form of turnright is tr.

The steps for using the turnright command are:

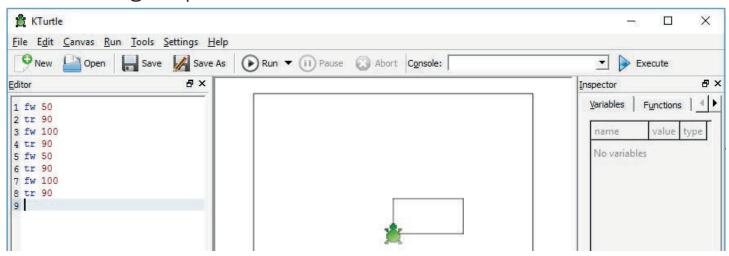
- Step 1. Type the turnright or tr command.
- Step 2. Press the Spacebar key.
- Step 3. Type the number of units or degrees.

We can move the turtle from 0 to 360 degrees.



- Example: 1. Type the commands shown in the figure in Editor Pane.
  - 2. Click on the Run button.

The following shape will be drawn on the Canvas.



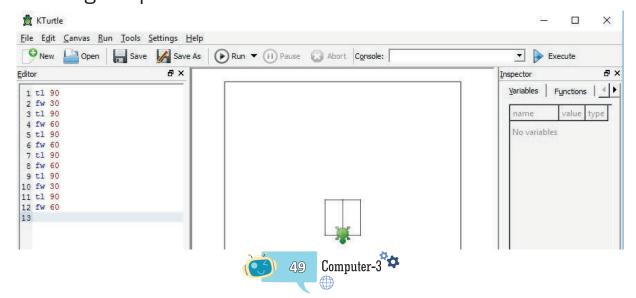
#### turnleft Command

The turnleft command is used to turn the turtle towards its left, i.e. in the anti-clockwise direction. While turning, the turtle rotates, but stays at the same position. The short form of turnleft is tl.

#### The steps for using the turnleft command are:

- Step 1. Type the turnleft or tl command.
- Step 2. Press the Spacebar key.
- Step 3. Type the number of units or degrees.
- Example: 1. Type the commands shown in the figure in Editor Pane.
  - 2. Click on the Run button.

The following shape will be drawn on the Canvas.



#### direction Command

The direction command turns the turtle in clockwise direction without using the tr or tl commands. The short form of direction is dir.

# Fact to Know

Local Knowledge

In tr and tl commands, degrees are counted from the current position whereas in the direction command, degrees are counted from the starting position of the turtle each time the command is given.

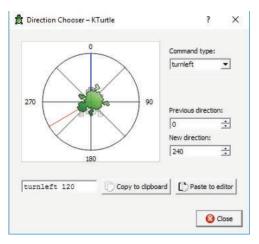
## The steps for using the direction command are:

- Step 1. Type the direction or dir command.
- Step 2. Press the Spacebar key.
- Step 3. Type the number of units or degrees.

Click on the Tools menu and select Direction Chooser... option, if you are not sure of how many degrees the turtle should move. The Direction Chooser –KTurtle dialog box appears.



- Select the command type: turnleft, turnright or any direction.
- Previous direction shows the previous direction of the turtle.
- New direction shows the new direction of the turtle.
- A text box shows the command.
- Click on the Paste to editor to paste the command in the Editor Pane.
- Click on the Close button.



#### center Command

This command brings the turtle to the center of the canvas without drawing a line. The head of the turtle points in the same direction as in the previous command.



#### reset Command

The reset command cleans up the canvas completely. We can use it whenever we want to try a new set of commands.

#### spritehide Command

The spritchide command is used to hide the turtle from the canvas. The turtle can draw lines even when it is hidden. The short form of spritchide is sh. Type the spritchide or sh and press the Enter key to use this command.

#### clear Command

The clear command will clean all drawings on the canvas. But the position and angle of the turtle will remain as they were. The short form of clear command is ccl.

#### spriteshow Command

The spriteshow command orders the hidden turtle to get back on the canvas. The short form of spriteshow is ss. Type the spriteshow or ss and press the Enter key to use this command.

#### **SAVING A PROGRAM**

To save a program, follow these steps:

Step 1. Click on the File menu.

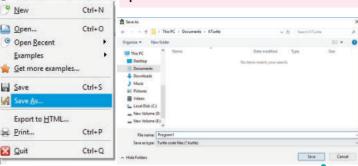
Step 2. Click on the Save As option. The Save As dialog box appears.

Step 3. Type the file name.

Step 4. Click on the Save button.

You can also click on the **Save As** button Save As present on the toolbar.

Local Knowledge



# Fact to Know

.turtle is the extension of KTurtle file.

Always click on the Save As command if you want to save a file with a new name, whereas click on the Save button to continue saving



the file with the same name. When we save the file for the first time, both the commands will open the Save As dialog box.

#### **CREATING A NEW FILE**

To create a new file, follow these steps:

- Step 1. Click on the File menu.
- Step 2. Click on the New option.

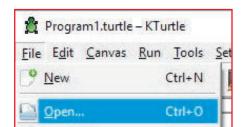
# Program1.turtle – KTurtle File Edit Canvas Run Tools Set New Ctrl+N Open... Open Recent

#### **OPEN AN EXISTING FILE**

To open an already existing file, follow these steps:

- Step 1. Click on the File menu.
- Step 2. Click on the Open option. The Open dialog box appears.
- Step 3. Select the file.
- Step 4. Click on the Open button.

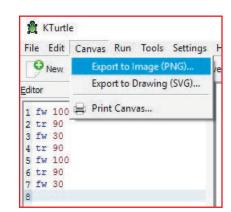
  The selected file will be opened.



#### **SAVING AN IMAGE**

To save an image, follow these steps:

- Step 1. Click on the Canvas menu.
- Step 2. Click on the Export to Image (PNG)... option. The Save as Picture dialog box appears.
- Step 3. Type the name for the picture.
- Step 4. Click on the Save button.



#### SETTING CANVAS SIZE AND COLOUR

To change the canvas size and colour, canvassize and canvascolor commands are used.

#### canvassize Command

The canvassize command is used to set the width and height of the



canvas. For example, canvassize 100,200 sets the canvas width to 100 steps and height to 200 steps.

#### canvascolor Command

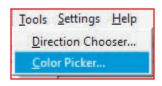
The canvascolor command is used to change the colour of the canvas. For example, canvascolor 0, 0, 0 makes the canvas black. 0, 0, 0 is called the RGB value. The first number stands for Red, second number for Green and third number for Blue. Each of them can take values from 0 to 255.

Color Picker – KTurtle

4, 138, 224

Copy to dipboard Paste to editor

(2) Close



We can also change the colour values by clicking on the Color Picker... option of the Tools menu. The Color Picker dialog box appears.

- Move the slider of the red, green and blue 0 colours.
- The corresponding colour appears. 0
- The text box shows the RGB numbers. 0
- Click on the Paste to editor button. 0
- Click on the Close button.

The Clear command does not affect the canvas colour and canvas size. They will remain same. While if you use the reset command after setting the canvas size, then the canvas colour will be set to white as before.

#### SETTING PEN COLOUR AND PEN WIDTH

To change the pen colour and pen width, pencolor and penwidth commands are used.

#### pencolor Command

The pencolor command is used to set the colour of the pen by changing the RGB values. The short form of pencolor is pc.



For example, pc 255, 255, 0 changes the colour of the pen to yellow.

#### penwidth Command

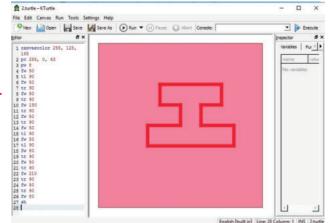
The penwidth command is used to set the width (size) of the pen. The

short form of penwidth is pw.

For example, pw 30 sets the pen width to 30 units.

- 1. Type these commands in Editor pane.
- 2. Click on the Run button.

The output shown alongside will appear on the Canvas.





- Note: KTurtle is a computer language useful for learning programming. It is used to draw figures and perform simple calculations. It uses a turtle for drawing.
- The forward command is used to move the turtle in the forward direction. The short form of forward is fw.
- The backward command is used to move the turtle in the backward direction. The short form of backward is bw.
- The direction command turns the turtle in clockwise direction without using the tr or the commands. The short form of direction is dir.
- The reset command cleans up the canvas completely. We can use it whenever we want to try a new set of commands.
- The canvassize command is used to set the width and height of the canvas.
- The canvascolor command is used to change the colour of the canvas.



Always cover your computer when not in use.





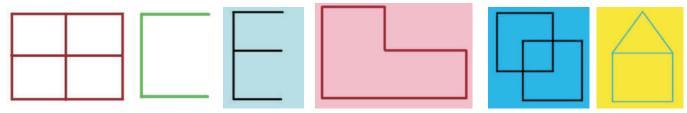
Α.	Tick	$(\checkmark)$ the correct an	iswer:			
	1.	Which of the following commands do not take input?				
		(a) clear	<b>(</b> b) fw	(c) dir	$\bigcirc$	
	2.	Which of the follow	ring panes is used to ty	rpe commands?	_	
		(a) Inspector	🔘 (b) Editor	🗘 (c) Canvas	$\bigcirc$	
	3.	Which of the follobackward direction	_	oves the turtle by 70	steps in	
		(a) bw -70	🔘 (b) fw -70	🔘 (c) fw 70	$\Diamond$	
	4.	Which of the followard 75 degrees?	owing commands is	used to turn the turtl	e left by	
		(a) tl 75	🔘 (b) tr 75	🗘 (c) dir 75	$\Diamond$	
В.	Wri	te 'T' for true and '	F' for false in the gi	ven circles :		
	1.	We can change th	ne execution speed o	f the program.	$\bigcirc$	
	2.		is used to set the co	. •		
	3.	.kturtle is the exte	ension of the KTurtle	file.	$\bigcirc$	
	4.	We can also press	s the F7 key to run a	program.	$\bigcirc$	
C.	Fill	in the blanks :				
	1.	Thebackward directio		ed to move the turtle	e in the	
	2.	The	_command is used to	turn the turtle towards	s its left.	
	3.	Thecanvas.	_ command is use	d to hide the turtle t	from the	
	4.	The	_ command is used <sup>.</sup>	to set the width of the	pen.	
D.	Ans	wer the following q	juestions :			
	1.	What is the different	ence between reset a	and clean commands?		
	2.	What is the differe	nce between spritehi	de and spriteshow com	ımands?	
	3.	Name the three m	nain parts of the KTu	rtle window.		
	4.	Name the comma	inds use to change tl	he colour and size of th	ne pen.	



Draw and colour the Turtle of KTurtle on a chart paper.

Project Time Practical Skills

#### Draw the following figures in KTurtle:



# Experience-Based Questions

Higher Order Thinking Skills

- Nidhi's teacher asked her to turn the turtle in clockwise direction without 1. using tl or tr commands. Can you help her in completing the task?
- 2. Ankur wants to move the turtle backward by 100 steps. He has given the command backward 100. Can you perform the same task using the forward command?

# Think & Answer

Life Skills & Values

Your friend forgets to give space between the bw command and the input. He/she is trying again and again but unable to solve the problem. But, you know the process. What will you do? Do you help him/her? If yes, then how?

# Activity Work

**Cutting & Making Skills** 

Prepare a chart on 'Parts of the KTurtle window'.

Discussion Communication

Discuss the different commands which turn the turtle in clockwise or anticlockwise directions.

#### Teacher's Help

Explain the concept of primary colours red, green and blue to students before teaching the canvascolor and pencolor commands.



# Extra Skills

# Let's Decode

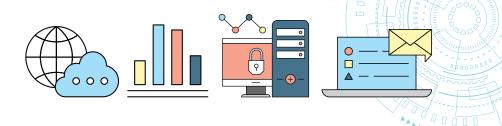
Find the correct letter for the given code and decode the computer terms given below:

Α	В	C	D	E	F	G	Н	I	J
1	2	3	4	5	6	7	8	9	10
K	L	M	N	0	Р	Q	R	S	T
11	12	13	14	15	16	17	18	19	20
		U	V	W	X	Y	Z		
		21	22	23	24	25	26		









# **Knowing About Scratch**

# **LEARNING OUTCOMES**

#### In this chapter, you will learn about :

- What is Scratch?
- Working with Sprite
- Creating a New Project 0
- **Exiting Scratch**

- How to Start Scratch? 0
- Saving a Project 0
- Opening an Existing Project

A computer would have no idea about what we are saying because a computer cannot think by itself and we cannot talk to it like a person.

We have to give them instructions in special computer languages that computers can understand. It understands only a few special languages of its own, called programming languages. Also, the number of words and the sentences that it understands are limited.

A programming language has a set of instructions called program, for Fact to Know instructing a computer to perform specific tasks. In this chapter, we will learn about one of the easiest computer languages- Scratch.

Local Knowledge

Scratch was designed by the MIT (Massachusetts Institute of Technology) Media Lab's Lifelong Kindergarten Group, led by Mitchel Resnick in 2003.

#### WHAT IS SCRATCH?

Scratch is a programming language and an online community where children can program and share interactive media such as stories, games and animation with people from all over the world. As children create with Scratch, they learn to think creatively, work collaborately and reason systematically.



#### **HOW TO START SCRATCH?**

To start scratch, follow these steps:

Step 1. Click on the Start button.

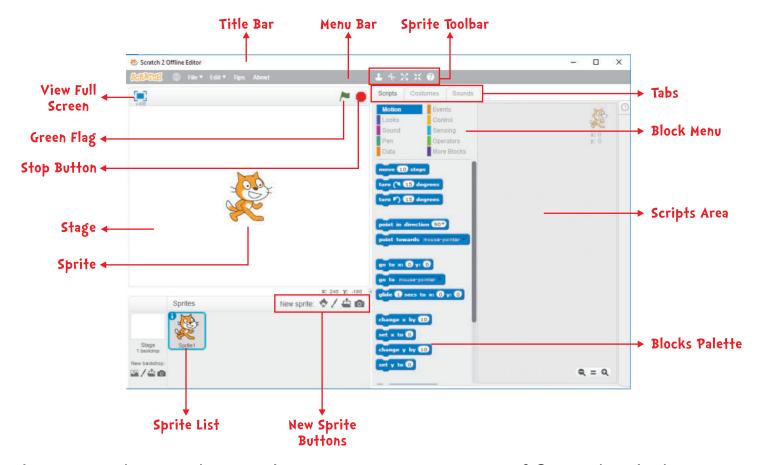
Step 2. Click on the Scratch 2 option.



Local Knowledge

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

The Scratch window appears. The various components of Scratch window are as follows:



Let us understand some important components of Scratch window.

#### **Sprite**

Scratch projects are made up of objects. The most basic object in Scratch is the Sprite. It is a small graphic character that performs actions in Scratch projects. There are many in-built Sprites in Scratch. Cat is the default Sprite in Scratch.

#### **Stage**

It is the main working area where all of the actions take place by the



Sprite as per the given instructions. It displays your creation. We can see your stories, games and animations created by us.

#### **Blocks Menu**

The Blocks menu area lists the ten categories of blocks Motion, Looks, Sound, Pen, Data, Events, Control, Sensing, Operators and More Blocks. Related instructions are grouped together in a Block. For example, all the movement related instructions are listed when we select the Motion Block. The block categories are all colour coded. So when we see a block of a specific colour, we can quickly determine which category it came from.

#### **Tab**

It consists of three tabs: Scripts, Costumes and Sounds.

- Scripts tab: Script is a set of stepwise instructions given to the Sprite to do a specific task. Script is also called a program. Each instruction is also called a command. It consists of the block menu and allows us to write a script.
- Costumes: It allows us to draw, import or edit images for a Sprite.
- Sounds: It allows us to record or import sound files for a Sprite to use.

#### **Blocks Palette**

We can find the various types of instructions in the Blocks Palette used to program the sprite and give instructions to it. It is used to create a script in Scratch.

#### **Green Flag**

It is a small green icon placed at the top-right corner of the stage screen. On clicking this button, the script will run step-by-step.

## Scripts Area 🛌

Scripts area is the place where we write the script for the Sprite. Drag the



instructions from the blocks palette and drop it in the Scripts area to write a program. The blocks fit into each other as jig-saw puzzle blocks.

# Stop Button

It is also placed at the top-right corner of the stage screen. It is red in colour and is used to stop the project at any time during the execution.

#### **WORKING WITH SPRITE**

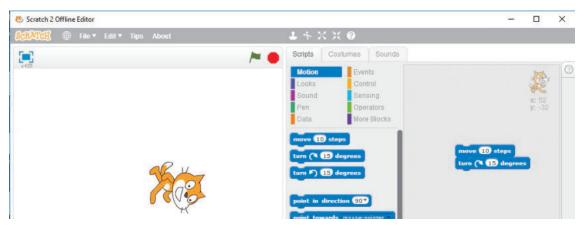
#### Moving a Sprite

To move or turn the Sprite around through different angles, use the blocks in the Motion block category.

Let us create our first Scratch project to move the Sprite.

- Step 1. Click on the Motion block category in the Blocks menu.
- Step 2. Click on the area and drag it in the Scripts area.
- Step 3. Now, click on the two series and drag it in the Scripts area.
- Step 4. Click any of the block in the Scripts area.

We notice that the Sprite moves the specified number of steps and then turns itself.



#### Motion Blocks Used in the Project

move 10 steps	This block is used to move the Sprite by 10 steps in forward direction.		
turn (* 15 degrees	This block is used to turn the Sprite in clockwise direction.		



We can change the number of steps the Sprite moves, by clicking inside the number of area and typing the new number. Similarly, we can change the turning value.



To move the Sprite in backward direction, type the number with a minus (-) sign, say -10.

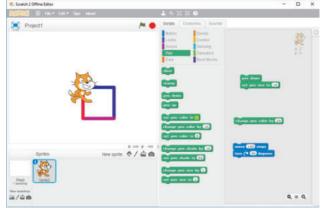
To remove the block from the scripts area, right-click on it and select Delete option.

#### **Drawing a Square**

To draw lines on the stage, the Pen block category is used. Let us draw a square on the stage.

- Step 1. Click on the Pen block category in the Blocks menu.
- Step 2. Click and drag the pendown, set pen size to 1) and set pen color to 3) on the Scripts area.
- Step 3. Click on the Motion block category in the Blocks menu.
- Step 4. Click and drag the area.
- Step 5. Click any of the block in the Scripts area till the Sprite completes square.





We can also make this square colourful.



## Pen Blocks Used in the Project

pen down	This block is used to draw line as the sprite moves on the stage.
set pen size to 1	This block is used to set the thickness of the pen to a specific number.
set pen color to 8	This block is used to set the colour of the pen.
change pen color by 20	This block is used to change the colour of the pen.

If we want to know the working of a particular block in the Script, then right-click on it and select the Help option.

#### **SAVING A PROJECT**

To save a project in Scratch, follow these steps:

- Step 1. Click on the File menu.
- Step 2. Select the Save option. The Save Project dialog box appears.
- Step 3. Type the name for your project in the File name: text box.
- Step 4. Click on the Save button.

#### **CREATING A NEW PROJECT**

To create a new project, follow these steps:

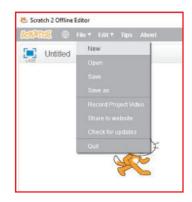
- Step 1. Click on the File menu.
- Step 2. Select the New option.

#### **OPENING AN EXISTING PROJECT**

To open an existing project, follow these steps:

Step 1. Click on the File menu.







- Step 2. Select the Open option. The Open Project dialog box appears.
- Step 3. Select the project you want to open.
- Step 4. Click on the Open button.

The selected project opens in the Scratch window.

#### **EXITING SCRATCH**

To exit Scratch, follow these steps:

- Step 1. Click on the File menu.
- Step 2. Select the Quit option.



Find out how to make the Sprite jump.







# Recollect the Chapter

- A programming language has a set of instructions called program, for instructing a computer to perform specific tasks.
- Sprite is a small graphic character that performs actions in Scratch projects.
- Stage is the main working area where all of the actions take place by the Sprite as per the given instructions.
- Scripts area is the place where we write the script for the Sprite.

# Computer MANNER ...

Do not eat or drink near the computer.



#### A. Tick (✓) the correct answer :

- 1. Which of the following is the default Sprite in Scratch?
  - (a) Dog
- (b) Mouse
- (c) Cat





	2.	Which of the following	g blocks category is u	sed to draw lines on the st	age?
		(a) Pen	🗘 (b) Motion	🔘 (c) Sound	$\bigcirc$
	3.	Which of the followi	ng is not a block me	nu?	
		(a) Motion	🗘 (b) Pen	(c) Move	0
	4.	Which of the followi	ng displays your cre	ation?	
		(a) Stage	(b) Script area	(c) Block palette	0
В.	Wri	te 'T' for true and 'F'	for false in the give	n circles :	
	1.		0 0	of instructions called erform specific tasks.	l O
	2.	Scripts area is the p	lace where we write	the script for the Sprite.	$\bigcirc$
	3.	To remove the block select Delete option.	•	rea, right-click on it and	
	4.	On clicking the Gree	n flag, the script wil	I run step-by-step.	$\bigcirc$
C.	Fill	in the blanks :			
	1.	Scratch projects.	small graphic chara	cter that performs action	ns in
	2.	is al	so called a program.		
	3.		1 1 0	ming language that let ions, games, music and a	
	4.		ne Sprite around the k category is used.	nrough different angles,	the
D.	Ans	wer the following que	estions :		
	1.	What is Scratch?			
	2.	What is the use of M	Motion and Pen block	categories?	
	3.	What do you unders	tand by Script area?		
	4.	What do you mean l	by Sprite?		
(re	eatio	vity Skills 👊		Art Integr	ation

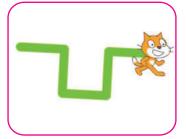
Draw and colour the Sprite on a chart paper.

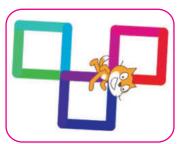


Project Time Practical Skills

#### Draw the following figures in Scratch:









# Experience-Based Questions

Higher Order Thinking Skills

- 1. Aarav wants to move the Sprite in backward direction by 50 steps. Can you help him in completing him task?
- 2. Nisha's teacher gave her an assignment to draw a square. But, she don't know how to draw lines on the Stage in Scratch. Help her in completing the task.

# Think & Answer

Life Skills & Values

Your friend is unable to move the sprite while programming with Scratch. What will you do? You will ignore her/him and continue working, or help her/him to move the Sprite?

# Activity Work

Cutting & Making Skills

Prepare a chart on 'Various Components of Scratch'.

Discussion

Discuss the different Motion category blocks and Pen category blocks in class in detail.

# Teacher's Help

• Tell the students that the Sprite is like your blind folded friend, who needs proper instructions from you to do the activity. Demonstrate how the Sprite can be instructed to move forward, backward and change directions.







# More About Scratch

# **LEARNING OUTCOMES**

#### In this chapter, you will learn about :

- Adding New Sprite from Library
- Painting New Sprite
- How to Make Duplicate Copy of Sprite?
- Adding Sound

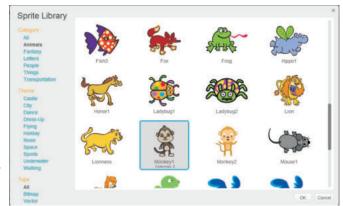
- How to Change the Appearance of Sprite?
- Sprites that Speak and Think
- Repeating Actions

#### ADDING NEW SPRITE FROM LIBRARY

Cat is the default Sprite in Scratch. But, we can insert a new Sprite. To add a new Sprite, follow these steps:

- Step 1. Click on the Choose Sprite from library option.
- Step 2. The Sprite Library appears. Select the Category, say Animals.
- Step 3. Select a Sprite of your choice.
- Step 4. Click on OK button.

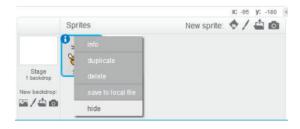
The new Sprite will appear on the Stage. It also gets added to the Sprite list.







We can hide the previous Sprite from the Stage. In the Sprite list, right-click on the Sprite we want to hide and select hide option.



#### **HOW TO CHANGE THE APPEARANCE OF SPRITE?**

To change the Sprite's appearance, we can use Costumes. The Looks category in block menu has instructions to change the appearance of the Sprite. We can see the different costumes for our Sprite by clicking the Costumes Tab next to the Scripts Tab. To change the appearance of the Sprite, follow these steps:

- Step 1. Click on the Costumes tab to display the list of Costumes of the selected Sprite.
- Step 2. Now, click on the Scripts tab.
- Step 3. Select Motion category of Blocks menu.
- Step 4. Drag this block in the Script area and change its step value from 10 to 30.
- Step 5. Select Looks category of Blocks menu.
- Step 6. Now, drag these blocks in the Scripts area.
- Step 7. Click on any of the block to run the block stack.

The Sprite will change its colour, size and costume.

#### **Looks Blocks used in the Project**

change color effect by 20	This block is used to change the colour and other graphic effect on a sprite.
next costume	This block is used to switch to the next costume in the sprite's costume list.
change size by 10	This block is used to change the sprite's size by the specified amount.



#### **PAINTING NEW SPRITE**

To paint or create your own Sprite, follow these steps:

- Step 1. Click on the Paint New sprite button.
- Step 2. Use the different tools to draw a Sprite. The Paint Editor window opens under the Costumes tab.

Sprites

| Series | S

A new sprite will be added to the Sprite list.

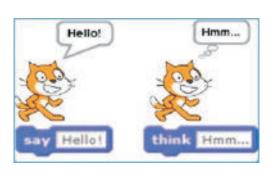
Once we have created the Sprite, we can make duplicate of it, increase or decrease its size or delete it by using the Sprite toolbar.

- Duplicate: It creates another copy of the Sprite.
- Delete: It deletes the Sprite.
- Grow: It increases the size of the Sprite.
- Shrink: It decreases the size of the Sprite.

#### SPRITES THAT SPEAK AND THINK

A Sprite can say or think in a Scratch project. We can make our sprite speak or think like a character in a comic strip.

Any phrase we type into these commands will appear above the Sprite, and the message is displayed permanently. If we want to clear the message, we use a say or think block with no text.

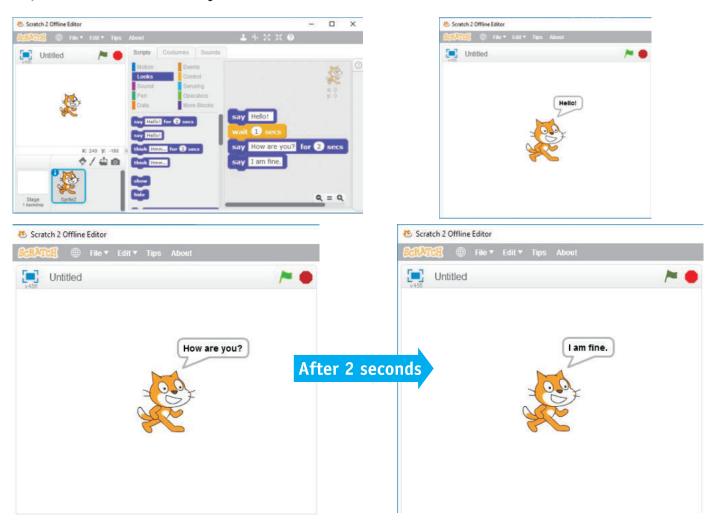


Let us make a project on it.

Step 1. Click on the Looks block category in the Blocks menu.



- Step 2. Click and drag the block on the Scripts area.
- Step 3. Click on the Control block category in the Blocks menu.
- Step 4. Click and drag the on the Scripts area.
- Step 5. Again, click on the Looks block category in the Blocks menu.
- Step 6. Click and drag the symmetric on the Scripts area.
- Step 7. Type in the message; 'How are you?' inside the block.
- Step 8. Now, drag the block on the Scripts area.
- Step 9. Type in the message; 'I am fine.' [sylamfine] inside the block.
- Step 10. Click on any of the block to run the block stack.

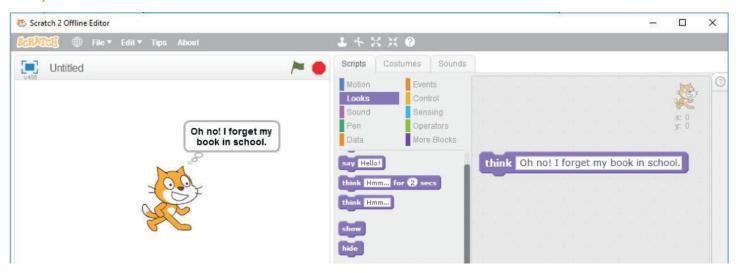


#### To Make a Sprite Think

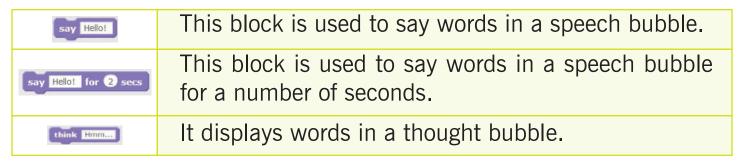
- Step 1. Click on the Looks category of Blocks menu.
- Step 2. Click and drag it in the Scripts area.



- Step 3. Type in the message inside the text space of the block.
- Step 4. Click on the block to run the block stack.



#### **Looks Block used in the Project**



#### **Control Block used in the Project**



This block makes the script wait for specified number of seconds and then continues with the next block.

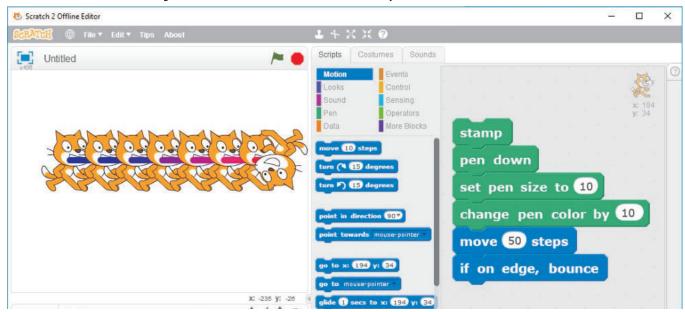
#### **HOW TO MAKE DUPLICATE COPY OF SPRITE?**

Let us make a duplicate copy of the sprite.

- Step 1. Click on the Pen block category in the blocks menu.
- Step 2. Click and drag the block on the Scripts area.
- Step 3. Click and drag the pen down, set pen size to 1 and change pen color by 10 block on the Scripts area. Then, set the pen size from 1 to 10.
- Step 4. Click on the Motion block category in the Blocks menu.
- Step 5. Click and drag the on the Scripts area. Then, change the step value from 1 to 50.



- Step 6. Click and drag the for edge, bounce block on the Scripts area.
- Step 7. Click on any of the block in the scripts area to run the block stack.



## Pen Block used in the Project



This block is used to create a duplicate copy of the Sprite.

#### Motion Block used in the Project



This block is used to turn the Sprite in the opposite direction if it touches the edge of the stage.

#### **REPEATING ACTIONS**



#### **Block**

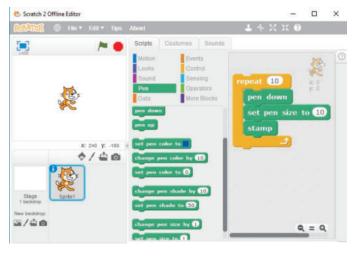
The Repeat block of the Control category of the Blocks menu is used to repeat the actions of the sprite as many times as needed. This block runs the blocks inside it a specified number of times. The Repeat instructions control the execution of the program.

Let us make a project on it.

- Step 1. Click on the Control block category in the Blocks menu.
- Step 2. Click and drag the block on the Scripts area.



- Step 3. Click on the Pen control category in the Blocks menu.
- Step 4. Click and drag the pen down, set pen size to 10 and stamp block on the Scripts area. Then, set the pen size from 1 to 10.
- Step 5. Click on the Motion control category in the Blocks menu.
- Step 6. Click and drag the move 10 steps and turn (\*15 degrees) block on the Scripts area. Then, change the steps value from 1 to 30 and turning value from 15 to 10.



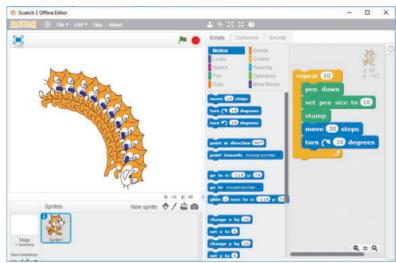
Step 7. Click on any block to run a block stack.



This block of the Events category in the Blocks menu is very useful. When this block is on the top of a block stack, the actions of the block get executed when the green flag on the top-right corner of the stage is clicked.

# Block

This block of the Control category runs the blocks inside it over and over again, unless the Stop button on the topright corner of the stage is clicked.



#### **ADDING SOUND**

Sound block has instructions to make the Sprite speak, add musical notes, etc. Let us make a project on it.



- Step 1. Click on the Control block category in the blocks menu.
- Step 2. Click and drag the block on the Scripts area.
- Step 3. Click on the Looks block category in the blocks menu.
- Step 4. Click and drag the next costume and block on the Scripts area.
- Step 5. Click on the Motion block category in the blocks menu.
- Step 6. Click and drag the **move** 25 steps block on the Scripts area.

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- Step 7. Click on the Sound block category in the Blocks menu.
- Step 8. Click and drag the pay sound meows block on the Scripts area.
- Step 9. Click on the Control block category in the Blocks menu.
- Step 10. Click and drag the block on the Scripts area.
- Step 11. Click on the Sound block category in the Blocks menu.
- Step 12. Click and drag the pay drum to for 0.25 beats block on the Scripts area.
- Step 13. Click on any of the blocks to run the block stacks.



# Sound Blocks used in the Project

play sound meow	This block is used to play the specified sound and continues to the next block immediately.
play drum 1 for 0.25 beats	This block plays a drum sound for a specified number of beats. Click on the drum type by clicking the drop-down arrow next to the number and the number of beats by changing the value in the box.



Collaboration

> Find out if we can add more than one sprite on a stage.

# Recollect the Chapter

- Cat is the default Sprite in Scratch. But, we can insert a new Sprite.
- A Sprite can say or think in a Scratch project. We can make our sprite speak or think like a character in a comic strip.
- The Repeat block of the Control category of the Blocks menu is used to repeat the actions of the sprite as many times as needed. This block runs the blocks inside it a specified number of times. The Repeat instructions control the execution of the program.
- The block runs the blocks inside it over and over again, unless the Stop button on the top-right corner of the stage is clicked.
- Sound block has instructions to make the Sprite speak, add musical notes, etc.

# Computer MANNER ...

Do not touch the electric socket, wires without permission of your teachers or parents.



#### A. Tick (✓) the correct answer :

- 1. Which of the following blocks is not belonged to Looks category?
  - (a) say Hello!







	2.	Which of the following	g blocks displays word	s in a thought bubble?
		(a) say Hello!	(b) say Hello! for 2 secs	(C) think Hmm
	3.	Which of the following	g blocks is not belonge	d to Control category?
		(a) forever	(b) where 🎥 the head	(C) repeat 10
	4.	Which of the following	g block controls the loc	ks of the sprite?
		(a) Looks	(b) Control	(c) Motion
В.	Wri	te 'T' for true and 'F' fo	or false in the given ci	rcles:
	1.	The Repeat instruction	ns control the execution	n of the program. 💢
	2.	Cat is the only Sprite i	in Scratch.	$\bigcirc$
	3.	Sound block has instr	uctions to make the Sp	orite speak, add
		musical notes, etc.		O O
	4.	We cannot paint a spr	ite in Scratch.	$\bigcirc$
C.	Fill	in the blanks :		
	1.	To change the Sprite's	appearance, we can u	ıse
	2.	block	is used to create a	a duplicate copy of the
		Sprite.		
	3.	A is the	ne default Sprite in Scr	atch.
	4.		0,	enu has instructions to
		change the appearance	e of the Sprite.	
D.	Wri	te down the uses of the	following blocks :	
	1.	3		
	2.	when Clicked		
	3.	play drum (17) for (0,25) beats		
	4. [	say Hello! for 2 secs		
E.	Ans	wer the following quest	tions :	
	1.	What is the difference	between 🛌 and 🖁	遇 blocks?
	2.	What is the use of For	ever block?	
	3.	What is the use of nex	kt costume block?	
	Δ	Name the blocks used	I to play the sound of a	a sprite?



Draw and colour any two Sprites of the Scratch on a chart paper.

Project Time Practical Skills

Drag the following blocks in the scripts area and observe the changes.



# Experience-Based Questions

Higher Order Thinking Skills

- 1. Piyush wants to make a duplicate copy of the Sprite. Can you help him in completing his task?
- 2. Abhishek wants to play a drum sound for a specified number of beats. Suggest him an appropriate block to complete his task.

## Think & Answer

Life Skills & Values

Your teacher gives you a project in Scratch and you are unable to do it. What will you do- ask a friend to complete it for you or try to do it again and if unsuccessful, ask with your teacher?

# Activity Work

Cutting & Making Skills

Draw and colour the different Sprites on a chart paper. Also, explain the different blocks you have studied in this chapter.

Discussion

Discuss the different repeating actions in class in detail.

# Teacher's Help

Ask the students if they want a different Sprite. Show them how to get the new Sprite or create a Sprite using the Paint editor.



#### Artificial Intelligence

# Extra Skills

# Alexa

Alexa is Amazon's all-knowing, interactive voice assistant. Alexa can do quick maths for us, launch our favorite playlists, check news and weather, and control many of our home's smart products.

Alexa is a voice that we can ask questions to and get answers, such as "What is the weather today in



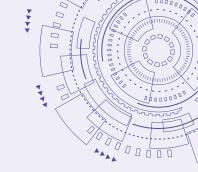
India?". Alexa has been integrated into many of Amazon's services and can be used with products such as original Amazon Echo, Echo Dot, Echo Spot, or Amazon Fire TV.

But really, what exactly is Alexa? When we ask Alexa a question, what we're doing is communicating with a cloud-based service. Amazon has designed the Alexa Voice Service (AVS) to mimic real conversations, but we're actually using intuitive voice commands to get this service to perform specific tasks. "Alexa" is simply the "wake word" that alerts the service to start listening to our voice. For most devices, we just have to say the wake word to get a response.

Alexa has also become the center of many smart-home systems, including Wink and Smart things.







1.	the correct answer (✓) the correct answer Which of the following	g is not an input device?				
	(a) BCR	(b) Biometric sensor (	c) Projector			
2.	A is a collect	ction of data.				
	(a) Folder	(b) Icon (	c) File			
3.	Which of the following	g is displayed just below the title	e bar?			
	(a) Work area	(b) Status bar (	c) Ribbon			
4.	is the	area where we draw in Paint 31	).			
	(a) Text	(b) Title Bar (	c) Canvas			
Writ	e 'T' for true and 'F' fo	r false in the given circles :				
1.	Software means the p	hysical parts of the computer tha	t we can touch or feel.			
2.	An operating system t	ells a computer how to work.				
3.	The Ruler makes easi	er to adjust our document with p	orecision.			
4.	We can draw both 2D	and 3D shapes in Paint 3D.				
Fill i	Fill in the blanks :					
1.	A can	be used in place of a mouse.				
2.	Windows 10 has a ne	ew search tool called	•			
3.	The b	utton reduces a window to a sm	all icon on the taskbar			
4.	is use	d to add text.				
Ansv	wer the following quest	ions :				
1.	What is the role of po	rts and SMPS inside the CPU of	a computer system?			
2.	Write any two features	s of Windows 10.				
	How many scroll hars	are there in Word 2019? Name	them.			
3.	Trow many scron bars					
3. 4.	•	here and Cylinder tools?				





Α.	Tick	(/)	the	correct	answer	
$\sim$	IICA	\ <b>V</b> /		CULLCL	alisvaci	

11011	V ) the confect answer :			
1.	Vhich of the following panes is used to type commands?			
	(a) Inspector	(b) Editor	(c) Canvas	
2.	2. Which of the following blocks category is used to draw lines on the			
	(a) Pen	(b) Motion	(c) Sound	
3.	Which of the following	is not a block menu?		
	(a) Motion	(b) Pen	(c) Move	
4.	Which of the following	block controls the looks o	f the sprite?	
	(a) Looks	(b) Control	(c) Motion	
Write	'T' for true and 'F' for	false in the given circles	:	
1	kturtle is the extension	of the KTurtle file		

- .kturtle is the extension of the Klurtle file. Ι.
- 2. Scripts area is the place where we write the script for the Sprite.
- 3. The Repeat instructions control the execution of the program.
- Cat is the only Sprite in Scratch. 4.

#### C. Fill in the blanks:

B.

⊥.	The	command is used to hide the turtle from the canvas.
2.		_ is also called a program.
3.		_ block is used to create a duplicate copy of the Sprite.
4.	Α	is the default Sprite in Scratch.

#### **Answer the following questions:** D.

- Name the commands use to change the colour and size of the pen. 1.
- What is the difference between reset and clean commands? 2.
- 3. What do you mean by Sprite?
- What is the use of next costume block? 4.

#### Write down the uses of the following blocks: Ε.

1.	locover	
2.	when / clicked	
3.	play drum 17 for 0.25 beats	
4.	say Hello! for 2 secs	

