CLASS III

COMPUTERS

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Chapter -1 :

The computer system

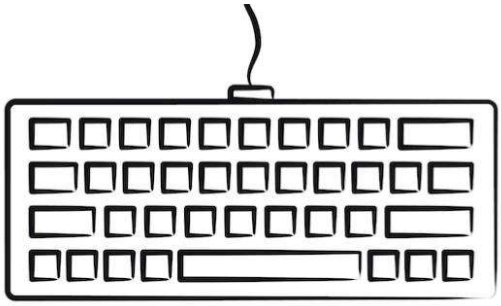
Meaning of computer

A computer is an electronic machine which is made up of various devices that help you to enter the data (input) through keyboard a mouse process it using the CPU and give the result (output) which can be seen on the monitor or printer.

A computer works in the IPO cycle- Input process output.

Input – The data and instructions we give to the computer is called as input. The device that is used to send input to the computer is an input device.

Eg- keyboard mouse and scanner



Process- The computer takes action on the data entered bt the user. It converts the data into meaningful information with the help of the

processor which is the CPU. This conversion of data into information is called processing. CPU has three parts-

ALU (Arithmetic logic unit)- the ALU does arithmetic calculations like addition, subtraction, multiplication and division and so on.

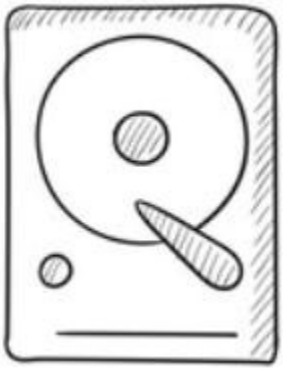
MU(Memory Unit)- The MU stores data and instructions given to the computer and the result of the processing.

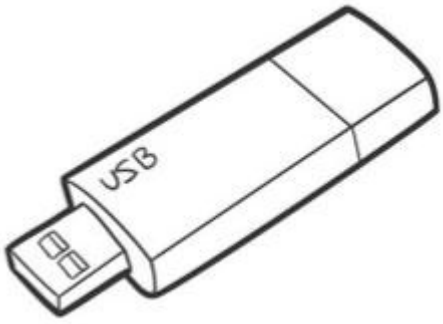
CU (Control Unit)- The CU coordinates between all the parts of the CPU

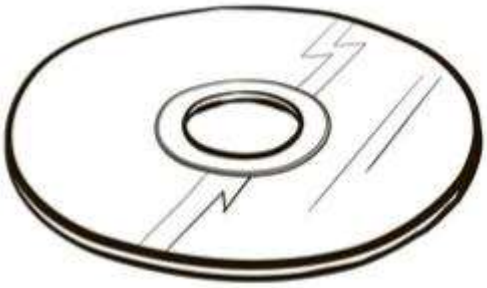
Output- The result which we get after processing the data and instructions is called output. The output which is displayed on the screen of the monitor is called the soft copy. The printout of the soft copy on paper is called the hard copy.

Eg- monitor, printer, speaker etc.

Storage- when you have finished working with your data you can store it in a more permanent form call storage hard disk, DVD, pendrive etc







are storage devices.

<u>Features of a computer-</u>

1. Computer works at a very high speed it does calculation faster than a human being .

2. Computer always gives accurate results so whatever input we give it gives accurate results.
3. Computer is free from tiredness unlike human beings it can work with same efficiency for a long time.
4. The best thing about a computer is its large memory but it stores a huge amount of information that can be retrieved quickly and easily when needed.
5. A computer is a multipurpose machine that performs a variety of task and is used in almost all fields.

Types of computers-

1. Microcomputers- these computers are made to be used by one person at a time desktop laptop tablet and smartphone are called microcomputers.
2. Minicomputers- this computers are small general purpose computers having the capability to serve number of users simultaneously
3. Mainframe computers - this computers are very large past and power computer some mainframe computers are so big that they require as much large space as that of a room.
4. Supercomputers - these are the largest and fastest of all types of computers they can process very large amount of data quickly they are used in very big organisation and government departments to do task such as weather forecasting in rocket launching PARAM was India's first supercomputer developed in 1991.

Book exercises.

A. Tick the correct option.

1. Which of the following can do all arithmetic calculations?-ALU
   a.CU. b. ALU. c MU

2. Which of the following is known as India's first supercomputer?-PARAM
   a.Pratyush. b.PARAM c. Server
3. A computer gives ____ results.- accurate
a false. b.incorrect. c.accurate
4.The data or instructions we give to the computer is called –input
a.input. b.output. c.storage

B. Fill in the blanks .

(Hard copy, micro, information, CU, CPU)

1. Desktop, laptop, and tablet computers are _____ computers.
2. The _____ coordinates between all the parts of the CPU.
3. The memory of the _____ stores data and instructions.
4. The meaningful and organized form of data is called _____.
5. A printout of the soft copy on paper is called the _____ of the output.

C. Write true or false.

1. The computer is a multipurpose machine. -TRUE

2. The working speed of a computer is very slow.- FALSE

3.ALU does all the processing.-FALSE

4. The output which is displayed on the screen of a monitor is called the hard copy.FALSE

5. Storage is the result we get after processing.- FALSE

D. Answer in short.

1. What are the three parts of the central processing unit?

2. Name any two storage devices.

E. Answer in detail.

1. What is meant by input and output?

2. Name any three features of a computer.

3. What is supercomputer?

Chapter -2:

Computer Hardware and Software

A computer consists of two components

– hardware and software

Hardware – The parts of the computer that we can touch is called hardware. All the input, processing, output and storage devices such as keyboard,mouse, monitor, speakers,printers, scanner,pendrive, DVD are hardware parts of a computer.

Software – computer hardware cannot work by itself. It needs step by step instructions to perform a task. These step wise instructions are called software or programs. A software helps us to give input to the computer Hardware. It also helps the computer to process input and convert it into output.

Types of software

There are mainly two types of software –

1. System software
2. Application software

System software – System software controls and manages the overall activities of a computer system. The system software is like a manager of a computer system.

Operating system is an example of system software.

Application software – Application software helps us to perform a specific type of job. For example you draw and color pictures in tux paint Software, but you cannot play a movie or a song in it .

Tux paint and rhythm box are examples of application software.

GIMP is used for creating and editing photos and designs.

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Book exercise.

A. Tick the correct option

1. Which of the following is not a hardware part of a computer?- TUX PAINT

a.Speakers. b.DVD. c.Tux Paint

2. Which of the following is a system software?- LINUX

a.Impress b.Tux Paint. c.Linux

3. Which of the following is a software?- GIMP

a.Mouse. b.CPU. c.GIMP

4. The stepwise instructions are called –- PROGRAMS

a.Programs. b.Hardware. c.Computer

B. Fill in the blanks.

(Two, software, system, application, operating)

1. A computer consists of _____ components.
2. The programs that instruct the computer to do different things are called _____

3. _____ software controls and manages the overall activities of a computer system.
4. _____ software is designed to perform one or more specific type of jobs on a computer.
5. _____ system runs application software.

C. Answer in short.

1. Give one example of system software.
2. Name the application software which is used for creating and editing photos.

D. Answer in detail.

1. Define hardware and give any two examples
2. Define software and given an example.
3. Which is an application software? Give one example.

E. Rearrange the letters to get correct words.

1. RARHDWEA- HARDWARE
2. EYETMS OSATWREF- SYSTEM SOFTWARE
3. IMPRESS- IMPRESS
4. LIUNX- LINUX
5. SNCANER- SCANNER

CHAPTER – 3

INTRODUCTION TO LINUX

What is Linux?

- Linux is an open-source operating system (OS) that is widely used in servers, supercomputers, and embedded devices.

- It was created by Linus Torvalds in 1991.

History of Linux

- Linux was initially developed as a Unix-like OS for personal computers.

- It was first released in 1991 and gained popularity in the late 1990s.

Features of Linux

- Open-source and free to use.

- Highly customizable and flexible.

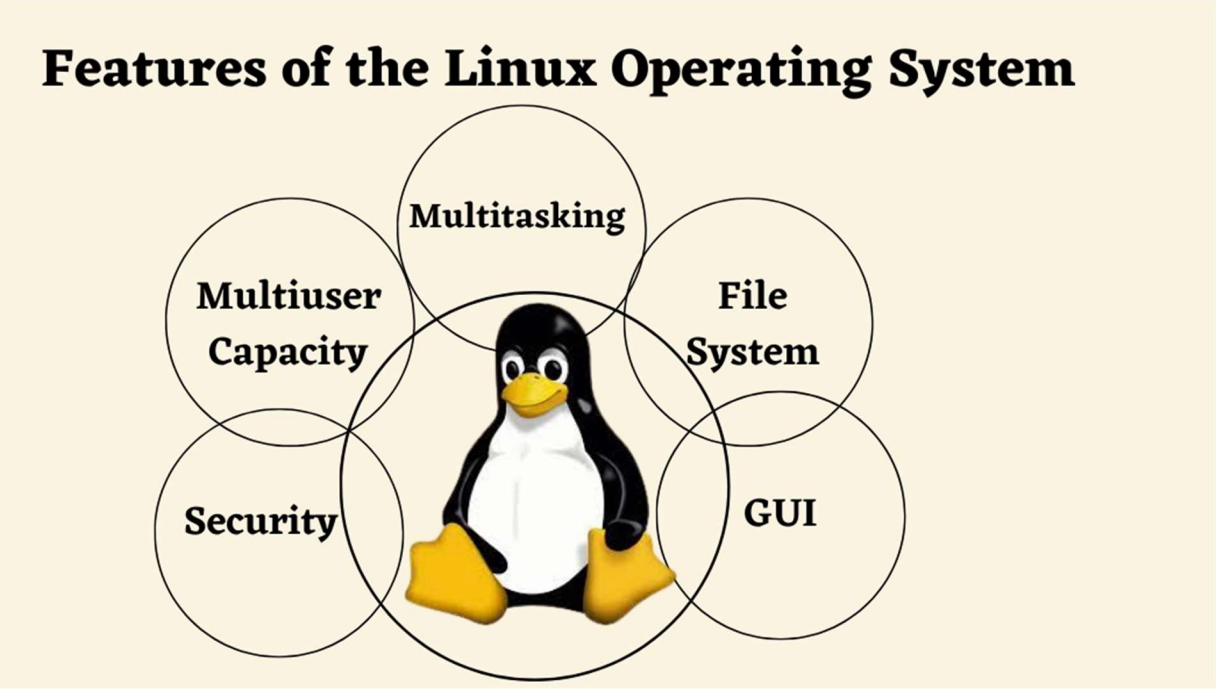
- Secure and stable.

- Supports multiple file systems and hardware platforms.

Linux Distributions

- A Linux distribution (distro) is a version of Linux that is packaged with other software and tools.

- Popular Linux distros include Ubuntu, Debian, Fedora, and CentOS.



What is Ubuntu Desktop?

Ubuntu Desktop is a special kind of computer program that helps us use our computer. It's like a magic window that shows us lots of things we can do on our computer.

What are the different parts of Ubuntu Desktop?

1. Desktop: This is the main area where we can see all our files, folders, and pictures.

2. Icons: These are little pictures on our desktop that help us open different programs, like games or painting tools.

3. Toolbar: This is the bar at the top of our screen that shows us important information, like the time and our computer's name.

4. Files and Folders: These are like our computer's filing cabinet, where we can store all our documents, pictures, and videos.

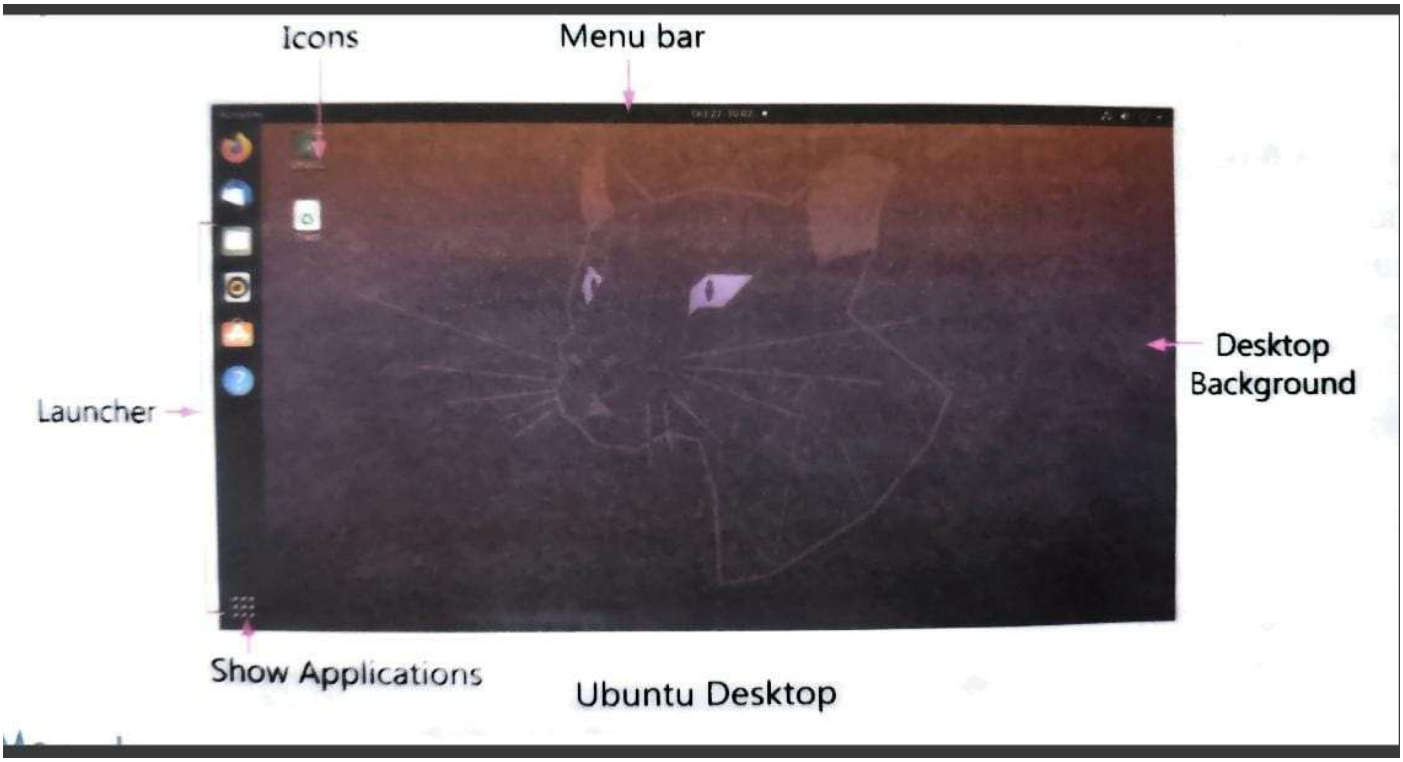
What can we do on Ubuntu Desktop?

1. Play Games: We can play lots of fun games on our computer, like puzzles, racing games, and more!

2. Paint and Draw: We can use special programs to paint and draw pictures on our computer.

3. Write Stories: We can use our computer to write stories, letters, and even emails to our friends!

4. Look at Pictures: We can look at all our favourite pictures and videos on our computer.



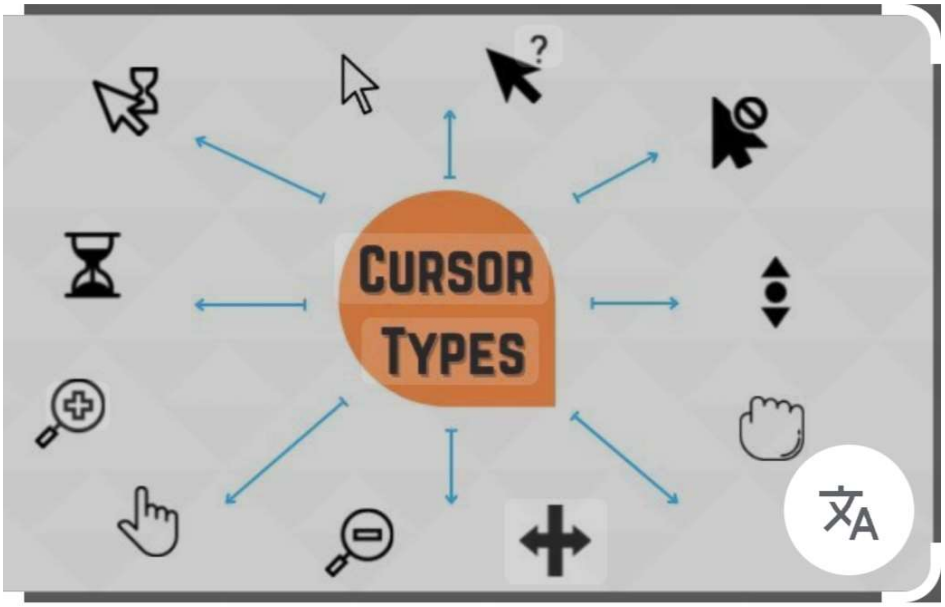
Steps to Change Desktop Background:

1. Right-click on the desktop: Click the right mouse button anywhere on the desktop.

2. Select "Change Desktop Background": A menu will appear. Click on "Change Desktop Background".

3. Choose a new background: A window will open showing different background options. You can choose from:

- Wallpapers: Pre-installed background images.
- Pictures: Your own pictures stored on the computer.



Steps to Close the Computer System:

1. Save your work: Make sure to save any open documents, pictures, or projects.

2. Close all applications: Click the "X" button on each application window to close them.

3. Click the Ubuntu logo: Click the Ubuntu logo (or your computer's logo) at the top left corner of the screen.

4. Select "Shut Down": A menu will appear. Click on "Shut Down" or "Power Off".

Activity

1. Draw a simple diagram of Ubuntu Desktop and label its different components, such as the Desktop, Icons, and Toolbar.

2. Write a short paragraph about your favourite thing to do on Ubuntu Desktop.

Exercise – chapter 3

Multiple Choice Questions

1. What is the main area on Ubuntu Desktop where we can see our files and folders?

a) Toolbar

b) Desktop

c) Icons

d) Files and Folders

Answer: b) Desktop

2. What are the little pictures on Ubuntu Desktop that help us open different programs?

a) Icons

b) Toolbars

c) Files and Folders

d) Desktop

Answer: a) Icons

3. What is the bar at the top of our screen that shows us important information?

a) Toolbar

b) Desktop

c) Icons

d) Files and Folders

Answer: a) Toolbar

4. What do you need to do to change the desktop background?

a) Right-click on the desktop

b) Left-click on the desktop

c) Double-click on the desktop

d) None of the above

Answer: a) Right-click on the desktop

5. Where can you find the "Change Desktop Background" option?

a) In the Start menu

b) In the Settings menu

c) By right-clicking on the desktop

d) None of the above

Answer: c) By right-clicking on the desktop

6. What do you need to do before shutting down the computer?

a) Save your work

b) Close all applications

c) Both a and b

d) None of the above

Answer: c) Both a and b

7. Where can you find the "Shut Down" option?

a) In the Start menu

b) In the Settings menu

c) By clicking the Ubuntu logo

d) None of the above

Answer: c) By clicking the Ubuntu logo

Fill in the blanks:

(Desktop, Linux Torvalds and 1991, open source, icons, toolbar, right click, settings, save, Ubuntu)

1. Linux is an _____ operating system.

2. Linux was created by _____ in _____.

3. The _____ is the main area on Ubuntu Desktop where we can see

our files and folders.

4. The little pictures on Ubuntu Desktop that help us open different programs are called

_____.

5. The _____ is the bar at the top of our screen that shows us

important information.

6. To change the desktop background, you need to _____ on the

desktop.

7. The "Change Desktop Background" option is available in the

_____

menu.

8. Before shutting down the computer, you need to _____ your work.

9. The "Shut Down" option is available by clicking the _____ logo.

True or False

1. Ubuntu Desktop is a type of computer hardware. (False)

2. The Ubuntu Desktop icons help us open different programs. (True)

3. The Toolbar is located at the bottom of our screen. (False)

Short Answer Questions

1. What is Ubuntu Desktop?

(Answer should include a brief description of Ubuntu Desktop as a computer program that helps us use our computer.)

2. What can we use the Ubuntu Desktop icons for?

(Answer should include a brief description of using icons to open different programs, such as games or painting tools.)

3. What is the first step to change the desktop background?

(Answer should include "Right-click on the desktop")

4. What are the different options available for changing the desktop background?

(Answer should include "Wallpapers", "Pictures", etc.)

5. What is the importance of saving your work before shutting down the computer?

(Answer should include "to prevent loss of data")

6. What happens when you shut down the computer properly?

(Answer should include "it helps keep the computer running smoothly")

7. What is the main difference between Linux and other operating systems?

8. Who created Linux and when?

9. What are some of the key features of Linux?

Activity

1. Draw a simple diagram of Ubuntu Desktop and label its different components, such as the Desktop, Icons, and Toolbar.

2. Write a short paragraph about your favourite thing to do on Ubuntu Desktop.

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CHAPTER 4 :

INTRODUCTION TO LIBRE OFFICE WRITER

LibreOffice Writer is a word processing software that allows us to create, edit, and print documents. It's like a digital notebook where we can write stories, create reports, and make lists.

Uses of LibreOffice Writer

1. Writing Stories: We can use LibreOffice Writer to write stories, poems, and even create our own books!

2. Creating Reports: We can use LibreOffice Writer to create reports about our favorite animals, countries, or historical events.

3. Making Lists: We can use LibreOffice Writer to make lists of our favorite foods, games, or movies.

4. Designing Posters: We can use LibreOffice Writer to design posters for school events, campaigns, or awareness programs.

5. Creating Letters: We can use LibreOffice Writer to write letters to our friends, family, or even our favorite authors!

Components of the LibreOffice Writer

Title Bar

- Displays the name of the document and the LibreOffice Writer logo.

Menu Bar

- Contains menus like "File", "Edit", "View", and "Help" that provide options for working with documents.

Toolbar

- Provides quick access to frequently used tools like "New", "Open", "Save", and "Print".

Ruler

- Helps measure and align text and objects on the page.

Document Area

- Where you type and edit your document.

Status Bar

- Displays information about the document, such as page numbers and word count.

Scroll Bars

- Allow you to scroll up and down or left and right to view different parts of your document.

Some key icons on the Toolbar:

- New: Creates a new document.

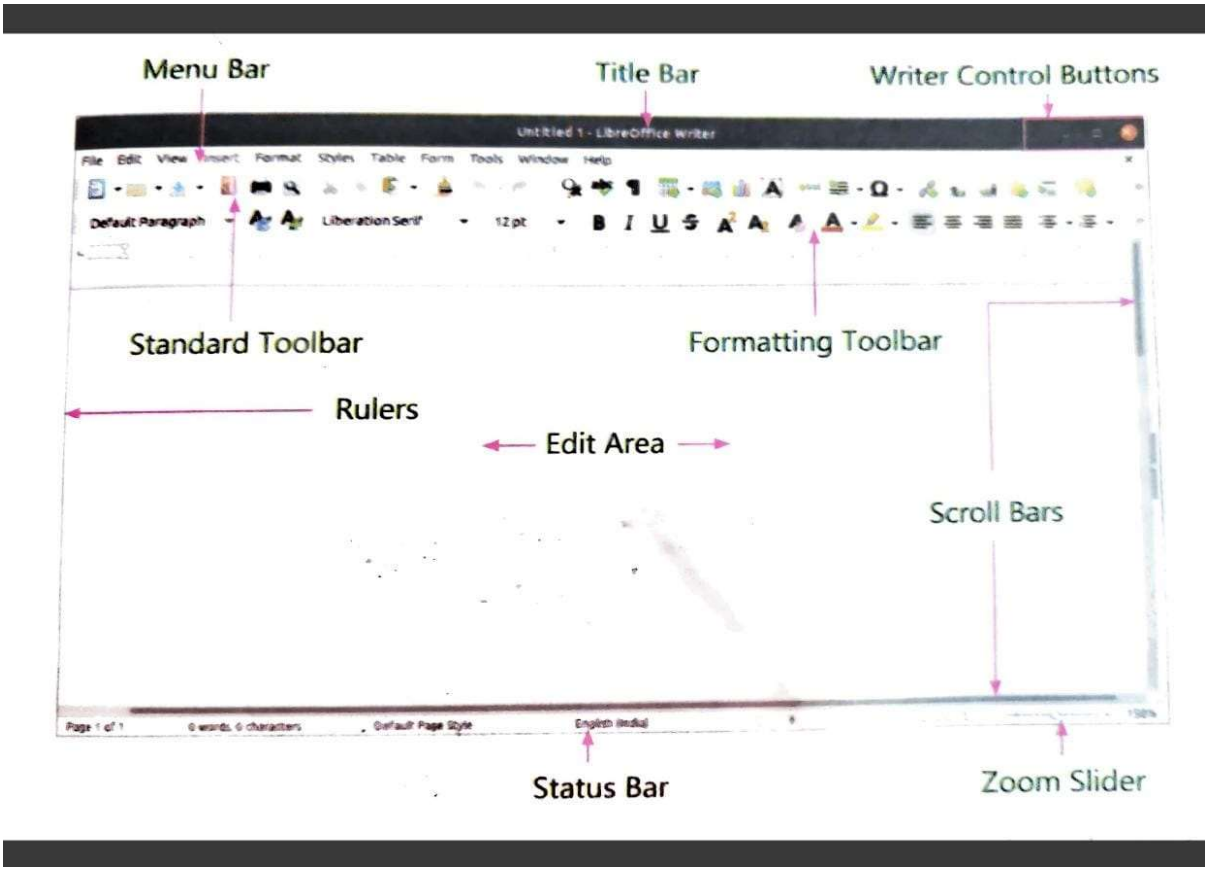
- Open: Opens an existing document.

- Save: Saves your document.

- Print: Prints your document.

- Undo: Undoes your last action.

- Redo: Redoes your last undone action.



Working with Libre Office Writer

steps for opening, creating, saving, opening, printing, and closing LibreOffice Writer-

- Opening LibreOffice Writer

1. Click on the LibreOffice Writer icon on the computer desktop or in the applications menu.

2. Wait for the program to open.

3. You will see the LibreOffice Writer window with a blank page.

- Creating a Document

1. Type a title for your document in the top line.

2. Start typing your text below the title.

3. Use the Enter key to start a new line.

4. Use the Space bar to separate words.

- Saving a Document

1. Click on the File menu at the top left corner of the window.

2. Select Save from the drop-down menu.

3. Choose a location to save your document, such as the Documents folder.

4. Type a name for your document in the File name box.

5. Click Save.

- Opening a Document

1. Click on the File menu at the top left corner of the window.

2. Select Open from the drop-down menu.

3. Navigate to the location where you saved your document.

4. Click on the document name to select it.

5. Click Open.

- Printing a Document

1. Click on the File menu at the top left corner of the window.
2. Select Print from the drop-down menu.
3. Choose the printer you want to use.
4. Select the number of copies you want to print.
5. Click Print.

- Closing LibreOffice Writer

1. Click on the File menu at the top left corner of the window.
2. Select Exit from the drop-down menu.
3. If you have unsaved work, you will be asked if you want to save it.
4. Click Yes to save your work or no to discard it.
5. LibreOffice Writer will close.

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Exercise – lesson 4

1. Multiple Choice Questions

1. What is LibreOffice Writer?

a) A painting software

b) A word processing software

c) A game software

d) A video editing software

Answer: b) A word processing software

2. What can we use LibreOffice Writer for?

a) Only for writing stories

b) Only for creating reports

c) For writing stories, creating reports, making lists, and more

d) None of the above

Answer: c) For writing stories, creating reports, making lists, and more

3. What is the purpose of the spell check feature in LibreOffice Writer?

a) To change the font size

b) To insert images

c) To correct spelling mistakes

d) To create tables

Answer: c) To correct spelling mistakes

4. How do you open LibreOffice Writer?

a) Click on the LibreOffice Writer icon on the desktop

b) Click on the Start menu and select LibreOffice Writer

c) Type "LibreOffice Writer" in the search bar

d) All of the above

Answer: d) All of the above

5. What do you need to do to save a document in LibreOffice Writer?

a) Click on the File menu and select Save

b) Click on the Edit menu and select Save

c) Click on the View menu and select Save

d) None of the above

Answer: a) Click on the File menu and select Save

6. How do you print a document in LibreOffice Writer?

a) Click on the File menu and select Print

b) Click on the Edit menu and select Print

c) Click on the View menu and select Print

d) None of the above

Answer: a) Click on the File menu and select Print

2. Short Answer Questions

1. What is LibreOffice Writer, and what can we use it for?

(Answer should include a brief description of LibreOffice Writer as a word processing software and its various uses.)

2. What are some of the basic features of LibreOffice Writer?

(Answer should include text editing, image insertion, tables and charts, and spell check.)

3. What are the steps to create a new document in LibreOffice Writer?

(Answer should include typing a title, typing text, using the Enter key, and using the Space bar.)

4. What happens when you click on the File menu and select Exit in LibreOffice Writer?

(Answer should include that LibreOffice Writer will close and that you will be asked if you want to save any unsaved work.)

3. Fill in the Blanks

Word processing, stories, file, file,

1. LibreOffice Writer is a _____ software that allows us to create, edit, and print documents.

2. We can use LibreOffice Writer to write _____, create reports, and make lists.

3. To open a document in LibreOffice Writer, you need to click on the _____ menu and select Open.

4. To print a document in LibreOffice Writer, you need to click on the _____ menu and select Print.

4. True or False

1. LibreOffice Writer is a free software. (True)

2. LibreOffice Writer can only be used for writing stories. (False)

3. LibreOffice Writer has a built-in spell check feature. (True)

4.LibreOffice Writer is a word processing software. (True)

5. You can only save documents in LibreOffice Writer, not open them. (False)

6. LibreOffice Writer has a built-in spell check feature. (True)

Activity

1. Create a new document in LibreOffice Writer and write a short story about your favorite animal.

2. Create a list of your favorite foods and drinks using LibreOffice Writer.

3. Design a poster for a school event using LibreOffice Writer.

4. Open LibreOffice Writer and create a new document.

5. Type a short story or poem and save it with a filename of your choice.

6. Open the document you just saved and make some changes to it.

7. Print the document using the Print option in the File menu.

8. Close LibreOffice Writer and reopen it to make sure your document is saved.

Points to Ponder – Shortcut Keys

Navigation

1. Ctrl + Home: Go to the beginning of the document

2. Ctrl + End: Go to the end of the document

3. Ctrl + Left/Right Arrow: Move cursor one word left/right

4. Ctrl + Up/Down Arrow: Move cursor one paragraph up/down

Editing

1. Ctrl + C: Copy selected text

2. Ctrl + X: Cut selected text

3. Ctrl + V: Paste copied/cut text

4. Ctrl + Z: Undo last action

5. Ctrl + Y: Redo last undone action

Formatting

1. Ctrl + B: Bold selected text
2. Ctrl + I: Italicize selected text
3. Ctrl + U: Underline selected text

Saving and Printing

1. Ctrl + S: Save document
2. Ctrl + P: Print document

Other

1. F1: Open Help menu
2. Ctrl + N: New document
3. Ctrl + O: Open document

CHAPTER 5

Introduction to Tux Paint

What is Tux Paint?

Tux Paint is a free and fun painting software that allows us to create and edit pictures using our computer.

Features of Tux Paint

1. Easy to use: Tux Paint has a simple and intuitive interface that makes it easy for kids to use.

2. Variety of tools: Tux Paint offers a range of painting tools, including brushes, shapes, and stamps.

3. Colorful palette: Tux Paint has a wide range of colors to choose from, making it perfect for creating bright and colorful artwork.

4. Undo and redo: Tux Paint allows us to undo and redo our actions, making it easy to experiment and try new things.

Uses of Tux Paint

1. Creating artwork: Tux Paint is perfect for creating artwork, such as paintings, drawings, and collages.

2. Designing cards and posters: Tux Paint can be used to design cards and posters for special occasions.

3. Illustrating stories: Tux Paint can be used to illustrate stories and create comics.

4. Having fun: Most importantly, Tux Paint is a fun and creative way to express ourselves and explore our imagination!

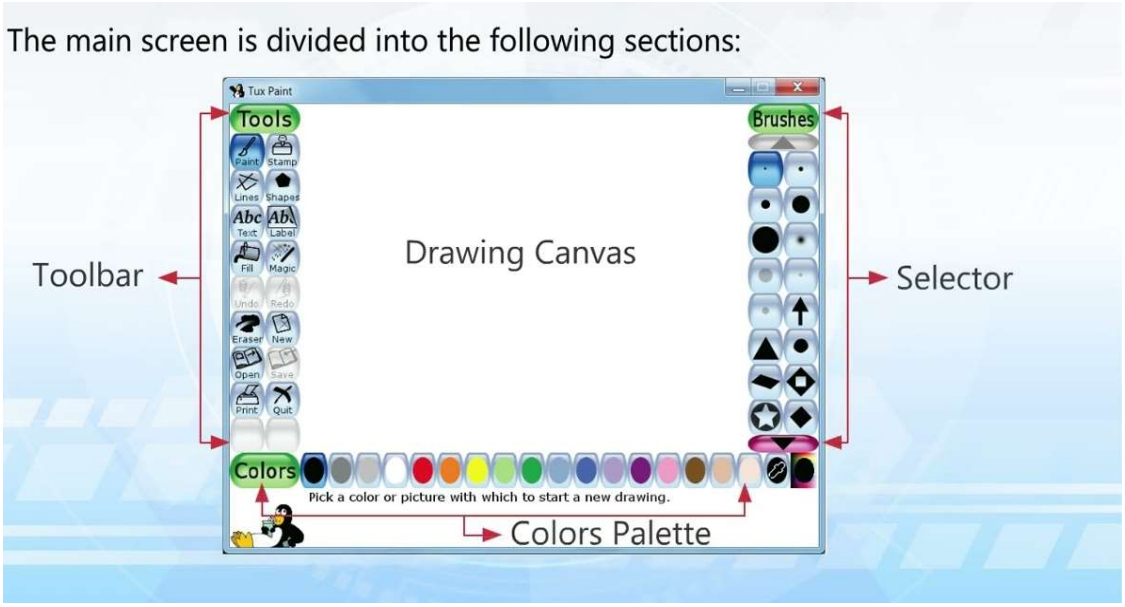
Basic Components of Tux Paint

1. Toolbar: The toolbar provides access to Tux Paint's various tools and features.

2. Canvas: The canvas is the area where we create our artwork.

3. Color palette: The color palette allows us to choose from a range of colors.

4. Undo and redo buttons: The undo and redo buttons allow us to undo and redo our actions.



Tools in Tux Paint

Drawing Tools

1. Brush: Use the brush tool to paint and draw on the canvas.

2. Eraser: Use the eraser tool to remove mistakes or unwanted parts of your artwork.

3. Line: Use the line tool to draw straight lines.

4. Shape: Use the shape tool to draw shapes like squares, circles, and triangles.

Color Tools

1. Color Palette: Choose from a variety of colors to use in your artwork.

2. Fill: Use the fill tool to fill a shape or area with a color.

Stamp Tools

Stamp: Use the stamp tool to add fun images like animals, shapes, and symbols to your artwork.

Text Tools

Text: Use the text tool to add words or sentences to your artwork.

Other Tools

1. Undo: Use the undo tool to go back to a previous version of your artwork.

2. Redo: Use the redo tool to go forward to a newer version of your artwork.

3. Save: Use the save tool to save your artwork with a filename of your choice.

Fill effect in the Magic tool in Tux Paint

Fill Effect

The Fill effect in the Magic tool is used to fill a closed shape or area with a color or pattern.

How to use the Fill effect:

1. Select the Magic tool from the toolbar.
2. Choose the Fill effect from the Magic tool menu.
3. Select the color or pattern you want to use to fill the shape or area.
4. Click on the shape or area you want to fill.

Smudge Effect

The Smudge effect in Tux Paint is used to smudge or blur colors together.

How to use the Smudge effect:

1. Select the Magic tool from the toolbar.
2. Choose the Smudge effect from the Magic tool menu.
3. Select the brush size and shape you want to use.
4. Click and drag on the artwork to smudge the colors.

Real Rainbow Effect

The Real Rainbow effect in Tux Paint is used to create a realistic rainbow effect.

How to use the Real Rainbow effect:

1. Select the Magic tool from the toolbar.
2. Choose the Real Rainbow effect from the Magic tool menu.
3. Select the size and shape of the rainbow you want to create.
4. Click on the artwork to add the rainbow.

Foam Effect

The Foam effect in Tux Paint is used to create a foamy, bubbly texture.

How to use the Foam effect:

1. Select the Magic tool from the toolbar.

2. Choose the Foam effect from the Magic tool menu.

3. Select the brush size and shape you want to use.

4. Click and drag on the artwork to add the foam effect.

Mosaic Effect

The Mosaic effect in Tux Paint is used to create a mosaic, tile-like effect.

How to use the Mosaic effect:

1. Select the Magic tool from the toolbar.

2. Choose the Mosaic effect from the Magic tool menu.

3. Select the tile size and shape you want to use.

4. Click on the artwork to add the mosaic effect.

Undo and Redo tools in Tux Paint

- Undo Tool

The Undo tool is used to go back to a previous version of your artwork.

How to use the Undo tool:

1. Click on the "Undo" button in the toolbar.

2. Your artwork will go back to its previous state.

Why use the Undo tool?

1. To correct mistakes.

2. To try again if you don't like what you've done.

- Redo Tool

The Redo tool is used to go forward to a newer version of your artwork.

How to use the Redo tool:

1. Click on the "Redo" button in the toolbar.

2. Your artwork will go forward to its newer state.

Why use the Redo tool?

1. To restore changes, you made after using the Undo tool.

2. To continue working on your artwork after correcting mistakes.

Creating a Slideshow in Tux Paint

Step 1: Create Your Slides

1. Open Tux Paint and create a new picture.
2. Draw or paint something on the picture.
3. Save the picture with a name, like "slide1".

Step 2: Create More Slides

1. Repeat steps 1-3 to create more pictures (slides).
2. Save each picture with a different name, like "slide2", "slide3", etc.

Step 3: Create a Slideshow

1. Go to the "File" menu and select "Slideshow".
2. Choose the pictures (slides) you want to include in your slideshow.
3. Click "OK" to create the slideshow.

Step 4: View Your Slideshow

1. Click on the "Play" button to start the slideshow.
2. Watch your slides appear one after the other.

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Exercise – lesson 3

Multiple Choice Questions

1. What is Tux Paint?

a) A word processing software

b) A painting software

c) A game software

d) A video editing software

Answer: b) A painting software

2. What is the purpose of the toolbar in Tux Paint?

a) To choose colors

b) To undo and redo actions

c) To access tools and features

d) To save artwork

Answer: c) To access tools and features

3. What is the canvas in Tux Paint?

a) The area where we choose colors

b) The area where we access tools and features

c) The area where we create our artwork

d) The area where we save our artwork

Answer: c) The area where we create our artwork

4. What is the tool used to paint and draw on the canvas?

a) Eraser

b) Brush

c) Line

d) Shape

Answer: b) Brush

5. Which tool is used to remove mistakes or unwanted parts of your artwork?

a) Brush

b) Eraser

c) Fill

d) Text

Answer: b) Eraser

6. What is the tool used to add fun images like animals, shapes, and symbols to your artwork?

a) Brush

b) Eraser

c) Stamp

d) Fill

Answer: c) Stamp

7. What is the purpose of the Smudge effect in the Magic tool?

a) To create a foamy texture

b) To blur colors together

c) To fill a shape with color

d) To create a mosaic effect

Answer: b) To blur colors together

8. Which effect is used to create a realistic rainbow?

a) Real Rainbow

b) Foam

c) Mosaic

d) Smudge

Answer: a) Real Rainbow

9. What does the Smudge effect do in Tux Paint?

a) Creates a rainbow

b) Fills a shape with color

c) Blurs colors together

d) Creates a mosaic effect

Answer: c) Blurs colors together

10. Which effect creates a realistic rainbow in Tux Paint?

a) Smudge

b) Foam

c) Mosaic

d) Real Rainbow

Answer: d) Real Rainbow

11. What does the Foam effect do in Tux Paint?

a) Creates a mosaic effect

b) Fills a shape with color

c) Creates a foamy texture

d) Blurs colors together

Answer: c) Creates a foamy texture

12. What does the Mosaic effect do in Tux Paint?

a) Creates a foamy texture

b) Fills a shape with color

c) Creates a mosaic, tile-like effect

d) Blurs colors together

Answer: c) Creates a mosaic, tile-like effect

13. What does the Undo tool do in Tux Paint?

a) Deletes the entire picture

b) Goes back to a previous version of the picture

c) Saves the picture

d) Prints the picture

Answer: b) Goes back to a previous version of the picture

14. What does the Redo tool do in Tux Paint?

a) Goes back to a previous version of the picture

b) Goes forward to a newer version of the picture

c) Deletes the entire picture

d) Saves the picture

Answer: b) Goes forward to a newer version of the picture

15. What is a slideshow in Tux Paint?

a) A single picture

b) A collection of pictures shown one after the other

c) A video

d) A game

Answer: b) A collection of pictures shown one after the other

16. How do you create a slideshow in Tux Paint?

a) By clicking on the "Slideshow" button

b) By selecting "File" > "Slideshow"

c) By clicking on the "New" button

d) By selecting "Edit" > "Slideshow"

Answer: b) By selecting "File" > "Slideshow"

Short Answer Questions

1. What are some of the features of Tux Paint?

(Answer should include easy-to-use interface, variety of tools, colorful palette, and undo and redo features.)

2. What are some of the uses of Tux Paint?

(Answer should include creating artwork, designing cards and posters, illustrating stories, and having fun.)

3. What is the purpose of the color palette in Tux Paint?

(Answer should include choosing colors for artwork.)

4. What is the difference between the undo and redo tools in Tux Paint?

(Answer should include going back to a previous version and going forward to a newer version of artwork.)

5. What is the difference between the Fill and Mosaic effects in the Magic tool?

(Answer should include that Fill fills a shape with a solid color or pattern, while Mosaic creates a tile-like effect.)

6. How do you use the Smudge effect in the Magic tool?

(Answer should include selecting the Smudge effect, choosing a brush size and shape, and clicking and dragging on the artwork.)

7. How do you use the Smudge effect in Tux Paint?

(Answer should include selecting the Smudge effect, choosing a brush size and shape, and clicking and dragging on the artwork.)

8. What is the difference between the Foam and Mosaic effects in Tux Paint?

(Answer should include that Foam creates a foamy texture, while Mosaic creates a tile-like effect.)

9. Why is the Undo tool useful in Tux Paint?

(Answer should include correcting mistakes or trying again.)

10. How does the Redo tool work in Tux Paint?

(Answer should include going forward to a newer version of the picture after using the Undo tool.)

11. What are the steps to create a slideshow in Tux Paint?

(Answer should include: create multiple pictures, select "File" > "Slideshow", choose the pictures to include, and click "OK".)

12. What is the purpose of the slideshow feature in Tux Paint?

(Answer should include: to display multiple pictures in a sequence, to create a presentation, or to tell a story.)

True or False

1. Tux Paint is a word processing software. (False)

2. Tux Paint has a wide range of colors to choose from. (True)

3. Tux Paint allows us to undo and redo our actions. (True)

4.The stamp tool is used to add text to your artwork. (False)

5. The fill tool is used to fill a shape or area with a color. (True)

6. The undo tool is used to go forward to a newer version of your artwork. (False)

7. The Undo tool deletes the entire picture. (False)

8. The Redo tool goes back to a previous version of the picture. (False)

9. The Undo and Redo tools are useful for correcting mistakes and trying again. (True)

10. A slideshow in Tux Paint can only include one picture. (False)

11. To create a slideshow in Tux Paint, you need to select "Edit" > "Slideshow". (False)

12. A slideshow in Tux Paint is a collection of pictures shown one after the other. (True)

Fill in the Blanks

Painting, toolbar, bush, eraser, real rainbow, smudge, foam, mosaic, undo, redo, file, pictures.

1. Tux Paint is a free and fun _____ software.

2. The _____ provides access to Tux Paint's various tools and features.

3. The _____ tool is used to paint and draw on the canvas.

4. The _____ tool is used to remove mistakes or unwanted parts of your artwork.

5. The _____ effect in Tux Paint creates a realistic rainbow.

6. The _____ effect in Tux Paint blurs colors together.

7. The _____ effect in Tux Paint creates a foamy texture.

8. The _____ effect in Tux Paint creates a mosaic, tile-like effect.

9. The _____ tool is used to go back to a previous version of the picture.

10. The _____ tool is used to go forward to a newer version of the picture.

11. To create a slideshow in Tux Paint, you need to select _____ > "Slideshow".

12. A slideshow in Tux Paint is a collection of _____ shown one after the other.

Activity

1. Create a new artwork using Tux Paint and save it with a filename of your choice.

2. Open Tux Paint and practice using the different effects in the Magic tool, such as Fill, Foam, Mosaic, Smudge, and Real Rainbow.

3. Open Tux Paint and create 3-5 new pictures. Select "File" > "Slideshow" to create a slideshow. Choose the pictures to include in the slideshow and click "OK". View your slideshow and make any necessary adjustments.

CHAPTER – 6

AI – ENABLED DEVICES

What is Artificial Intelligence (AI)?

Artificial Intelligence is like a super smart computer that can think and learn like humans. Just like how you can teach a dog new tricks, we can teach computers to do new things using AI.

How is AI used in our daily life?

1. Virtual Assistants: You might have seen your parents using virtual assistants like Siri, Google Assistant, or Alexa. These assistants use AI to understand our voice commands and do tasks for us.

2. Image Recognition: Have you ever taken a selfie and the phone recognizes your face? That's AI at work! It helps the phone identify people, objects, and even emotions in pictures.

3. Games: Many games use AI to make the game more challenging and fun. For example, in a car racing game, the AI can make the opponent cars drive more realistically.

4. Chatbots: You might have interacted with chatbots on websites or apps. These chatbots use AI to understand our questions and give us answers.

5. Self-Driving Cars: Some cars are being designed to drive themselves using AI. They can recognize roads, traffic lights, and even pedestrians!

6. Smart Homes: Some homes have smart devices that can control the temperature, lighting, and security using AI.

smartphone is a special kind of phone that can do many things besides making calls and sending messages. It's like a small computer that you can carry with you everywhere! You can play lots of fun games on a smartphone. You can watch your favorite cartoons, movies, and videos on a smartphone. You can take pictures using a smartphone. You can listen to your favorite songs and music also. You can use a smartphone to access the internet and learn new things.

smart doorbell is a special kind of doorbell that can see, hear, and talk to people who come to your door. It's like having a magic eye that helps keep your home safe. A smart doorbell has a camera that can show you who's at the door, even if you're not at home. You can talk to people at the door using your smartphone or tablet, even if you're not at home. A smart doorbell can record videos of people who come to your door, so you can see what happened even if you're not there. If someone comes to your door, a smart doorbell can send a message to your smartphone or tablet, so you know someone's there.

A smart doorbell is a cool device that helps keep your home safe and makes it easy to answer the door, even if you're not at home.

A Smart TV is a special kind of television that can connect to the internet and do many things besides just showing TV channels. It's like having a big computer screen in your living room!You can watch your favorite TV shows, movies, and cartoons on a Smart TV. You can play games on a Smart TV, just like on a computer or gaming console. You can use a Smart TV to browse the internet, just like on a computer or tablet. You can watch your favorite YouTube videos on a Smart TV. You can connect your smartphone, tablet, or computer to a Smart TV and share pictures, videos, and music.

A driverless car, also called a self-driving car, is a special kind of car that can drive itself without a human driver. It's like having a personal chauffeur, but instead of a person, it's a computer that drives the car! A driverless car has special sensors and cameras that help it see the road and detect other cars, people, and objects. The car has a powerful computer brain that uses the information from the sensors and cameras to make decisions about how to drive. The car uses GPS and maps to navigate and find its way. Driverless cars can help reduce accidents caused by human error.

Conclusion

In this chapter, we explored some amazing smart technologies that are changing our world. We learned about smartphones, smart doorbells, smart TVs, and even driverless cars! These technologies are not only making our lives easier and more convenient, but they're also helping us stay safe and connected. As we continue to learn and grow, remember to always be curious, keep exploring, and stay excited about the amazing possibilities that technology has to offer.

CHAPTER – 7

AI – ENABLED DEVICES

BOOK EXERCISES

A. Answer the following questions in short.

Q1. What is the full form of AI?

Ans – The full form of AI is Artificial Intelligence.

Q2. Name some popular AI devices.

Ans – Some popular AI devices are smartphones, smartwatches, smart doorbells, smart T.V, driverless cars, etc.

Answer the following questions in detail.

Q1. What is a smartphone, and what are some of its main functions?

Ans- A smartphone is a special kind of phone that can connect to the internet and do many things besides just making calls and sending messages. Some of its main functions include making calls, sending messages, browsing the internet, taking pictures, and playing games.

Q2. What is a smart doorbell, and how does it work?

Ans - A smart doorbell is a special kind of doorbell that can see, hear, and talk to people who come to your door. It works by using sensors and cameras to detect motion and record video, and it can alert the homeowner through a smartphone app.

Q3. What is a driverless car, and what are some of its benefits?

Ans - A driverless car is a special kind of car that can drive itself without a human driver. Some of its benefits include safer roads, more free time for passengers, and help for people with disabilities who may not be able to drive themselves.

B. Fill in the blank

(Internet, motion sensor, GPS, Internet, think)

1.A smartphone is a special kind of phone that can connect to the _____.

2. A smart doorbell has a special feature called _____ that allows it to detect motion.

3. A driverless car uses _____ to navigate and find its way.

4. A Smart TV can connect to the _____ to stream videos and play games.

5. Artificial Intelligence (AI) is a type of technology that allows computers to _____ and learn like humans.

C. Multiple choice questions.

1. What is the main function of a smartphone?

A) Only making calls

B) Only sending messages

C) Connecting to the internet and doing many things

D) Only playing games

Correct Answer: C) Connecting to the internet and doing many things

2. What is a smart doorbell equipped with?

A) Only a camera

B) Only a motion sensor

C) Both a camera and a motion sensor

D) Neither a camera nor a motion sensor

Correct Answer: C) Both a camera and a motion sensor

3. What technology is used in driverless cars to navigate?

A) GPS

B) Internet

C) Artificial Intelligence

D) All of the above

Correct Answer: D) All of the above

4. What can you do on a Smart TV?

A) Only watch TV shows

B) Only play games

C) Stream videos, play games, and browse the internet

D) None of the above

Correct Answer: C) Stream videos, play games, and browse the internet

5. What is Artificial Intelligence (AI)?

A) A type of computer hardware

B) A type of computer software

C) A type of technology that allows computers to think and learn like humans

D) None of these

Correct Answer: C) A type of technology that allows computers to think and learn like humans

D. State True or False.

1. A smartphone can only make calls and send messages. (F)
2. A smart doorbell has a motion sensor that can detect movement. (T)
3. Driverless cars use GPS to navigate and find their way. (T)

4. A Smart TV can only watch TV shows. (F)
5. Artificial Intelligence (AI) is a type of technology that allows computers to think and learn like humans. (T)

CHAPTER 7

STEPWISE - THINKING

Do you know how computers solve problems? They follow a special set of instructions, one step at a time! This is called stepwise thinking.

Why is Stepwise Thinking Important?

Stepwise thinking is essential for problem-solving in computer science because it helps us:

- Break down complex problems into smaller parts

- Identify the steps needed to solve each part

- Write clear and precise instructions (algorithms) to solve the problem

- Avoid mistakes and errors by following each step carefully

Real-Life Examples of Stepwise Thinking

You might be surprised to know that stepwise thinking is used in many real-life situations, such as:

- Following a recipe to cook a meal

- Assembling a piece of furniture using instructions

- Solving a puzzle or playing a game that requires strategic thinking

Here are some examples to explain the concept of stepwise thinking:

Example 1: Making a Peanut Butter and Jelly Sandwich

1. Get two slices of bread.

2. Open the peanut butter jar.

3. Spread peanut butter on one slice of bread.

4. Open the jelly jar.

5. Spread jelly on the other slice of bread.

6. Put the two slices of bread together.

Example 2: Brushing Your Teeth

1. Get your toothbrush.

2. Squeeze toothpaste on the toothbrush.

3. Brush your teeth in circular motions.

4. Brush your tongue and the roof of your mouth.

5. Spit out the toothpaste.

6. Rinse your mouth with water.

These examples illustrate how stepwise thinking can be applied to various everyday tasks, problems, and activities. By breaking down complex tasks into smaller, manageable steps, we can achieve our goals more efficiently and effectively.

What is a Loop?

A loop is a programming concept that allows a set of instructions to be repeated over and over again. It's like a merry-go-round that keeps going around in a circle until it's told to stop! Loops are useful when we need to perform a task multiple times.

importance of problem-solving and stepwise thinking:

Problem-solving and stepwise thinking are essential skills that help us navigate the complexities of life. By developing these skills, we can improve our critical thinking, analytical skills, and productivity.

It is a systematic process that requires analyzing the problem, generating solutions, evaluating the options, and implementing the best solution. Problem-solving is essential in real-life situations as it helps individuals to navigate through complex challenges, make informed decisions, and achieve their objectives. It is a valuable skill that is required in various aspects of life, including academics, career, and personal relationships.

CHAPTER 7

STEPWISE – THINKING

Book Exercises

A. Fill in the blank.

(Complexities, steps, condition, decisions, stepwise)

1. Problem-solving is a critical skill that helps us navigate the _____ of life.
2. Stepwise thinking is a systematic approach to problem-solving that helps us break down complex problems into manageable _____.
3. A loop is a programming concept that allows a set of instructions to be repeated over and over again until a certain _____ is met.

4. Critical thinking is an essential skill for problem-solving that helps us analyze situations, identify solutions, and make informed _____.
5. Algorithms are a set of instructions that are used to solve a problem in a _____ and efficient manner.

B. State true and false .

1. Problem-solving is only used in academics.(F)
2. Stepwise thinking involves breaking down complex problems into manageable steps.(T)
3. Loops are used to repeat a set of instructions only once. (F)
4. Critical thinking is not essential for problem-solving. (F)
5. Algorithms are a set of instructions that are used to solve a problem in a random manner. (F)

C. Multiple-choice questions .

1. What is problem-solving?

A) A skill used only in academics

B) A critical skill used in various aspects of life

C) A skill used only in programming

D) A skill used only in mathematics

Correct Answer: B) A critical skill used in various aspects of life

2. What is stepwise thinking?

A) A systematic approach to problem-solving that involves breaking down complex problems into manageable steps

B) A random approach to problem-solving

C) A trial-and-error approach to problem-solving

D) A intuitive approach to problem-solving

Correct Answer: A) A systematic approach to problem-solving that involves breaking down complex problems into manageable steps

3. What is a loop?

A) A programming concept that allows a set of instructions to be repeated only once

B) A programming concept that allows a set of instructions to be repeated multiple times

C) A programming concept that allows a set of instructions to be skipped

D) A programming concept that allows a set of instructions to be reversed

Correct Answer: B) A programming concept that allows a set of instructions to be repeated multiple times

4. What is critical thinking?

A) A skill that involves analyzing situations, identifying solutions, and making informed decisions

B) A skill that involves making random decisions

C) A skill that involves following instructions blindly

D) A skill that involves avoiding problems

Correct Answer: A) A skill that involves analyzing situations, identifying solutions, and making informed decisions

5. What is an algorithm?

A) A set of instructions that are used to solve a problem in a random manner

B) A set of instructions that are used to solve a problem in a stepwise and efficient manner

C) A set of instructions that are used to solve a problem in a trial-and-error manner

D) A set of instructions that are used to solve a problem in an intuitive manner

Correct Answer: B) A set of instructions that are used to solve a problem in a stepwise and efficient manner

D. Give one word answer.

1. Problem-solving - A critical skill used in various aspects of life

2. Stepwise thinking - A systematic approach to breaking down complex problems

3. Loop - A programming concept that repeats instructions

4. Critical thinking - A skill that involves analyzing situations and making informed decisions

5. Algorithm - A set of instructions that solves a problem in a stepwise manner

E. Short Answer Questions:

Q1. What is problem-solving?

Ans- Problem-solving is a critical skill used to overcome obstacles and achieve goals.

Q2. What is an algorithm?

Ans- An algorithm is a set of instructions used to solve a problem in a stepwise manner.

F. Long Answer Questions:

Q1.Explain the concept of problem-solving and its importance in real-life situations.

Ans - Problem-solving is a critical skill that involves identifying and overcoming obstacles to achieve a specific goal. It is a systematic process that requires analyzing the problem, generating solutions, evaluating the options, and implementing the best solution. Problem-solving is essential in real-life situations as it helps individuals to navigate through complex challenges, make informed decisions, and achieve their objectives. It is a valuable skill that is required in various aspects of life, including academics, career, and personal relationships.

Q2. Describe the concept of stepwise thinking and its application in computer programming.

Ans - Stepwise thinking is a systematic approach to problem-solving that involves breaking down complex problems into manageable steps. It is a logical and methodical process that requires analyzing the problem, identifying the key steps, and implementing the solution in a sequential manner. In computer programming, stepwise thinking is essential for writing algorithms, which are sets of instructions that solve a specific problem. Programmers use stepwise thinking to break down complex problems into smaller, manageable parts, and then write code to implement the solution.

Q3. Explain the concept of algorithms and their role in computer programming.

Ans - An algorithm is a set of instructions that solves a specific problem in a stepwise manner. It is a well-defined procedure that takes some input, processes it, and produces a corresponding output. Algorithms are essential in computer programming as they provide a systematic approach to solving complex problems. They are used to perform various tasks, such as sorting data, searching for information, and solving mathematical equations. Algorithms are written in a programming language and are executed by a computer to produce the desired output.

Computer class 3

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Chapter 5- Tux Paint

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Chapter 6- AI Enabled Devices

Chapter 7- Stepwise Thinking