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DAV PUBLIC SCHOOL DVC, MTPS, BANKURA, W.B.

Study Materials
&
Assignment
For the Session: 2020-21

NAME _____

CLASS/ SECTION - **IV** _____

ROLL NO- _____

Label the following computer System

Now that you have labeled all the parts of a computer correctly, write any five ways how a computer is used in your school.

1. _____

2. _____

3. _____

4. _____

5. _____

The above mentioned points show that a computer does a lot of jobs for us.

Let us now learn about the working of a computer in this chapter.

COMPUTER AND ITS WORKING

Students, do you like coffee shake? Do you know how is it prepared?

To prepare a coffee shake, we need to follow a few steps as shown below:

Step I	Step II	Step III
Put milk, sugar, coffee and ice in a jar.	Mix all the ingredients with the help of a mixer.	The coffee shake is ready.
INPUT	PROCESS	OUTPUT

We first **Input** the ingredients, then, **Process** them and finally, we get the **Output**, i.e. coffee shake. Similarly, a computer also works in three steps:

STEP I INPUT → **STEP II PROCESS** → **STEP III OUTPUT**

The steps mentioned above will be discussed in detail in this chapter.

DEVICES OF A COMPUTER

A computer requires some devices for its working. These are categorised as—
Input Devices, **Processing Device** and **Output Devices**.

Let us study them one by one.

1. Input Devices

We all know that computer is a machine. It cannot do anything by itself. We have to tell a computer what to do. That means, we have to give it an **Input** (Step I). Let us first understand the term **Input** by the given example.

If we want a computer to add two numbers, say 10 and 12, then, we have to type these two numbers with a plus sign '+' in between.

Here,

- the numbers, 10 and 12 are the **Data.**
- 10 + 12 is the **Instruction.**

Thus, the data or instruction given to a computer to do something is called **Input**. The devices that help a user to give input to a computer are called **Input Devices.**

Keyboard and **Mouse** are the two most commonly used input devices. We have already used Keyboard and Mouse while working in MS-Paint and WordPad in Class–III.

Some other Input Devices are:

Input Devices		Uses
Scanner		It works like a photocopier machine and saves paper.
Joystick		It is used for playing games.
Touch Screen		It controls a computer by simply touching the screen by a finger.
Microphone		It is used to input sound.
Webcam		It is used for sharing images and videos on the Internet.

Activity

Go to an ATM along with your parents. Tick (✓) the input device that you find there.

- Touch Screen ☐
- Joystick ☐

2. Processing Device

Now, the Input, i.e. the instruction 10 + 12 gets **processed** (Step II) in the other part, i.e. Central Processing Unit (CPU) of a computer.
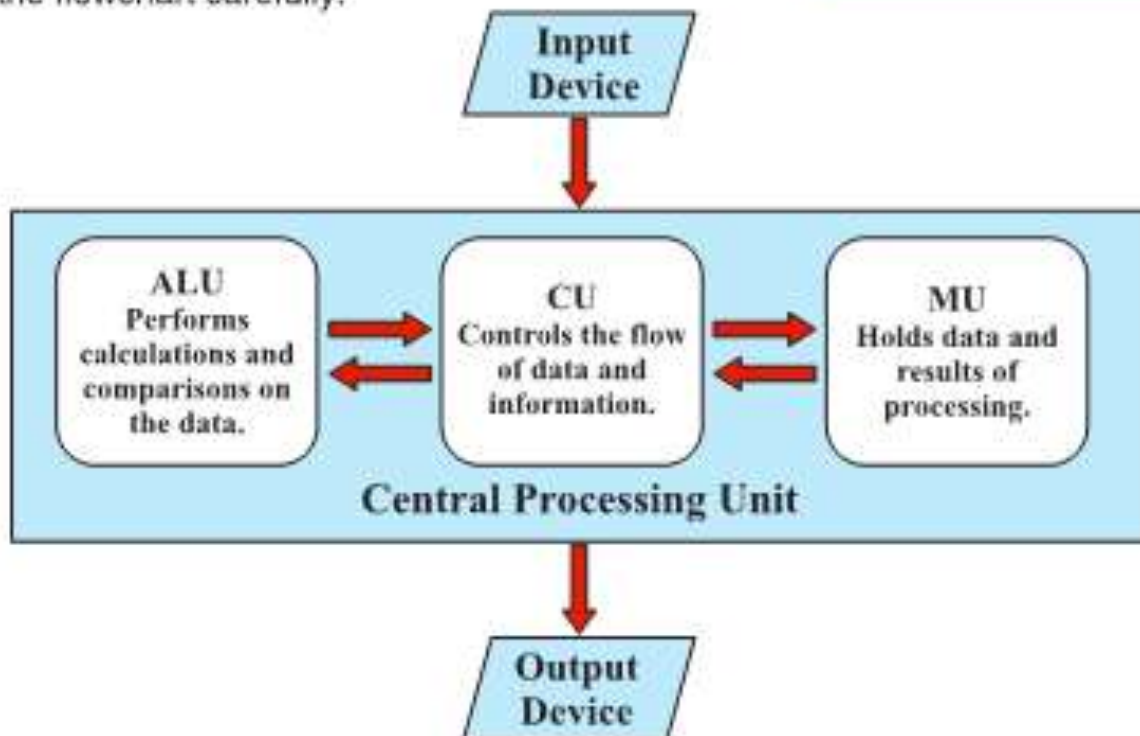
A **Central Processing Unit (CPU)** is a **Processing Device** that processes instructions entered through the input devices.

A CPU processes instructions using its three parts:

a. **Control Unit (CU)**

b. **Arithmetic Logical Unit (ALU)**

c. **Memory Unit (MU)**

See the flowchart carefully:

Let us understand it with the help of an example:

Step 1. The instruction 10 + 12 is entered through an input device.

Step 2. CU takes the instruction.

Step 3. CU sends the instruction to the ALU and stores it in MU.

Step 4. ALU adds 10 and 12, and calculates the result as 22.

Step 5. CU collects the answer and sends it to the MU and the output device.

3. Output Devices

Now, after processing, we get the result, i.e. the **Output** (Step III). Here, the output is 22. The devices that are used to communicate the results of the processed data to a user are called **Output Devices**.

Some of the common Output Devices are:

Output Devices	Uses
Monitor	It is used to produce soft copy output from a computer. It is of different types— • Cathode Ray Tube (CRT) • Liquid Crystal Display (LCD) • Thin Film Transistor Liquid Crystal Display (TFT LCD) • Light Emitting Diode (LED)
Printer	It is used to produce hard copy output from a computer. It is of two types— • Impact Printer (e.g. Daisy-Wheel, Dot-Matrix and Line Printers) • Non-impact Printer (e.g. Laser Printers and Ink-Jet Printers)
Speaker	It is used to produce output in the form of sound.
Headphone	It is used to produce sound. A sound can be heard by putting the headphone close to ears.
Projector	It is used to show pictures on a big screen.

Remember

• **Input/Output** can be in the form of text, pictures, sound, movies, etc.
• **Soft Copy Output** can be seen or heard through various output devices.
• **Hard Copy Output** can be obtained on a paper through printer.

Assignment-1

A. Match the following.

1. Microphone	(a) calculates and makes comparisons.
2. ALU	(b) controls the flow of data and information.
3. Speaker	(c) gives the hard copy output on a paper.
4. CU	(d) helps to listen to sound from a computer.
5. Printer	(e) inputs sound in a computer.

B. Write True or False for the given statements.

1. A monitor is an output device. _____

2. The CPU processes a received instruction. _____

3. A printer is an input device. _____

4. Dot Matrix is a type of Mouse. _____

5. A computer works in three stages. _____

C. Answer the following questions in brief.

1. Name the device that is used to share images and videos on the Internet.

2. Which device is used to produce a soft copy output?

3. Name the three steps involved in the working of a computer.

4. Name the different forms of Input/Output.

5. What do you understand by Input?

D. Answer the following questions.

1. Define Input and Output devices.

2. What is a Central Processing Unit?

3. Differentiate between the following:

   (a) Printer and Scanner   (b) Speaker and Headphone

4. Explain the three parts of a CPU.

5. Which are the two types of printers? Give examples.

Assignment-2

A. Match the following.

1. Microphone   (a) calculates and makes comparisons.

2. ALU   (b) controls the flow of data and information.

3. Speaker   (c) gives the hard copy output on a paper.

4. CU   (d) helps to listen to sound from a computer.

5. Printer   (e) inputs sound in a computer.

B. Write True or False for the given statements.

1. A monitor is an output device.   _____

2. The CPU processes a received instruction.   _____

3. A printer is an input device.   _____

4. Dot Matrix is a type of Mouse.   _____

5. A computer works in three stages.   _____
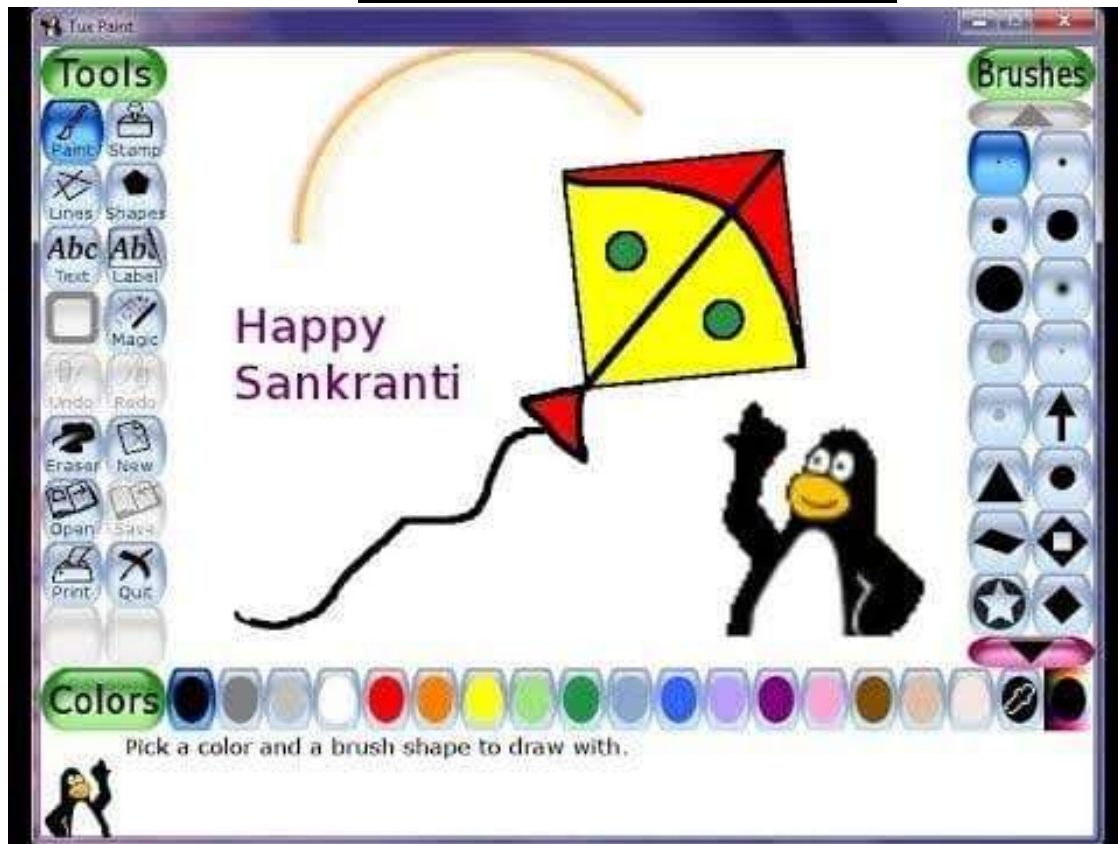
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TUX PAINT-Drawing

PRACTICAL ASSIGNMENT-1

PRACTICAL ASSIGNMENT-2

PRACTICAL ASSIGNMENT-3

PRACTICAL ASSIGNMENT-4