TRINITY COLLEGE FOR WOMEN NAMAKKAL

Department of Physics

PROGRAMMING IN C LANGUAGE

19UPHS02-ODD Semester

Presented by

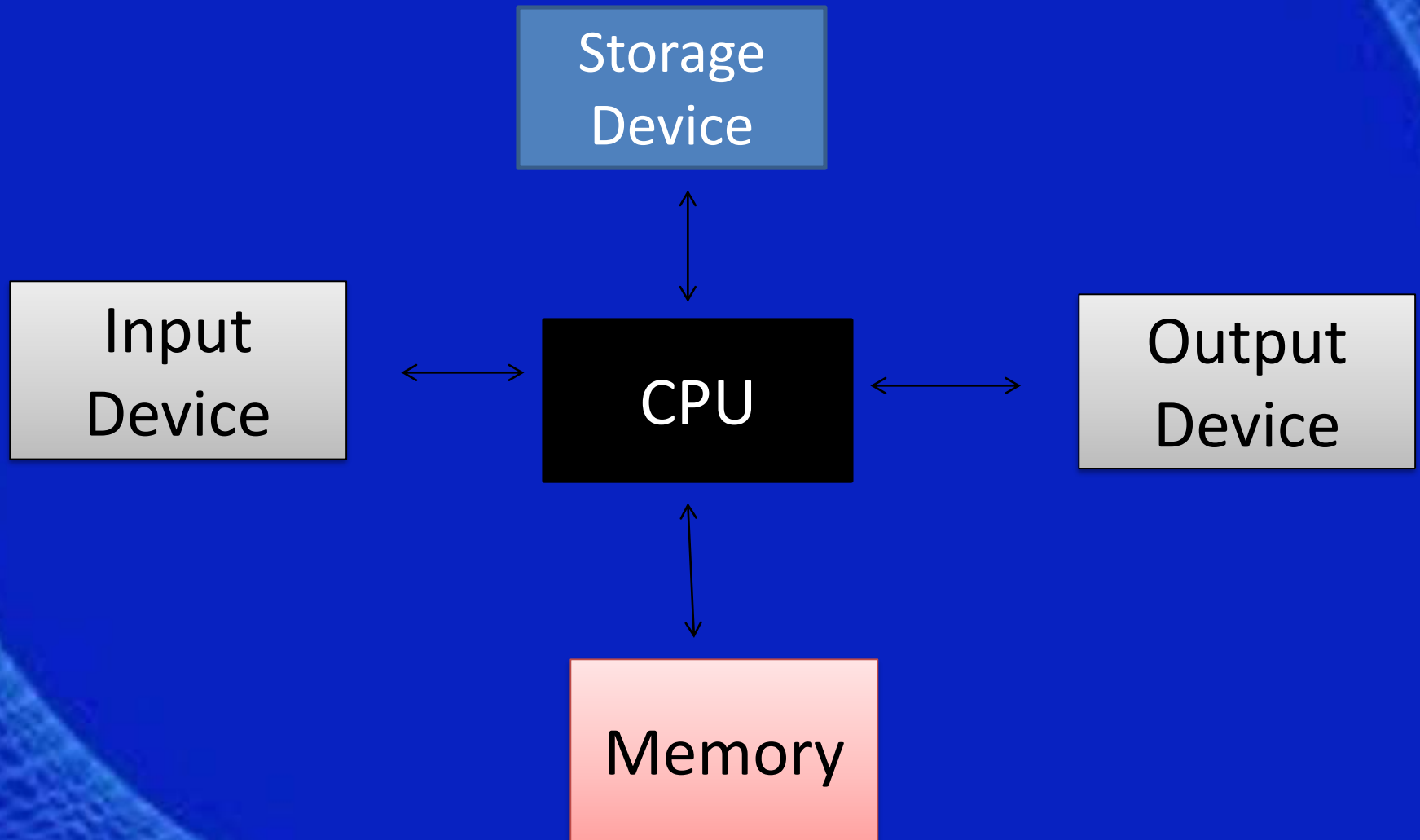Dr. R. SAKUNTHALADEVI

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Block diagram of a computer

Storage Device

Input Device

CPU

Output Device

Memory

Input unit

- 1. Keyboard – alphabet, punctuation, special keys
  - Earlier 101 keys, now a days 104, standard keyboard called query keyboard
- 2. Mouse -mechanical, opto mechanical , optical
- 3. Mouse pad
- 4. OCR -optical character recognition, read the   text.
- 5. OMR - optical mark recognition, accept pen,   pencil .
- 6. Touch screen -display screen.

Output unit

1. Moniter:

a)Monochrome : display only one   colour

b)Gray scale : display gray colour only

c) Colour: display 16 colours to 16   million colours

2. Printer : 5 types

i)   Daisy wheel – plastic or metal, very slow , can't print pictures .

ii)   Dot matrix - several pins , combination of dot form characters, cost low, low quality, very noisy

iii)   Ink jet –high quality but very slow, require special ink

iv)   Laser – high quality , very fast , print various fonts and images

v)   Line – high speed, print variety of fonts

CPU

Brain of the computer, execute program instruction

Three parts

1. ALU (Arithmetic and Logic Unit)
    i)   Perform arithmetic and logical operations
    ii)   Arithmetic - addition,subtraction,multiplication and division.
    iii)   Logical – Comparisions eg) $<$, $>$, $=$,. In logical operation result either true (1) or False (0).

2. Control unit
    Control all parts of computer
    Trans signals between input device, ALU, Memory and Output device

3. Memory Unit
        Store the data temporarily
        Capacity of the memory vary from computer to computer

4. Storage device
        Store the data permanently
        Eg) CD, DVD, Floppy disc , Pen drive , etc.

Programming languages

- The language used in communication of computer instructions
- Help to communicate user with computer
- Three types
- 1. Machine language (low level)
- 2. Assembly language(symbolic)
- 3.Procedure – oriented language (high level)

Example
Write an algorithm to add two numbers

- Step 1: Start the program

- Step 2 : Input two numbers A and B

- Step 3: Find sum of A +B

- Step 5 : Store the result

- Step 6 : Print the result

- Step 7: stop the program

Flow chart

- Diagrammatic representation
- Draw some special rules
- Symbols can be prescribed by ANSI (American National Standard Institute)
- The direction of flow chart from left to right or top to bottom
- It should be clear, neat, and easy to follow
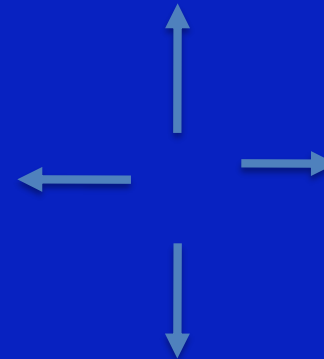
Symbols

- Start / Stop the program

- Input / Output operation

- Processing

- Decision making

Connector

- Arrows

THANK YOU

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