@Sree Vishnu Varthini

Day - 14

Embedded Systems Programming

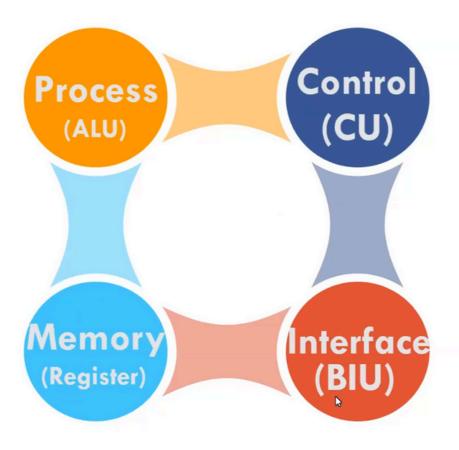
MICROPROCESSOR

- A **microprocessor** is a compact digital device on a single integrated circuit (IC) or a small set of ICs.
- It handles data processing and control functions, fetching instructions from memory, decoding and executing them, and delivering results.
- A microprocessor is built from logical circuits, which are, in turn, composed of gates made from transistors.

MICROPROCESSOR

It performs four main functions: processing, control, memory, and interfacing.

Microprocessor



CORE FUNCTIONS

• Process:

This is managed by the Arithmetic and Logic Unit (ALU), which handles all calculations and logical operations.

• Control:

The Control Unit directs the overall system operations, directing how tasks are executed within the microprocessor.

• Memory:

Responsible for data storage, this unit includes registers and various other memory components essential for holding instructions and data.

CORE FUNCTIONS

• Interface:

This unit bridges the microprocessor's internal components and connects it to external devices, enabling communication with the outside world.

KEY OPERATIONS

Leads from external memory and writes to internal memory: Fetches data or instructions from external memory and stores them internally.

External memory and writes to external memory: Sends processed data from internal memory to external storage or devices.

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