

Computer Systems

Key Words

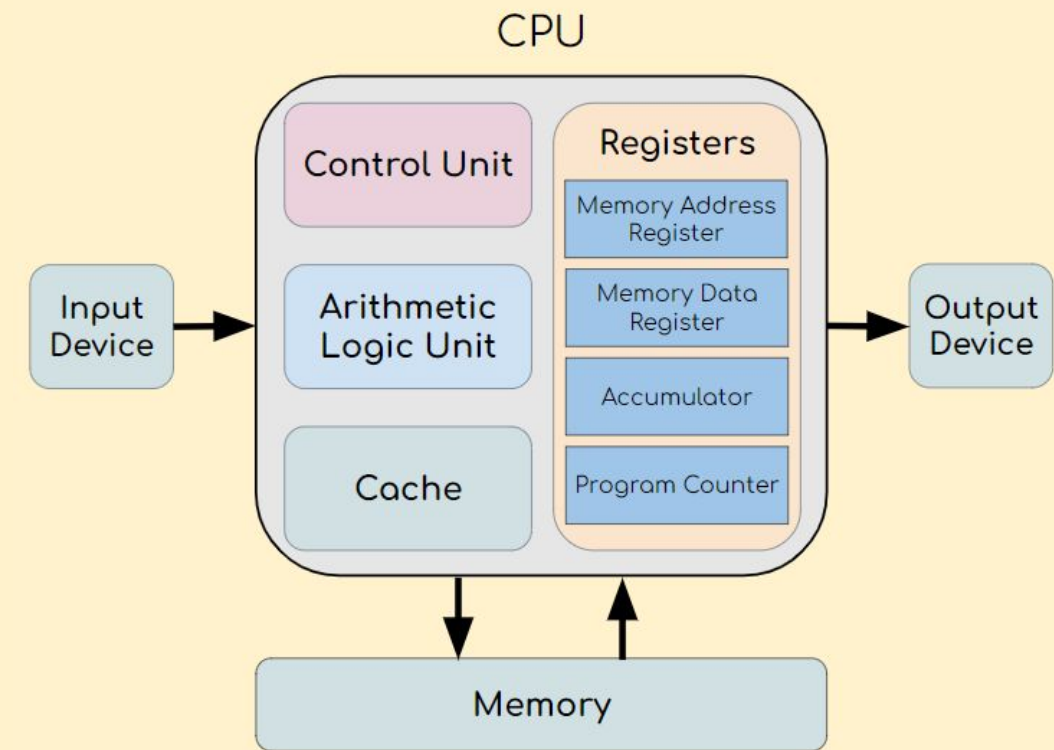
Accumulator (ACC)	A CPU register that stores the results of any arithmetic or logical operations carried out by the ALU.
Arithmetic Logic Unit (ALU)	Part of a CPU that carries out the arithmetic and logic operations of a computer instruction.
binary	A number system that contains two symbols, 0 and 1. Also known as base 2.
computer architecture	The internal, logical structure and organisation of the computer hardware.
embedded system	A special purpose computer built into another device.
general purpose computer	A computer designed to be able to carry out a wide range of different tasks.
Memory Address Register (MAR)	A CPU register that stores the address for data to be fetched from or sent to memory.
Memory Data Register (MDR)	A CPU register that stores the data that has been fetched from memory or is waiting to be sent to memory.
Program Counter (PC)	A CPU register that stores the address of the next instruction to be executed.
registers	Locations of computer memory within the processor that provide extremely fast access.
Von Neumann architecture	A description of the processing architecture that most modern CPUs use.

Von Neumann Architecture

- Named after John von Neumann



- He described a computer architecture where:
 - the data and programs are both stored in the computer's memory in the same place
 - all instructions and data are stored as binary digits
- The main registers in a CPU are:
 - Program Counter (PC)**
Stores the location of the next **instruction** in a program to be fetched.
 - Memory Address Register (MAR)**
Stores the location for data to be fetched from or sent to **memory**.
 - Memory Data Register (MDR)**
Stores the data that has been fetched from or is waiting to be sent to **memory**.
 - Accumulator**
Stores the result of the calculation performed by the **ALU**.



Embedded Systems

Embedded Systems

They are dedicated systems that are designed for a fixed purpose. They are a system within a larger system e.g. Washing machines, car park barriers, microwaves, car engines, MP3 etc



General Purpose System

A machine that is capable of carrying out some general data processing under program control. Your PC /laptop is an example of this but also it could be something far more basic too.



Quizizz



Extended Reading



Exam Questions



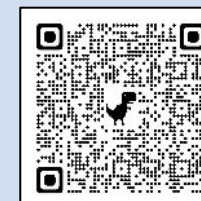
Video



Revision Techniques



Quizlet



Specification

