

Keywords: Autumn 1

Computer Science

Computer Hardware - How a computer processes instructions

Keyword	Definition
Central Processing Unit(CPU)	Processes the instructions in the computer system
Random Access Memory	Primary memory that stores currently open/running programs, files, data/instructions
Secondary Storage	Hard Disk Drive or Solid State Drive – store programs, files permanently
Registers	Super-fast stores of memory on the CPU used in the processing of data (Fetch Decode Execute Cycle)
Fetch – Decode – Execute Cycle	Instructions are fetched from RAM into the CPU, decoded and executed.
PC – Program Counter	Stores the number of instruction to be fetched and points to the address of the next instruction, (increments by 1 each cycle).
MAR – Memory Address Register	Stores the address of the instruction to be fetched.
MDR – Memory Data Register	Stores the data/instruction fetched from RAM
ACC - Accumulator	Stores the temporary result from the ALU
ALU – Arithmetic Logic Unit	Carries out mathematical calculations and logical decisions
Address bus	Connect the CPU and RAM
Data bus	Connects RAM and the CPU
Comparing CPU performance	Using Clock Speed, Cores and Cache to compare how well CPU's should perform.
Clock Speed	How many instructions a CPU can process per second, measured in GHz
Cores	Independent processing units on the actual CPU that can process instructions independently of each other.
Cache	Small, fast memory that stores recently/frequently used data/instructions – quicker for the CPU to access than RAM