The CPU

The Central Processing Unit (CPU) controls the operations of the computer, fetches and executes instructions to allow software to run.

The Von Neumann Architecture

Memory Address Register (MAR)	**Memory Data Register** (MDR)	**Program Counter** (PC)	Accumulator
Holds the memory location of data that needs to be accessed	Holds data that is being transferred to or from memory	Contains the address of the next instruction to be executed	Where intermediate arithmetic and logic results are stored

Von Neumann architecture was first published by John von Neumann in 1945.

His computer architecture design consists of a **Control Unit**, **Arithmetic** and **Logic Unit** (ALU), **Memory Unit**, **Registers** and **Inputs/Outputs**.

Von Neumann architecture is based on the stored-program computer concept, where instruction data and program data are stored in the same memory. This design is still used in most computers produced today.

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