8085 Architecture | Learn Intel 8085 Microprocessor Architecture Step - By - Step

Intel Corporation's 8085 microprocessor was one of the first 8-bit processors released by the company in 1976. The 8085 processor is still in use today and has been updated with a 16-bit, 32-bit and 64-bit architecture. The 8085 microprocessor operates at 3.2 MHz and has a single-phase clock. The program counter register is a 16-bit special purpose register used in the 8085 architecture to store the address of the instruction that needs to be fetched from the memory. The main function of the flag register is to indicate the status of the processor after each ALU operation. The 8-bit flag register can have a total of eight flags, each flag is represented by a specific bit in the 8-bit flag register. All arithmetic and logical operations are performed by the arithmetic and logic unit. The timing and control unit of the 8085 microprocessor is driven by a stream of clock signals generated by the clock circuit built into the processor chip.

Interrupts are signals sent to the microprocessor to pause the current activity and attend to the request sent by external devices. Interrupts are external events that occur in real time to seek the processor response. Interrupts can be generated either by the program instructions or it can also be generated by the peripheral devices connected to the system. Interrupts can be classified into the following groups depending upon their parameters.