

Programming Model of the 8085....

The programming model consists of some segments of the ALU and the registers. This model does not reflect the physical structure of 8085 but includes the information that is critical in writing the assembly language program.

Registers

8085 has six registers to store 8 bit data. They are identified as B ,C,D,E,H & L. They can be combined as register pair BC, DE & HL to perform some 16 Bit operations. These registers are used to store or copy the data into it by using data copy instructions.

Accumulator

The accumulator is an 8 bit register that is used to store 8 bit data and perform arithmetic and logical operation. The result of an operation is stored in accumulator.

ALU(Arithmetic Logic Unit)

This is the are of microprocessor where various computation are performed on data.

Flags

The ALU includes five flip-flops which are set or reset after application according to data conditions of result in the accumulator of results in the accumulator.They are Zero(Z), Carry(C), Sign (S), Parity(P) and Auxiliary Carry(AC) flags. The microprocessor uses flags to test data conditions. These flags have critical importance in decision making process in the microprocessors.

Memory Pointers

It is also called as stack pointer.It points to a memory location in R/W memory called as stack.

Program Counter Register

The microprocessor uses the PC register to sequence the execution if the instruction i.e. it points to the memory address from which the next byte is to be fetched.

Timing and Control Unit

It provides necessary clock pulses to all the components and controls in the operation.

16 Bit Address Bus

It is used to carry 16 bit address of peripheral or memory location.

8 Bit Data Bus

It is used to transfer binary information.

