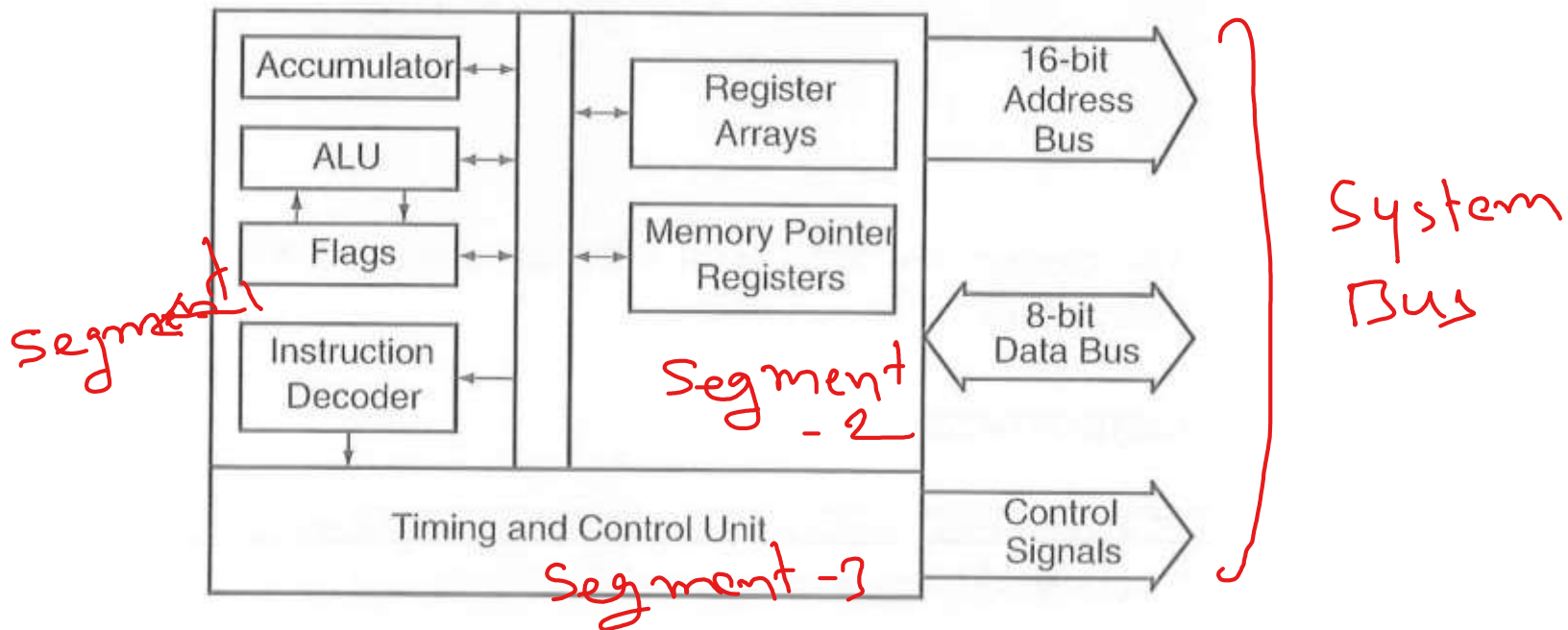


# 8085 Programming Model

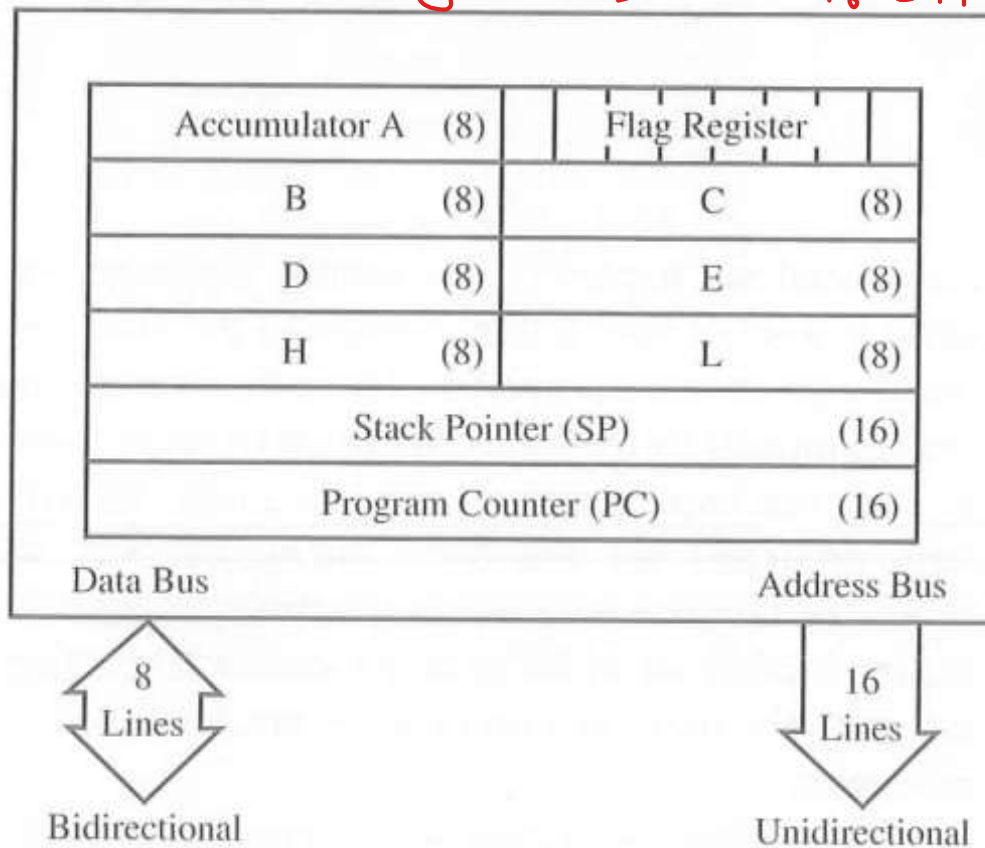
8085 Hardware Model:



- Microprocessor consist of three component
  - ALU
  - Register Array
  - Timing and control

## 8085 Programming Model:

- consist of some segment of ALU & Register
- components are - 6 Register, 1 accumulator, one flag register, one 16 bit stack pointer and one



and one  
16 bit  
Program  
counter

### Registers —

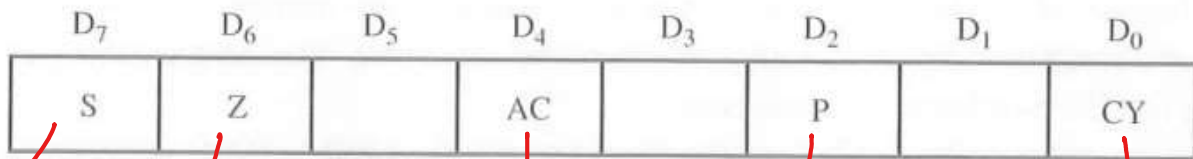
- 6 general purpose register

B C D E H & L each hold  
8 bit data

- BC, DE, HL are register pair  
hold 16 bit data

## Flag Register:

- 5 Flip-Flop hold 1 bit information i.e current state of ALU result.



Sign  
Flag

Zero  
Flag

Auxiliary  
Carry  
Flag

Parity  
Flag

Carry Flag

Z: Zero Flag — set 1 when result is zero  
CY: Carry Flag — set when arithmetic operation result carry otherwise (reset)

S: Sign — Set when D<sub>7</sub> bit of result is 1

P: Parity — if result have even number of 1 set, otherwise reset.

AC - Auxiliary carry — in arithmetic

operation if carry is generated by  
digit D3 and passed to D4;  
AC Flag is set

SP and PC —

