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1. ALU
 2. STACK POINTER
 3. PROGRAM COUNTER
 4. INSTRUCTION REGISTER
AND DECODER

LECTURE 6

ALU (ARITHMETIC AND LOGIC UNIT)

- It is 8 bit unit
- In this arithmetic and logical operation are carried out .
- ALU contain the binary adder to perform addition substracion by 2's complement method
- Data is supplied by memory devices and input ouput devices
- The result is typically stored in the accumulator

STACK POINTER

- Stack pointer is a 16 bit register which contain the address of top of stack
- With the help of incrementer and decrementer stack pointer perform their work
- The stack pointer is incremented when data is push
- The stack pointer is decremenda when data is pop

INSTRUCTION REGISTER AND DECODER

- During the instruction fetch, the first 8 bit of instruction is transfer to the 8 bit instruction register
- The content of instruction register are available to the instruction decoder
- The output of decoder get by timing signals, ALU & data buffer

PROGRAM COUNTER

- Program counter is 16bit register acting a pointer to next executable instruction
- It always contain the 16 bit address of memory location where next executable code is stored
- Microprocessor uses this register to sequence the execution of instruction.
- PC is a auto incremented pointer.

REGISTERS IN MICROPROCESSOR 8085

1. ACCUMULATOR
2. TEMPORARY REGISTER
3. INCREMENTER / DECREMENTER
4. REGISTER B & C
5. SERIAL I/O CONTROL

LECTURE 7

ACCUMULATOR

- Accumulator is main 8 bit register in microprocessor 8085.
- It is used to perform arithmetic and logical operation one of the operand is always stored in accumulator
- It can be used as both primary source and destination register and the final result is always stored in accumulator
- All data transfer between cpu and i/o devices are perform through accumulator.

TEMPORARY REGISTER

- The temporary register is used to store the data during execution of arithmetic or logic instruction
- The register is used internally
- This register is not available for the programmer
- This one is a very useful register of microprocessor 8085

INCREMENTER/DECREMENTER

- It is 16 bit special purpose register
- It also used in addition and subtraction
- It is used to add or subtract one from the program counter or stack pointer

REGISTER B/C

- Register b and c this are the general purpose register
- It is 8 bit register but it can be also used as a 16 bit register
- The most significant 8 bit are stored in the register b and the least 8 bit are stored in register c .
- This register are programmable register means programmer can used this reregister.

A decorative graphic on the left side of the slide consisting of white lines and small circles, resembling a circuit board or a stylized tree structure.

THANK YOU

CS ACADEMY