

ADDRESSING MODES OF 8085

Mr. Gursharan Singh Tatla
professorgstatla@gmail.com

Gursharan Singh Tatla

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Addressing Modes of 8085

- To perform any operation, we have to give the corresponding instructions to the microprocessor.
- In each instruction, programmer has to specify 3 things:
 - Operation to be performed.
 - Address of source of data.
 - Address of destination of result.

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Addressing Modes of 8085

- The method by which the address of source of data or the address of destination of result is given in the instruction is called **Addressing Modes**.
- The term addressing mode refers to the way in which the operand of the instruction is specified.

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Types of Addressing Modes

- Intel 8085 uses the following addressing modes:
 1. Direct Addressing Mode
 2. Register Addressing Mode
 3. Register Indirect Addressing Mode
 4. Immediate Addressing Mode
 5. Implicit Addressing Mode

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Direct Addressing Mode

- In this mode, the address of the operand is given in the instruction itself.

LDA 2500 H	Load the contents of memory location 2500 H in accumulator.
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- LDA is the operation.
- 2500 H is the address of source.
- Accumulator is the destination.

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Register Addressing Mode

- In this mode, the operand is in general purpose register.

MOV A, B	Move the contents of register B to A.
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- MOV is the operation.
- B is the source of data.
- A is the destination.

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Register Indirect Addressing Mode

- In this mode, the address of operand is specified by a register pair.

MOV A, M | Move data from memory location specified by H-L pair to accumulator.

- MOV is the operation.
- M is the memory location specified by H-L register pair.
- A is the destination.

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Immediate Addressing Mode

- In this mode, the operand is specified within the instruction itself.

MVI A, 05 H | Move 05 H in accumulator.

- MVI is the operation.
- 05 H is the immediate data (source).
- A is the destination.

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Implicit Addressing Mode

- If address of source of data as well as address of destination of result is fixed, then there is no need to give any operand along with the instruction.

CMA | Complement accumulator.

- CMA is the operation.
- A is the source.
- A is the destination.

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Thank You 🙌
Have a Nice Day

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