



# **ADDRESSING MODES OF 8085**

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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.

# 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.

# 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

# Direct Addressing Mode

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

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

# Register Addressing Mode

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

**MOV A, B**

**Move the contents of register B to A.**

- MOV is the operation.
- B is the source of data.
- A is the destination.

# Register Indirect Addressing Mode

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

<b>MOV A, M</b>	<b>Move data from memory location specified by H-L pair to accumulator.</b>
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- MOV is the operation.
- M is the memory location specified by H-L register pair.
- A is the destination.

# 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.



# 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.

**Thank You** 🙌😊

**Have a Nice Day**