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.

| LDA 2500 H | Load the contents of memory location 2500 H in accumulator. |

- 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.

<table>
<thead>
<tr>
<th>MOV A, B</th>
<th>Move the contents of register B to A.</th>
</tr>
</thead>
</table>

- 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.

| 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.
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.

<table>
<thead>
<tr>
<th>CMA</th>
<th>Complement accumulator.</th>
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- CMA is the operation.
- A is the source.
- A is the destination.
Thank You 😊
Have a Nice Day