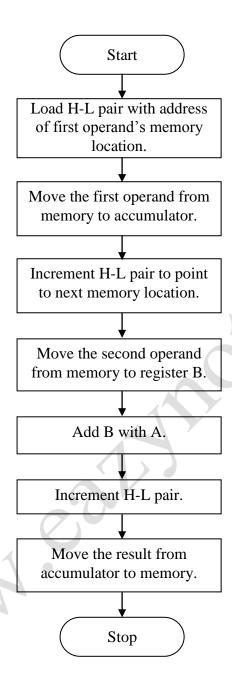**Program 9:** Add two 8-bit numbers without considering the carry.

**Flowchart:**

**Program:**

| Address | Mnemonics | Operand | Opcode | Remarks |
|---------|-----------|---------|--------|---------|
| 2000 | LXI | H, 3000H | 21 | Load H-L pair with address 3000H. |
| 2001 | | | 00 | Lower-order of 3000H. |
| 2002 | | | 30 | Higher-order of 3000H. |
| 2003 | MOV | A, M | 7E | Move the 1st operand from memory to reg. A. |
| 2004 | INX | H | 23 | Increment H-L pair. |
| 2005 | MOV | B, M | 46 | Move the 2nd operand from memory to reg. B. |
| 2006 | ADD | B | 80 | Add B with A. |
| 2007 | INX | H | 23 | Increment H-L pair. |
| 2008 | MOV | M, A | 77 | Move the result from reg. A to memory. |
| 2009 | HLT | | 76 | Halt. |

**Explanation:**

- This program adds two operands stored in memory location 3000H and 3001H, without considering the carry produced (if any).

- Let us assume that the operands stored at memory location 3000H is 04H and 3001H is 02H.

- Initially, H-L pair is loaded with the address of first memory location.

- The first operand is moved to accumulator from memory location 3000H and H-L pair is incremented to point to next memory location.

- The second operand is moved to register B from memory location 3001H.

- The two operands are added and the result is stored in accumulator.

- H-L pair is again incremented and the result is moved from accumulator to memory location 3002H.

**Output:**

    **Before Execution:**

        3000H:     04H

        3001H:     02H

    **After Execution:**

        3002H:     06H