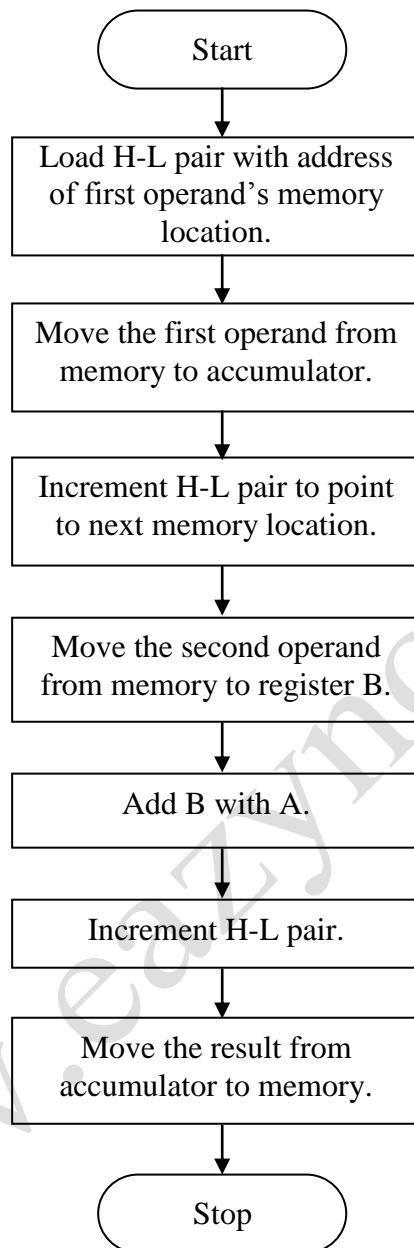


Program 9: Add two 8-bit numbers without considering the carry.

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 1 st operand from memory to reg. A.
2004	INX	H	23	Increment H-L pair.
2005	MOV	B, M	46	Move the 2 nd 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