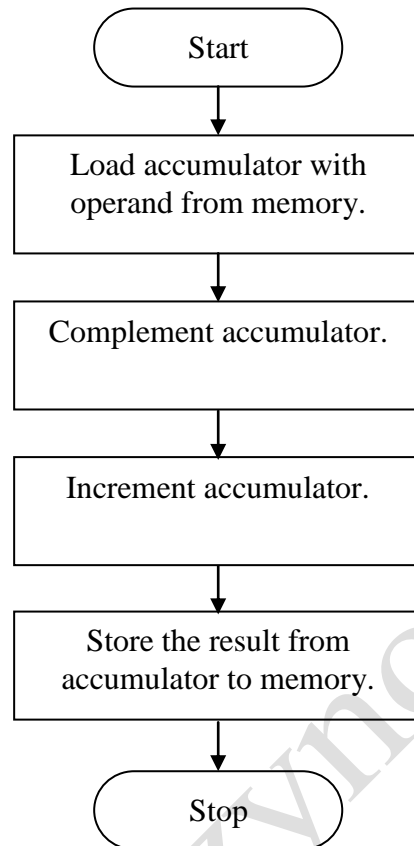


Program 2: 2's complement of an 8-bit number.**Flowchart:****Program:**

Address	Mnemonics	Operand	Opcode	Remarks
2000	LDA	3000H	3A	Load H-L pair with data from 3000H.
2001			00	Lower-order of 3000H.
2002			30	Higher-order of 3000H.
2003	CMA		2F	Complement accumulator.
2004	INR	A	2C	Increment accumulator.
2005	STA	3001H	32	Store the result at memory location 3001H.
2006			01	Lower-order of 3001H.
2007			30	Higher-order of 3001H.
2008	HLT		76	Halt.

Explanation:

- This program finds the 2's complement of an 8-bit number stored in memory location 3000H.
- Let us assume that the operand stored at memory location 3000H is 85H.
- The operand is moved to accumulator from memory location 3000H.
- Then, its complement is found by using CMA instruction.
- One is added to accumulator by incrementing it to find its 2's complement.
- The result is stored at memory location 3001H.

Output:**Before Execution:**

3000H: 85H

After Execution:

3001H: 7BH