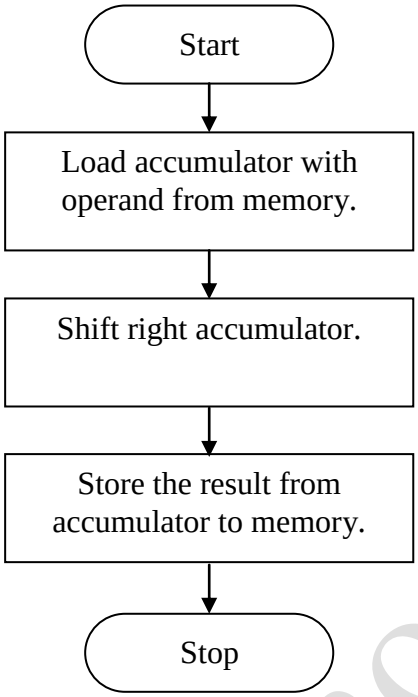
Program 6: Shift right 8-bit number by 1 bit.

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	RAR		1F	Shift right accumulator.
2004	STA	3001H	32	Store the result at memory location 3001H.
2005			01	Lower-order of 3001H.
2006			30	Higher-order of 3001H.
2007	HLT		76	Halt.

Explanation:

- This program performs the right shift operation on an 8-bit number by one bit stored in memory location 3000H.
- Let us assume that the operand stored at memory location 3000H is 04H.
- The operand is moved to accumulator from memory location 3000H.
- Then, shift right operation is done by using RAR instruction.
- The result is stored at memory location 3001H.

Output:

Before Execution:

3000H: 04H

After Execution:

3001H: 02H