Flow Chart to Find Smallest of Two 8-bit Numbers

Start

Load H-L pair with address 3000 H

Move data from 3000 H to A

Increment H-L pair

Move data from 3001 H to B

Compare B with A

If carry ? — Yes

No

Move data from B to A

Store the result at location 3002 H

Stop
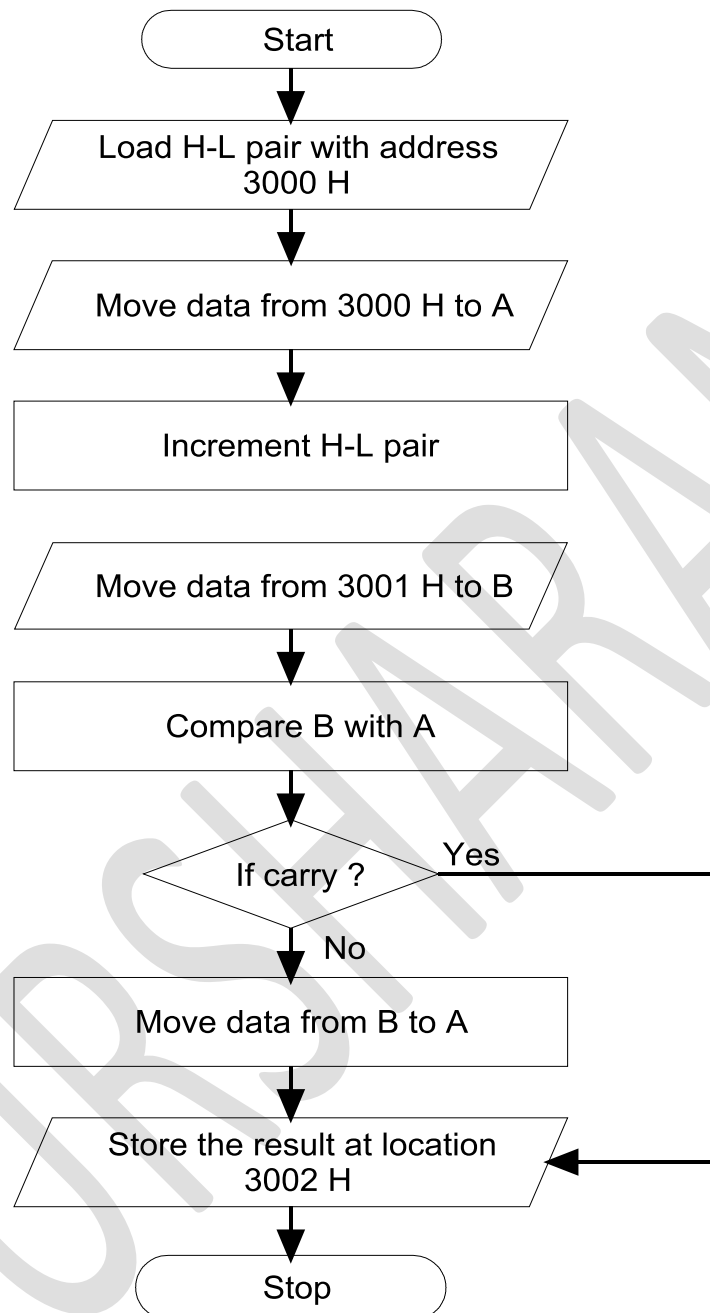
Program to Find Smallest of Two 8-bit Numbers

Address	Mnemonics	Operand	Opcode	Remarks
2000	LXI	H, 3000 H	21	Load H-L pair with address 3000 H
2001			00	
2002			30	
2003	MOV	A, M	7E	Move data from 3000 H to A
2004	INX	H	23	Increment H-L pair
2005	MOV	B, M	46	Move data from 3001 H to B
2006	CMP	B	B8	Compare B with A
2007	JC	200B H	DA	Jump to location 200B H if carry comes
2008			0B	
2009			20	
200A	MOV	A, B	78	Move data from B to A
200B	STA	3002 H	32	Store the result at location 3002 H
200C			02	
200D			30	
200E	HLT		76	Halt

Before Execution:

3000: 25 H
3001: 15 H

After Execution:

3002: 15 H