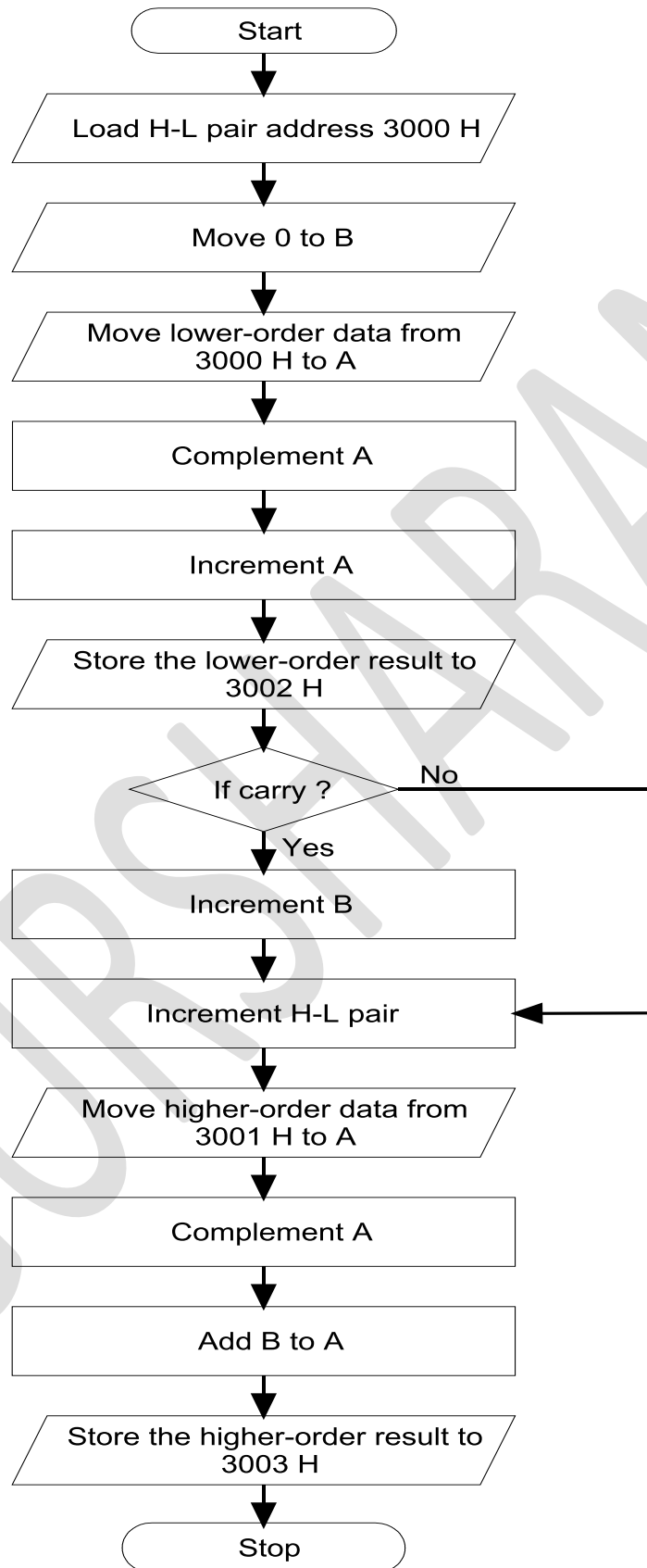


Flow Chart to Find 2's Complement of 16-bit Number



Program to Find 2's Complement of 16-bit Number

Address	Mnemonics	Operand	Opcode	Remarks
2000	LXI	H, 3000 H	21	Load H-L pair with address 3000 H
2001			00	
2002			30	
2003	MVI	B, 00 H	06	Move 0 to B
2004			00	
2005	MOV	A, M	7E	Move lower-order data from 3000 H to A
2006	CMA		2F	Complement A
2007	INR	A	3C	Increment A
2008	STA	3002 H	32	Store the lower-order result to 3002 H
2009			02	
200A			30	
200B	JNC	200F H	D2	Jump to location 200F H if no carry
200C			0F	
200D			20	
200E	INR	B	04	Increment B
200F	INX	H	23	Increment H-L pair
2010	MOV	A, M	7E	Move higher-order data from 3001 H to A
2011	CMA		2F	Complement A
2012	ADD	B	80	Add B to A
2013	STA	3003 H	32	Store the higher-order result to 3003 H
2014			03	
2015			30	
2016	HLT		76	Halt

Before Execution:

3000: 12 H

3001: 05 H

After Execution:

3002: EE H

3003: FA H