

### Program 13

write a program to sort array of size 3, in ascending order.

Address	Label	OPCode	OPerand	Comments
8000h	START	LXI	H, XX50h	Set up HL pair as pointer for memory bytes
8003h		MVI	D, 00h	The register D is used as flag register
8005h		MOV	C, 02	Initialize register C with data count.
8007h	CHECK	MOV	A, M	Get the number
8008h		INX	H	Go to the next location
8009h		CMP	M	Compare the contents of the current memory location with the contents of the Accumulator
800Ah		JC	NEXTBYT	if (A) < second byte, do not exchange.
800Bh <del>800Dh</del>		MOV	B, M	Get the second byte for exchange
<del>8014h</del> 800Eh		MOV	M, A	Store first byte in second location



Address	Label	OPCode	OPerand	Comments
800Fh		DCX <del>MOV</del>	H <del>M, A</del>	Point to first location.
8010h		MOV <del>DCX</del>	M, <del>H</del> B	Store second byte in first location
8011h		<del>MOV</del> INX	<del>M, B</del> H	Get ready for next comparison
8012h		MVI	D, 01H	Load 1 in D as a remainder for exchange
8013h	NEXTBYT	DCR	C	Decrement comparison count.
8014h		JNZ	CHECK	If comparison count not 0, go back.
8017h		MOV	A, D	Get flag bit in A
8018		RRC		Place flag bit DO in carry
8019		JC	START	<del>IF</del> <del>START</del> If flag is 1, exchange occurred Start the next pass
<del>8013h</del> 801Ch		HLT		Terminate the program.