



Arab Academy for Science, Technology & Maritime Transport
COLLEGE OF ENGINEERING & TECHNOLOGY

Department : Computer Engineering Department

Course : Computer Organization

Course Code: CC 312

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Sheet #3

1) List the hexadecimal code for the following program (hand assemble it).

Label	HexAddress	Instruction
	100	Load A
	101	Add One
	102	Jump S1
S2,	103	Add One
	104	Store A
	105	Halt
S1,	106	Add A
	107	Jump S2
A,	108	HEX 0023
One,	109	HEX 0001

2) Trace the above code to get the value of AC.

3) Trace by value the contents of each register of the code above.

4) Write MARIE program that is equivalent to the following code segment:

<pre> a) If (X=Y) {X++;} Else If (X<Y) {Y--;} </pre>	<pre> b) If (X>Y) {Y=X+X; X=0; } Y=Y+1; </pre>
<pre> c) for (i=0; i<5; i++) { Y = Y + 2; } </pre>	<pre> d) j = 5 ; while (j>0) { X = X + 3 ; j -- ; } </pre>

5) Write a MARIE program to get the maximum of 2 numbers in memory at addresses (170H, 180H), and put this maximum value in address (250H).