Lab 4

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4/23/2023

CDA 3203 Computer Logic Design

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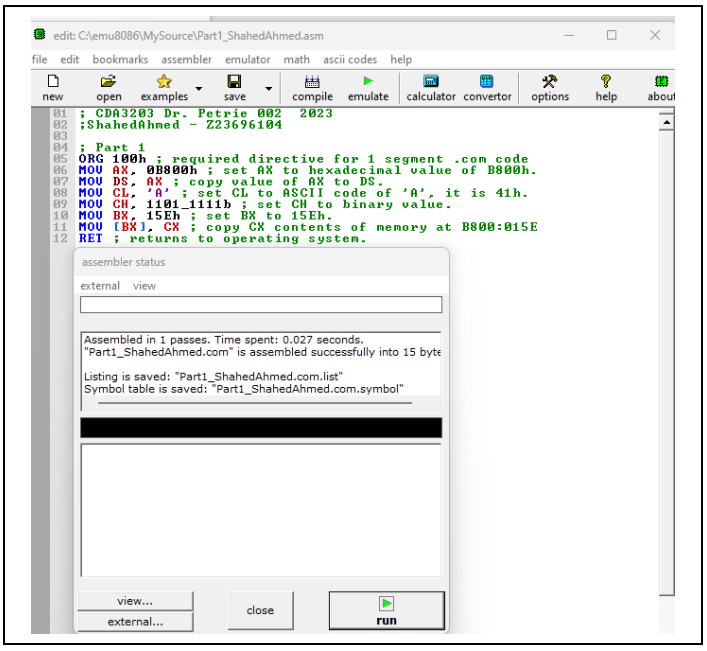
Florida Atlantic University

Part 1.



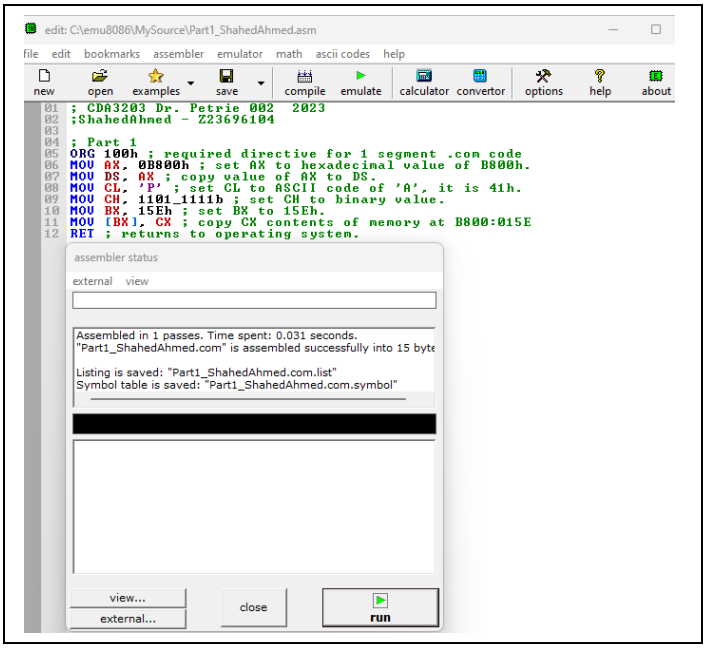
Write the HEX Machine Code for each Assembly Instruction

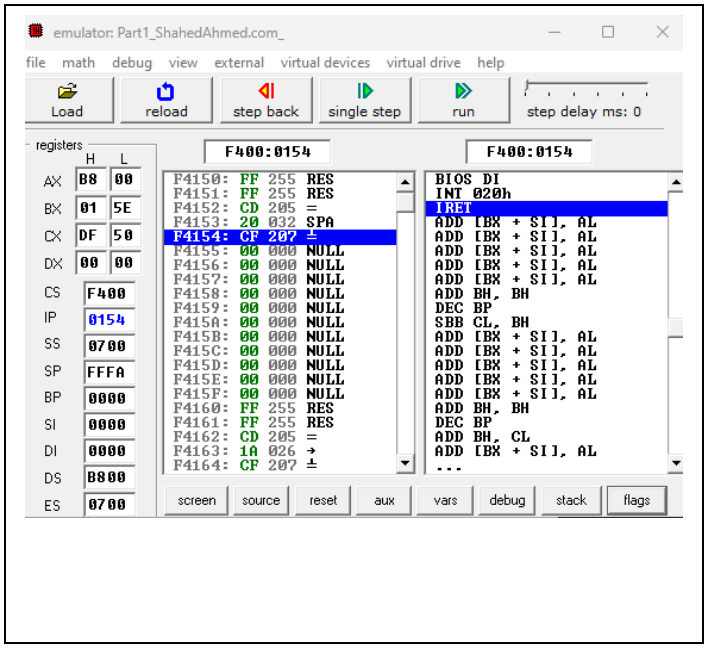
1. MOV AX, 0B800h — B8 00 B8
2. MOV DS, AX — 8E D8
3. MOV CL, 'A' — B1 41
4. MOV CH, 1101_1111b — B5 DF
5. MOV BX, 15Eh — BB 5E 01
6. MOV [BX], CX — 89 0F
7. RET — C3

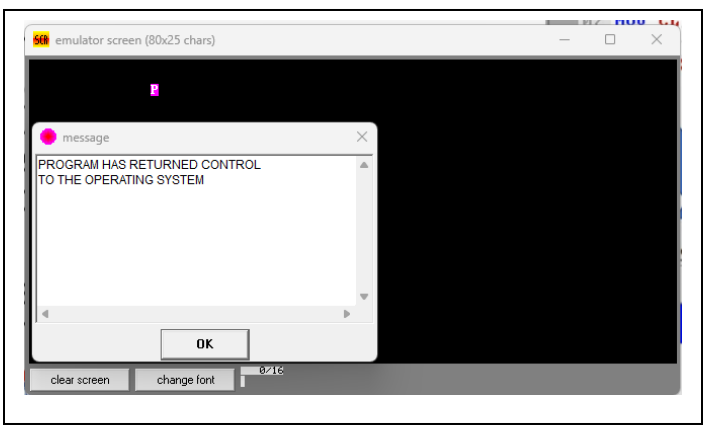
8. The CS:IP address of the first instruction is 0700:0100
9. The CS:IP address of the last instruction is 0700:010E
10. What is the **Effective Address** of the first instruction? Show work of how you calculated the physical address.

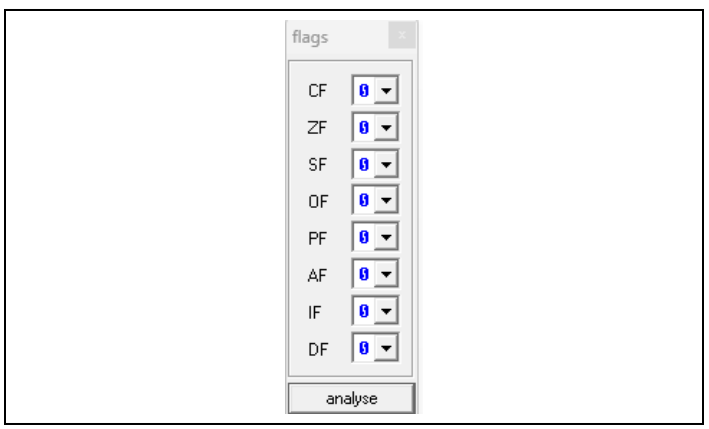
07100H

0700Hx10H + 0100H

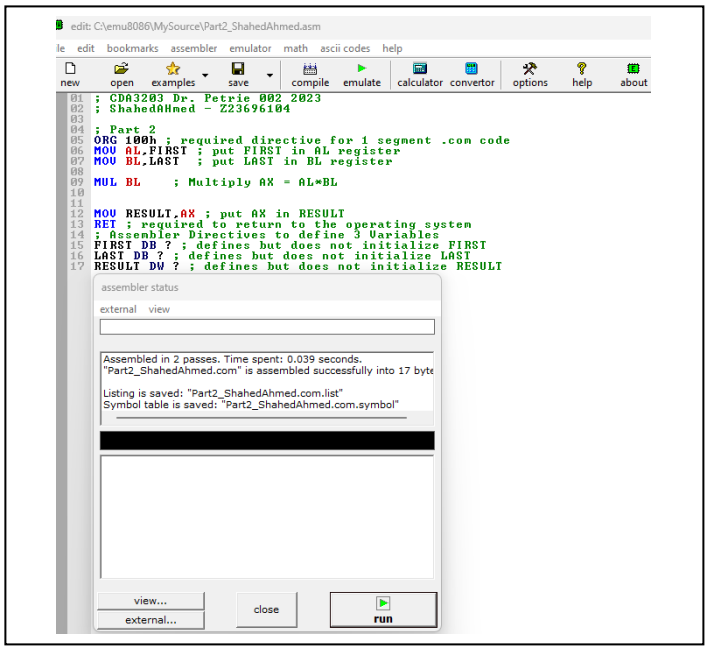








Part 2



11. Compare the instructions in the Editor window with the assembled code in the Emulator window.
What did the Emulator substitute for the following in the assembled instructions:

FIRST was changed to 23

LAST was changed to 04

RESULT was changed to 0

13. Look at RESULT and AX in the different windows snipped show value AFTER you Single Stepped :

In Emulator window, AX = 005C

In Variables window, RESULT = 92

In RAM window, 2 bytes of RESULT = 0700 010C

12. In Symbol Table snip find the Offset of

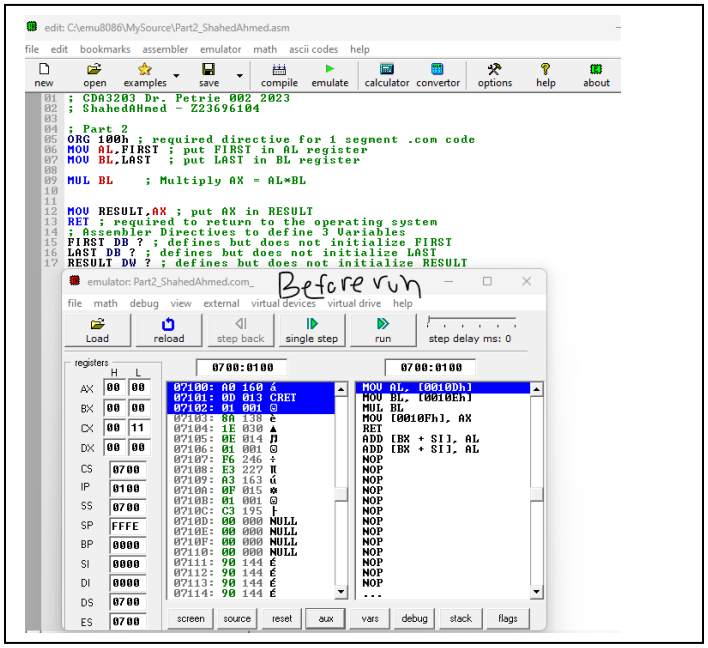
RESULT = 0010F

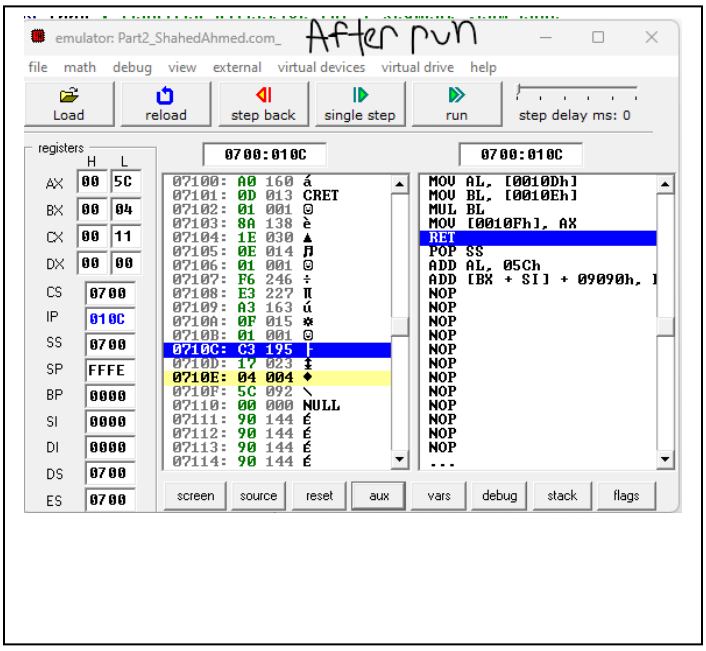
14. DS:Offset is the address of RESULT. Calculate the 20-bit

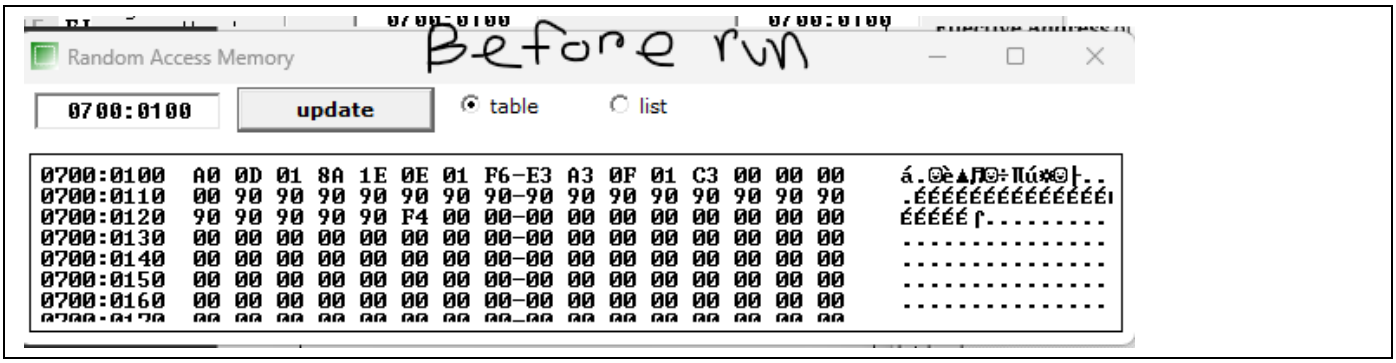
Effective Address of RESULT in Hex? 07109h

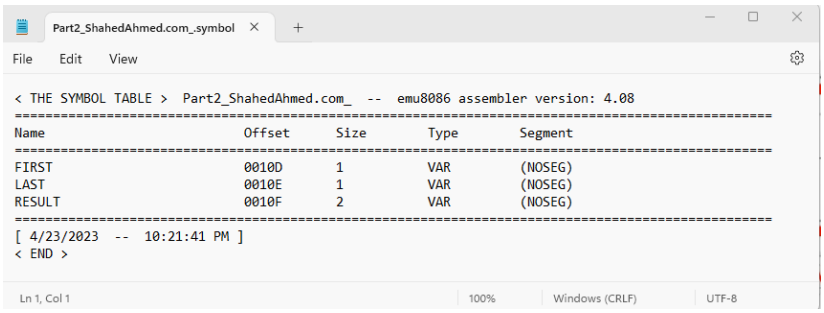
Show work of how you calculated the physical address:

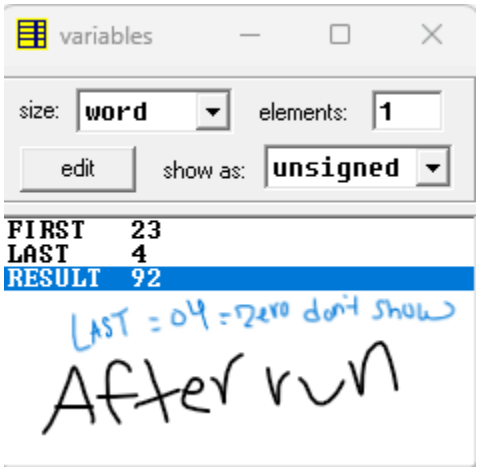
0700hx10h+0109h











Confirmation SPOT Survey was completed

WINDOW
CLOSE