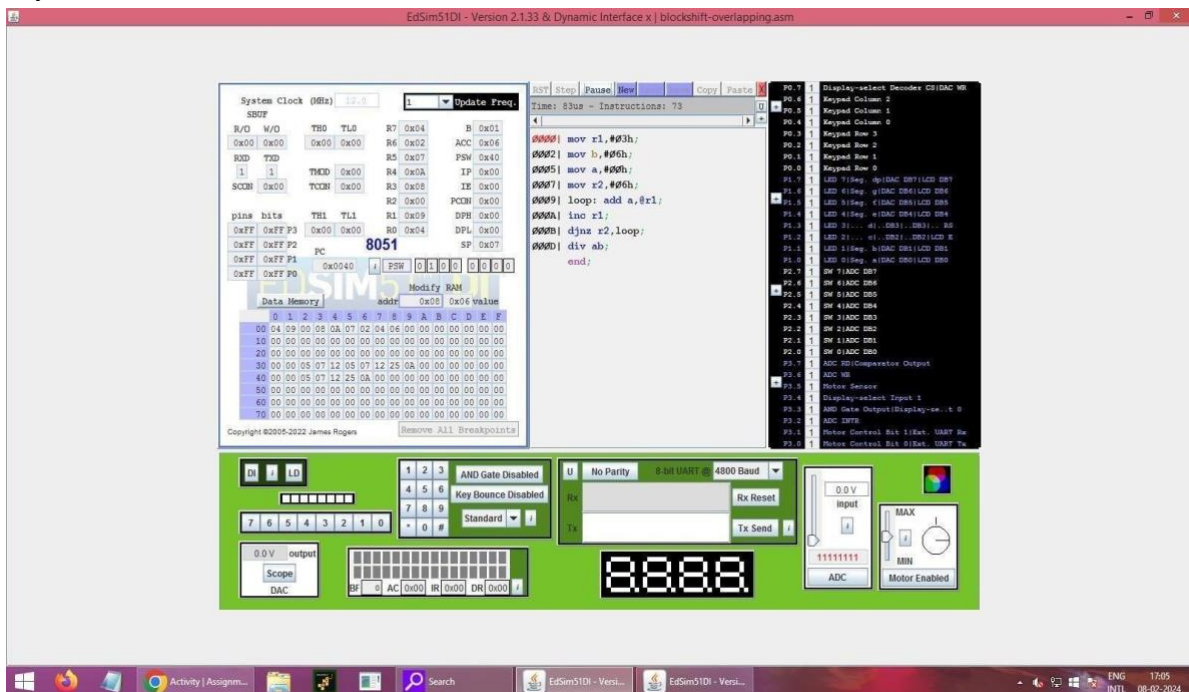


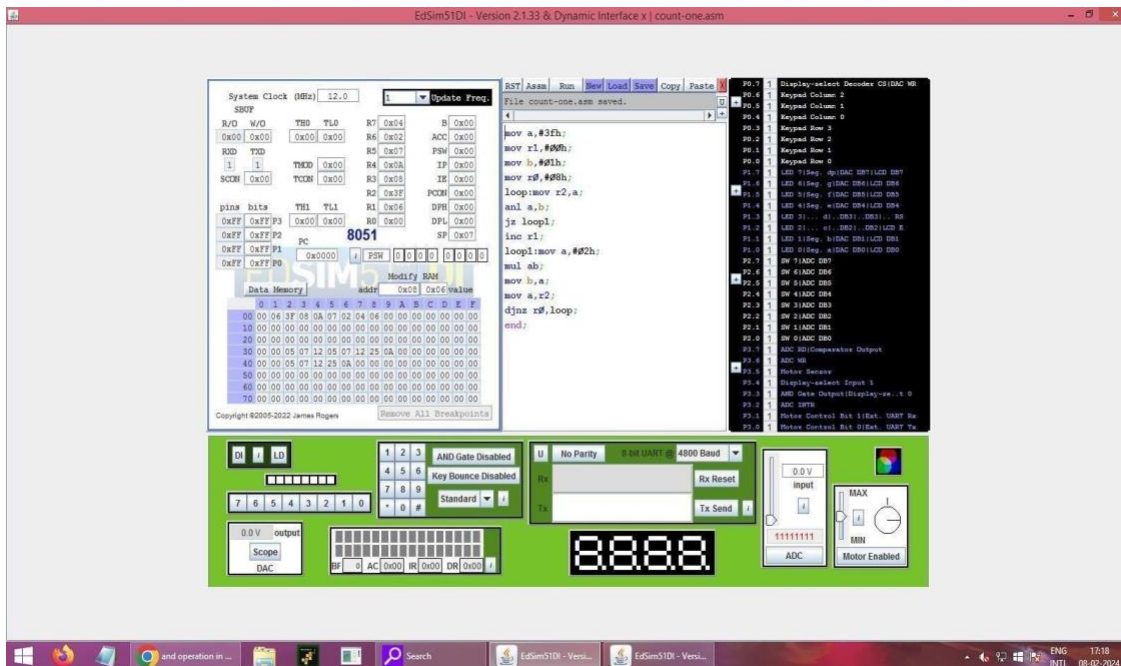
Assignment 4

Write the assembly language program in Edsim51.

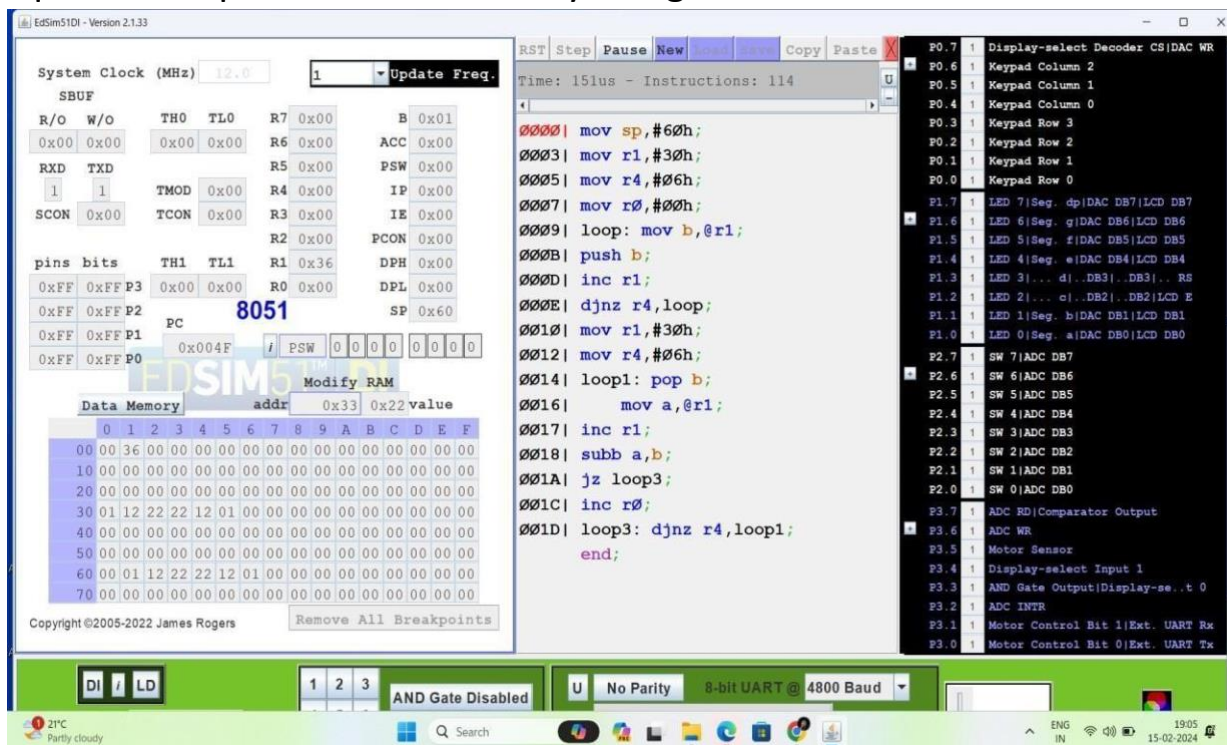
Q1. Write an assembly code to find the average of the numbers stored in an array.



Q2. Write an assembly code to find the numbers of 1's in a number and store the result in a register.

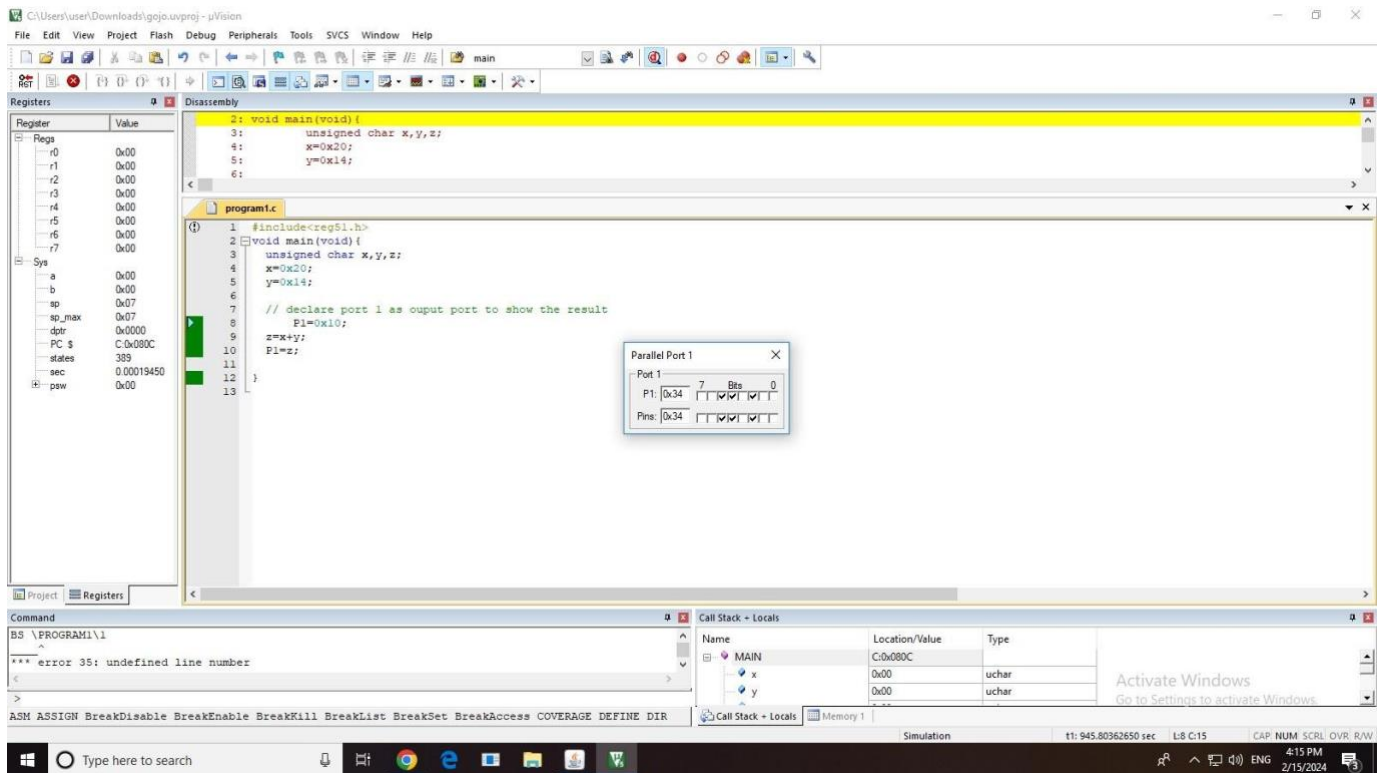


Q3. Write an assembly program to check whether the number stored in a sequence is a palindrome or not by using stack.

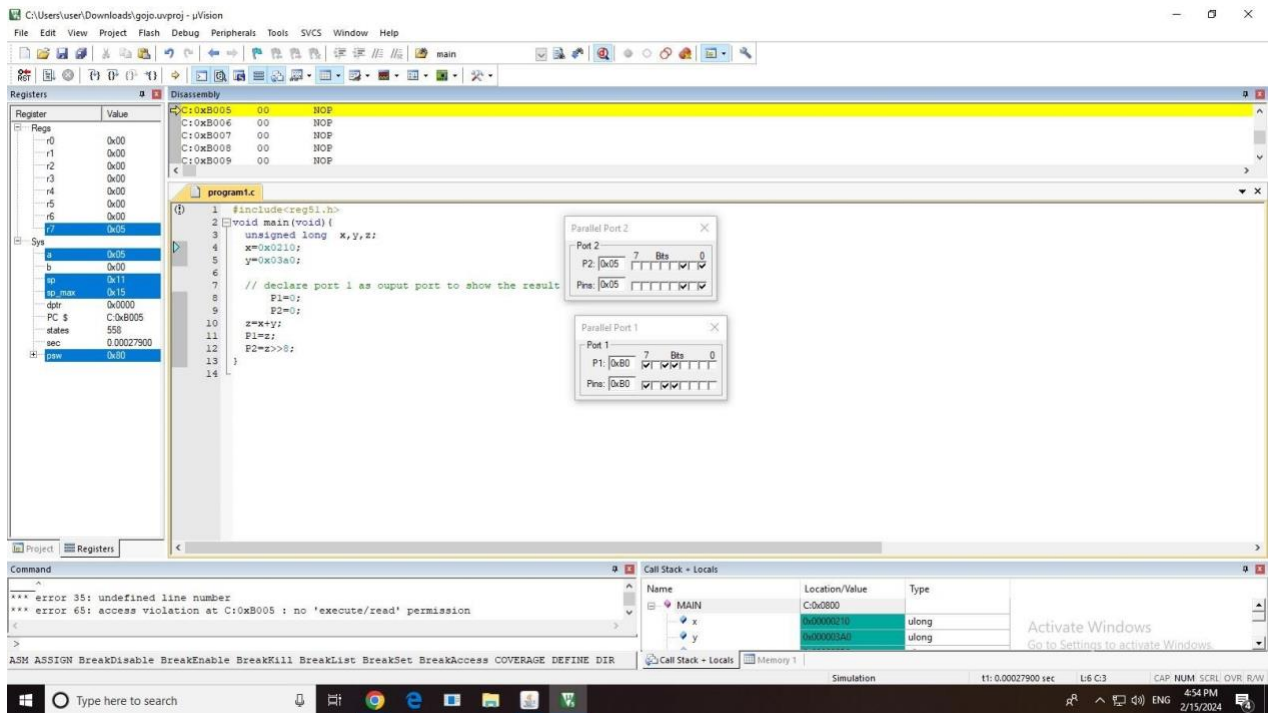


Write the C Program in Keil Embedded C:

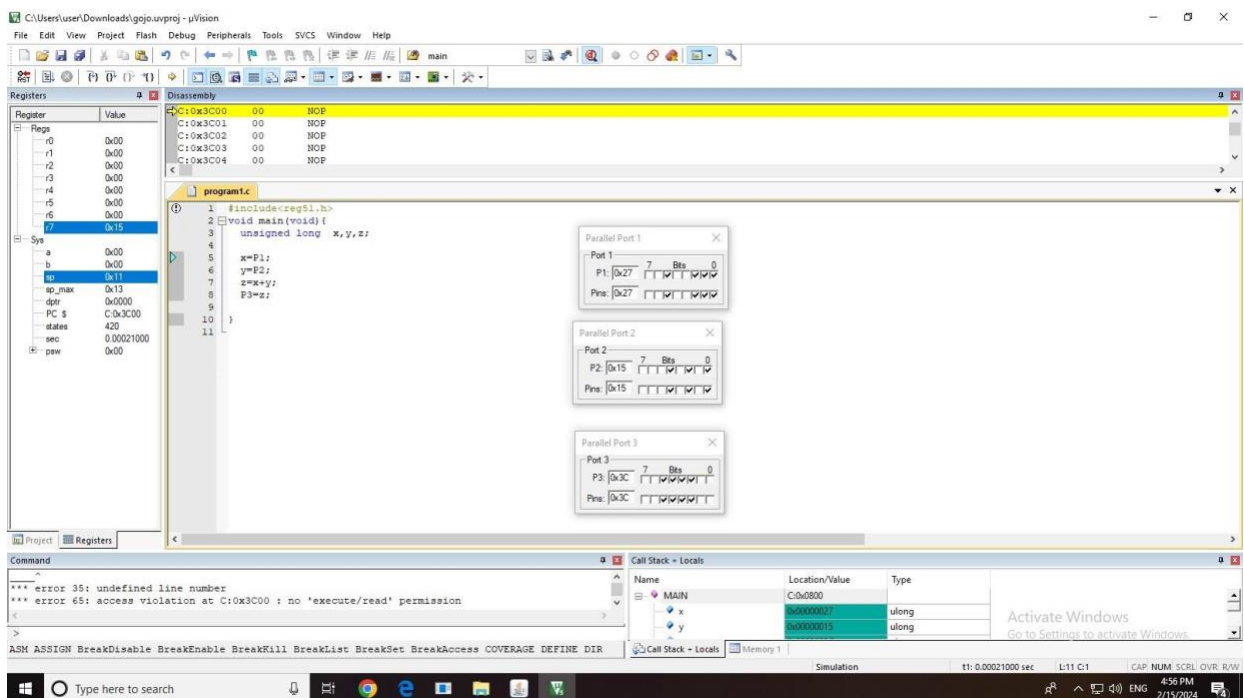
A. Addition of two 8-bit numbers and show the output on port P1.



B. Addition of two 16-bit numbers and show the output on port P1 & P2.



C. Addition of two 8-bit numbers. Take input from port P1 & P2 and show the result on port P3.



D. Addition of two 16-bit numbers. Take input from port P1, P2 & P3, P4 and display the result on port P3 & P4.

The screenshot shows the uVision IDE interface with the following components:

- Registers Window:** Displays the state of various registers. The 'r7' register is highlighted with a value of 0x08.
- Disassembly Window:** Shows the assembly code for the program, with the first instruction being a NOP at address C:0xAC00.
- Source Code Window (program1.c):** Contains the following C code:


```

1 #include<reg51.h>
2 void main(void) {
3     unsigned long x,y,z,s,z,t;
4
5     x=P0;
6     y=P1;
7     z=P2;
8     s=P3;
9
10    z=x+z;
11    t=y+s;
12
13    F2=z;
14    F3=t;
15
16
17 }
      
```
- Port Configuration Windows:** Four windows are open for Parallel Port 0, 1, 2, and 3, showing pin configurations and bit settings.
- Command Window:** Displays error messages:


```

*** error 35: undefined line number
*** error 65: access violation at C:0xAC00 : no 'execute/read' permission
      
```
- Call Stack + Locals Window:** Shows the current state of variables x, y, and z, with their locations and values.
- Simulation Status Bar:** Indicates the simulation is running at 0.00022400 sec.