Assignment#4 (50 marks)

Modify your Simpletron program from a console-based program to one with GUI. The GUI should be like this

		Accumulator		InstCounter 0	InstReg		OpCode		Operand	

	0	1	2	3	4	5	6	7	8	9
0	1007	1008	2007	3008	2109	1109	4300	0000	0000	0000
10	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
20	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
30	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
40	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
50	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
60	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
70	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
80	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
90	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000

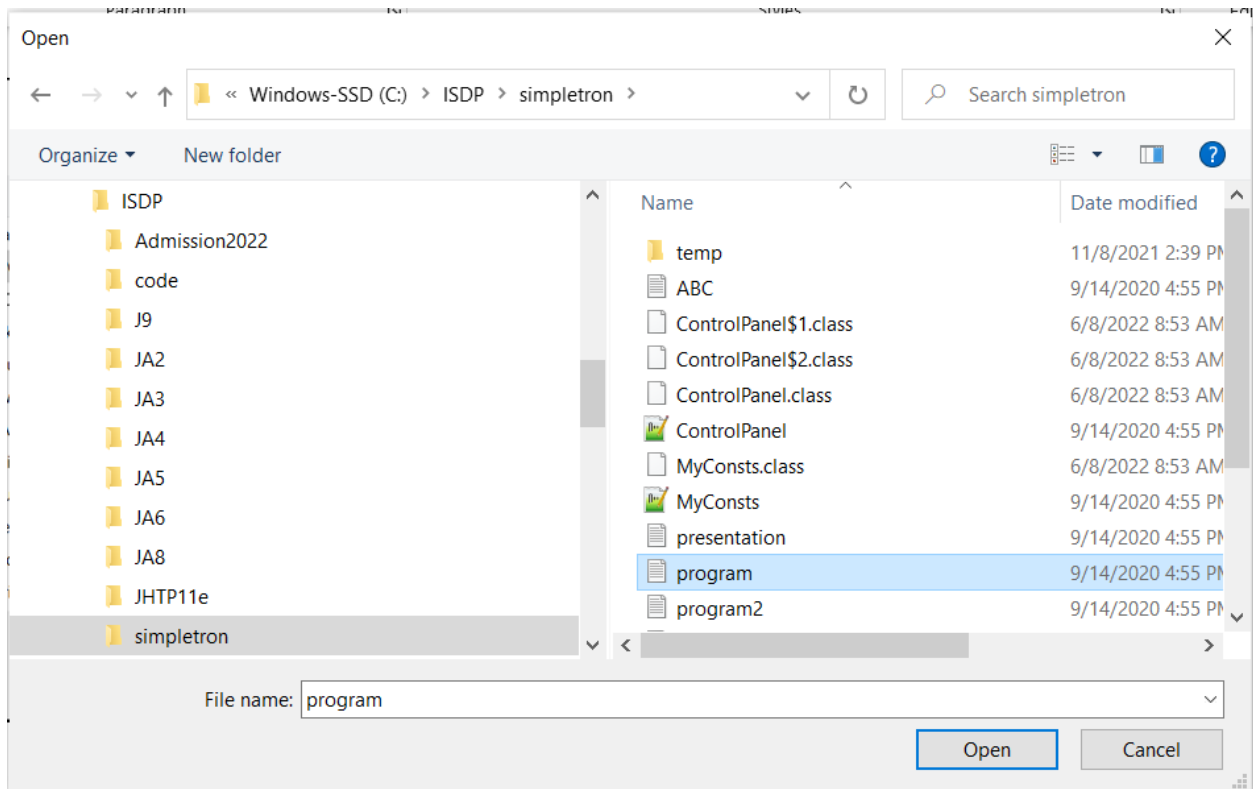| Load Program	Execute Next Instruction	● Exe one inst ○ Exe program

Moreover, instead of loading the SML program from command line you should read it from a file. The name of the file will be selected by using FileChooser class

FileChooser fileChooser = new FileChooser();

File file = fileChooser.showOpenDialog(

The above line will open a dialog box like shown below. Using this dialog box, you will select the file which contains the SML program that you want your Simpletron to execute. Once the program is loaded, as shown in the above figure, you will

execute it one instruction at a time by pressing the "Execute Next Instruction" button.

Do not provide IDE based solution. I will only accept solution which runs from command line. This assignment is worth 50 points because it requires a good amount of work, so start early if you want to finish it on time and get full marks.

Warning : I know that the solution to this problem is available on the net so suppress your temptation to submit copied code. I will probably find out and will penalize you. Moreover, you won't get good marks in the final exam if you don't understand the GUI related topics. I warned you similarly about question on midterm, but majority did not pay any attention to my warning and were unable to answer related question.

Due Date : Saturday, December 31st, 2022