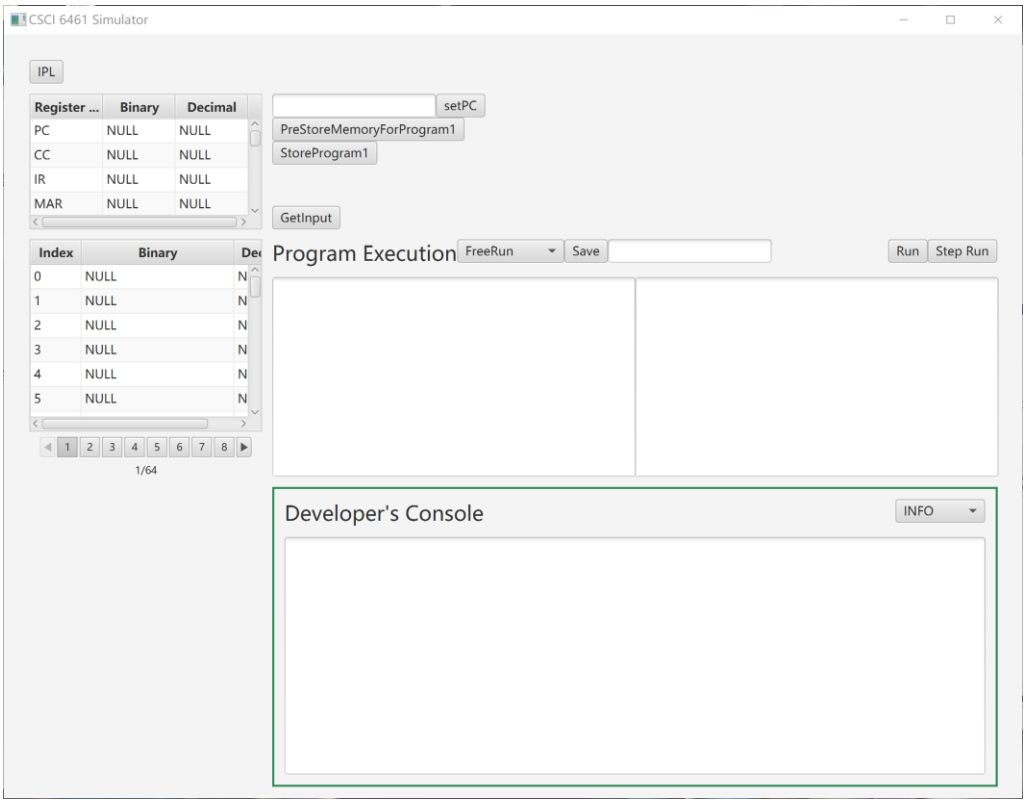
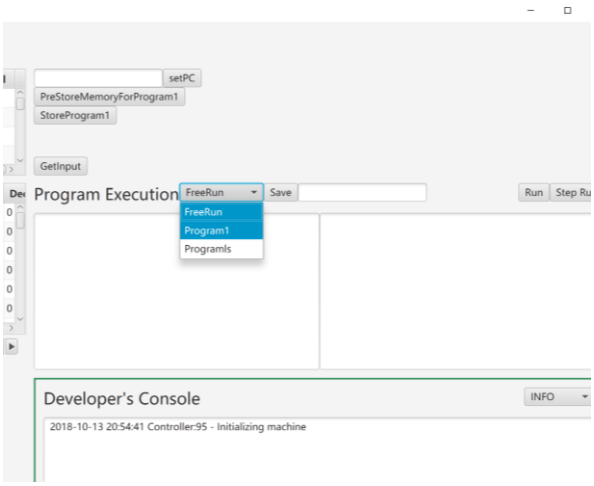
User GUIDE



① Open **simulator-1.0-SNAPSHOT.jar**

② Click Button**[IPL],** the Simulator is Initialized.

How to Run Program1:



Program1 is pre-stored in a file, thus you can click button **[FreeRun]** and then chooses **[Program1]**.

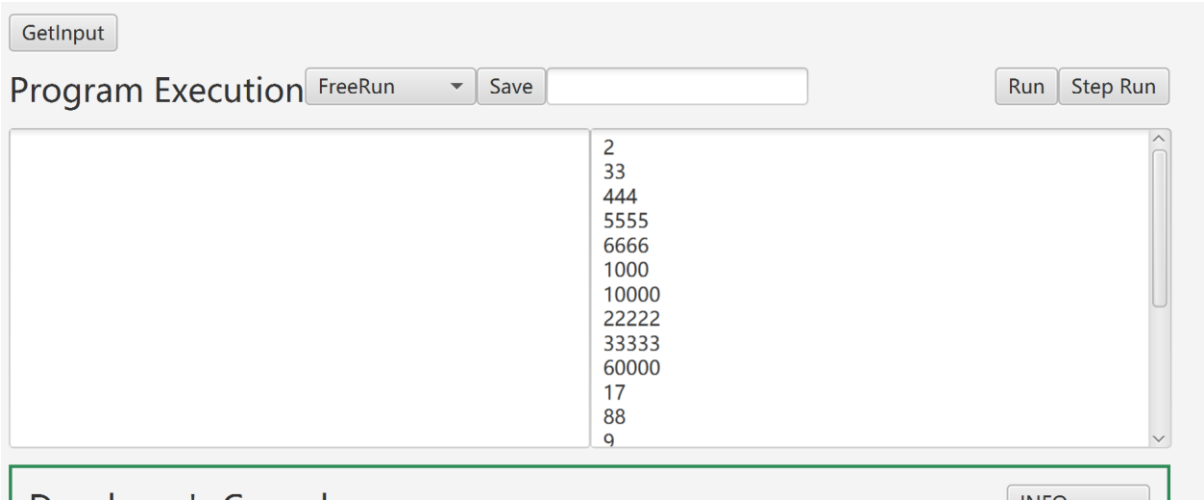
To run it:

① Click Button **[PreStroeMemoryForProgram1]**
That will store some values into memory, which helps run the program1;

memory[8]	0000000001000000	64	for X1
memory[9]	0000000010101010	170	for X2
memory[85]	1111111111111111	65535	for compare
memory[86]	0000000001000000	64	
memory[87]	0000000001010100	84	

② Click Button **[StoreProgram1]**
That will store program1 form the memory[126] to memory[185]
And set the PC =126
For more detail of program1, please check **program1.xlsx**

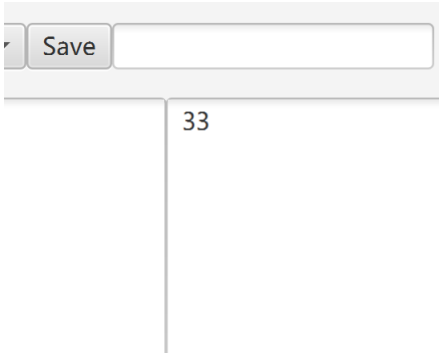
③ Enter 21 numbers in the box. The simulator will search the first 20 numbers for the number closest to the last number entered by the user.



Then Click Button **[GetInput]**

④ Then click **[Run]** or **[Step Run]** to run the program1. After each instruction, the Developer's Console will output information about what the simulator has done.

⑤ After calculation, the box outputs a number which is the closest one among 20 numbers.



Specifically, in our test, we input the following numbers

	A
1	2
2	33
3	444
4	5555
5	6666
6	1000
7	10000
8	22222
9	33333
10	60000
11	17
12	88
13	9
14	10
15	12
16	15
17	118
18	3298
19	5389
20	3213
21	32

It's evident that the correct answer is 33, which is consistent with the output from our simulator.

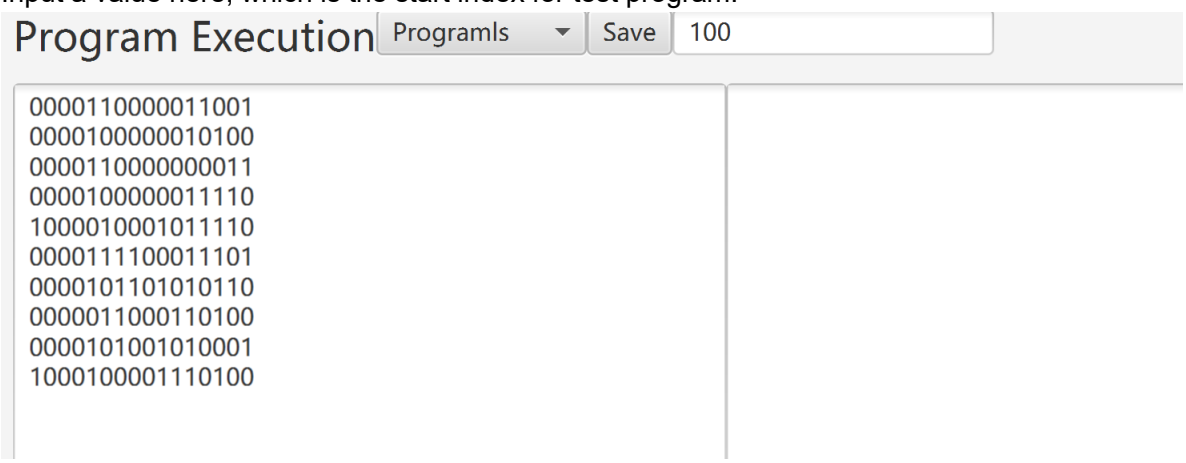
Note: If you input a value that is not a number, it won't be IN to the simulator.

How to Run Instructions

We have pre-stored a "Load and Store Test Program" for quick experiments.

① Choose **[programls],** it will be loaded automatically.

② Input a value here, which is the start index for test program.



③ Click Button **[Save],** now the **"programls"** is stored to memory, start with 100, PC=100

④ Then click **[Run]** or **[Step Run]** to run it.

⑤ You can use **[SetPC]** to change PC, then run a instruction repeatly.

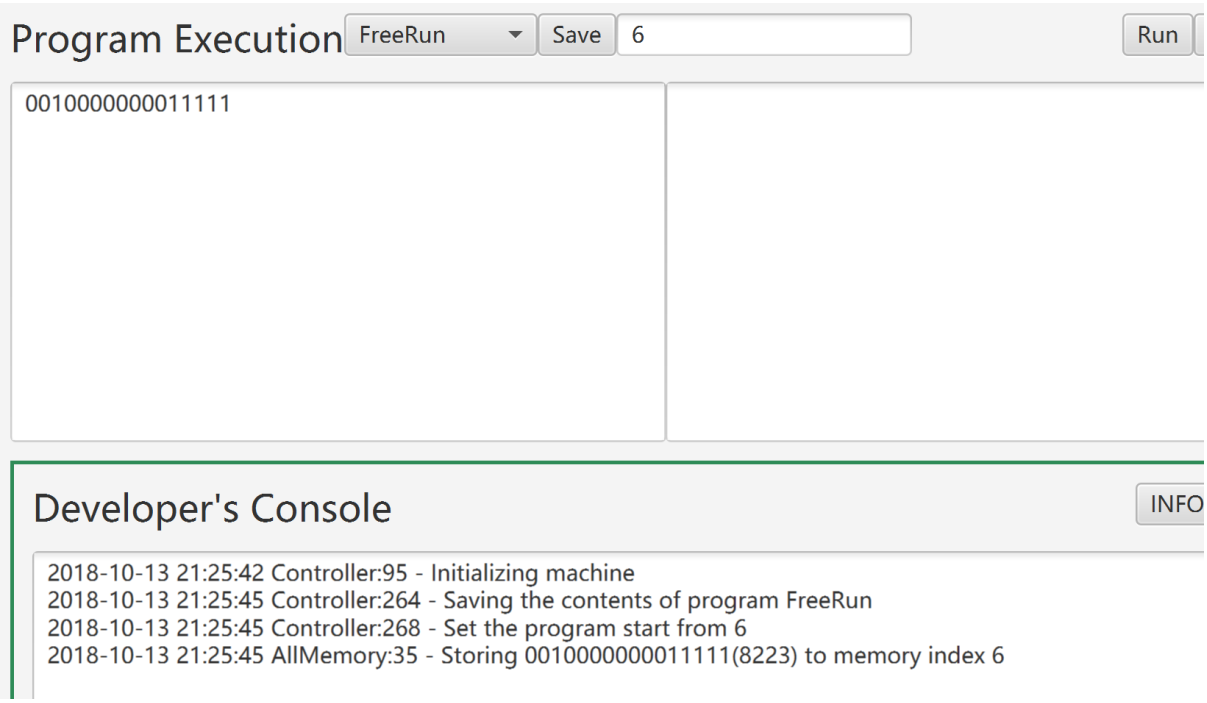
Input a index value like “100” and click **[SetPC]**, PC = 100.

How to FreeRun

You can use instructions freely by choosing **[FreeRun]** and set your own instructions.

① Input an instruction in box.
Such as “0010000000011111” JZ R0,0,31

② Input an index and save. E.g., save it to memory[6]



③ Click **[Run]**

```
2018-10-13 21:26:18 AllMemory:73 - Fetching 0010000000011111(8223) from memory index 6
2018-10-13 21:26:18 AllMemory:76 - Hit cache
2018-10-13 21:26:18 Transfer:55 - JZ Jump to 31 when R0 =0
2018-10-13 21:26:18 AllMemory:73 - Fetching 0000000000000000(0) from memory index 31
2018-10-13 21:26:18 Miscellaneous:37 - HLT
```