

Test Report

Group-7
2013/10/16

DIRECTORY

1.	INITIALIZE PROGRAM LOAD	2
1.1	WELCOME	2
1.2	SET MEMORY.....	2
1.3	SET PC	2
1.4	FINISH INITIALIZATION	3
2.	INPUT DATA.....	4
2.1	INPUT MEMORY	4
2.2	INPUT DATA	5
2.2.1	Enter Data into R0.....	5
2.2.2	Enter Data into R1.....	7
2.2.3	Enter Data into R2.....	9
2.2.4	Enter Data into R3.....	10
3.	RUN AMR, SMR, AIR,SIR INSTRUCTIONS.....	12
3.1	RUN AMR	12
3.2	RUN SMR.....	16
3.3	RUN AIR	21
3.4	RUN SIR	25

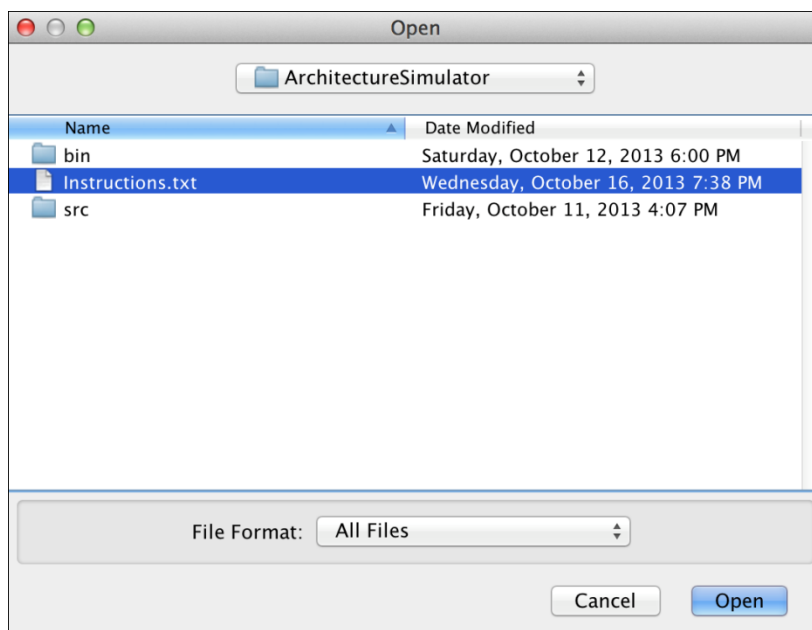
1. Initialize Program Load

1.1 Welcome



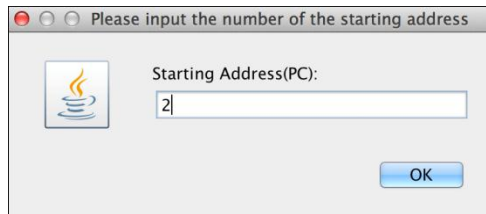
Click the Button "Start and loading memory" to start the initialization.

1.2 Set Memory



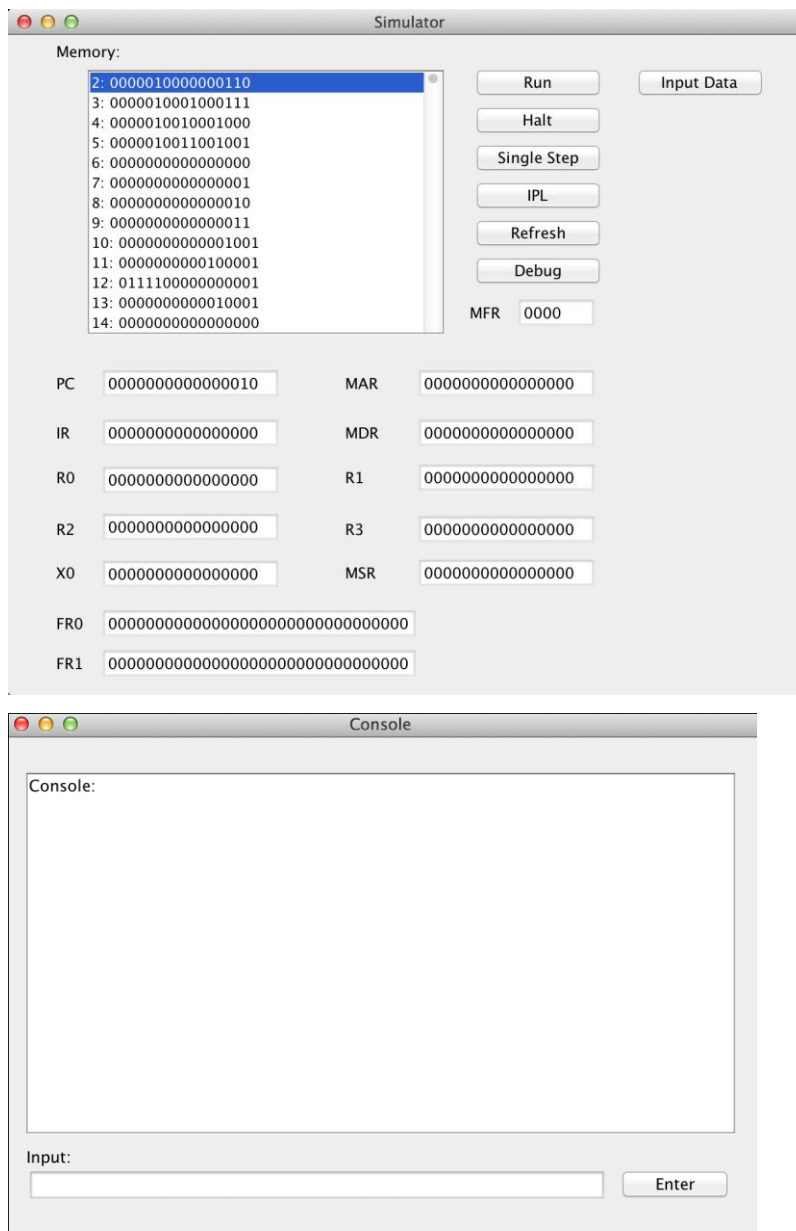
Choose a memory file to load.

1.3 Set PC



Input the PC number, 2.

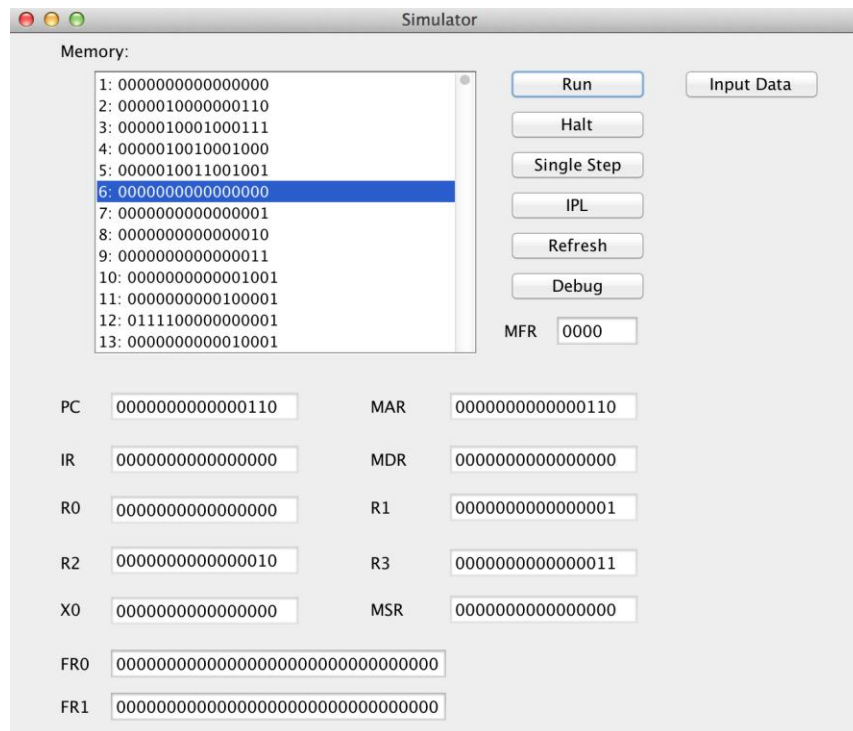
1.4 Finish Initialization



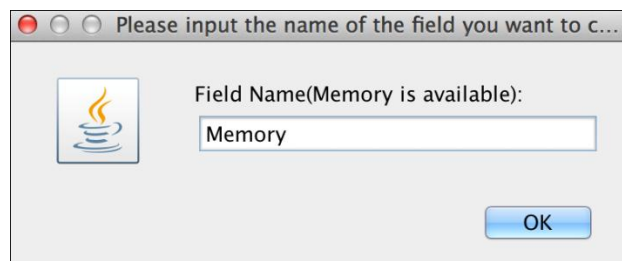
When the initialization finish, you can see both of these windows.

2. Input Data

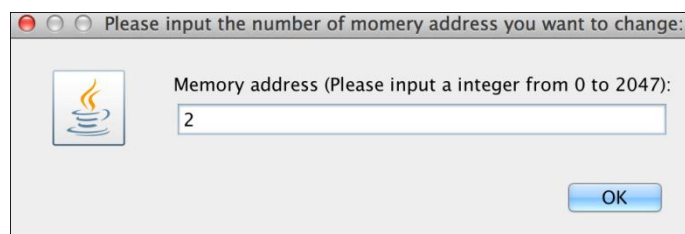
2.1 Input Memory



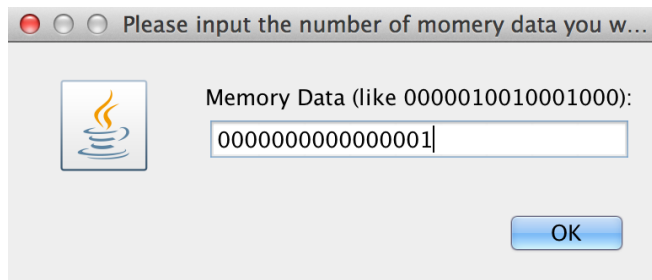
Click Button “Input data”, and you will see a window like following.



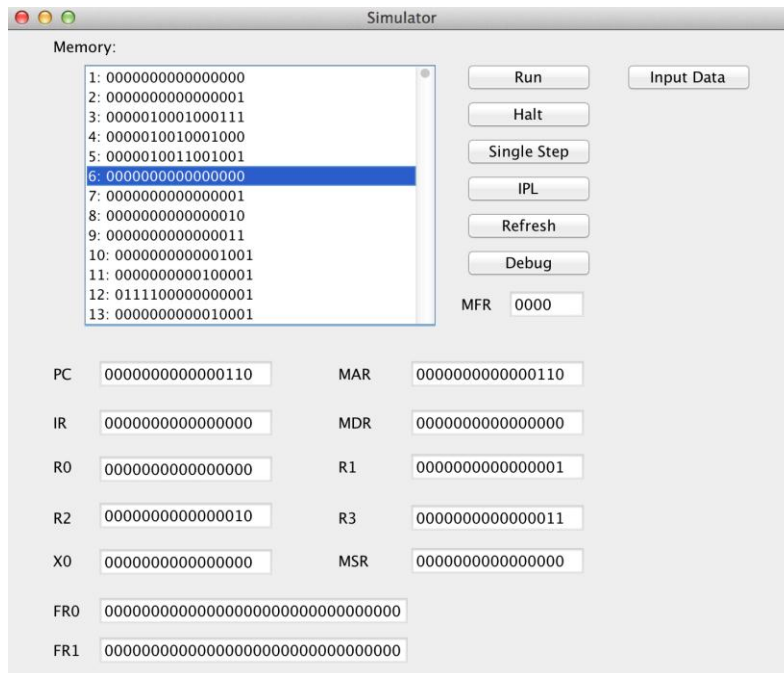
Input “Memory”, and click Button “OK”.



Input the address number you want to enter data into, and click Button “OK”.



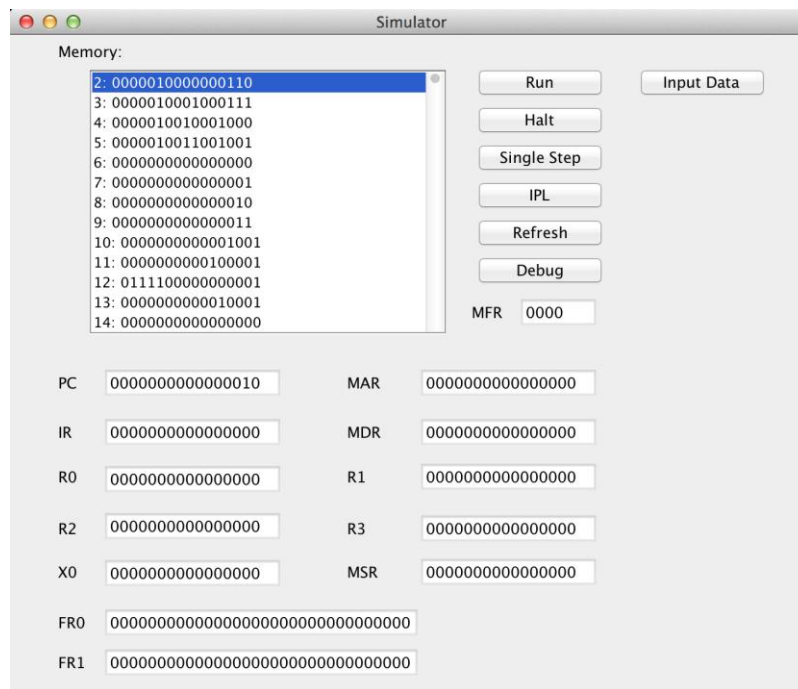
Input the data you want to enter, and click Button “OK”.



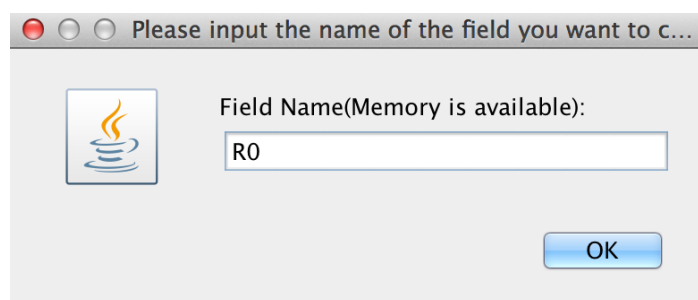
Congratulation! The data in the memory has been changed successfully.

2.2 Input Data

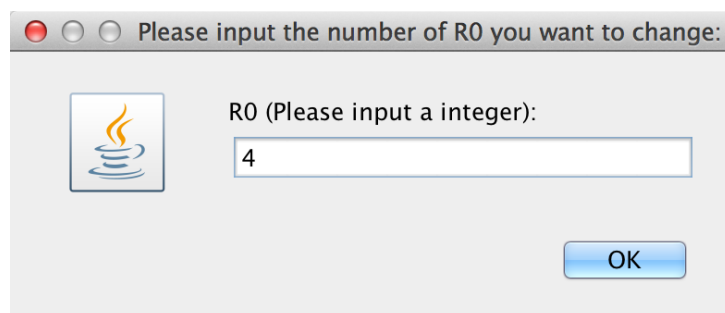
2.2.1 Enter Data into R0



Click Button “Input data”, and you will see a window like following.



Input the field name“R0”, and click Button “OK”.



Input the data“4”, and click Button “OK”.

Simulator

Memory:

- 2: 0000010000000110
- 3: 0000010001000111
- 4: 0000010010001000
- 5: 0000010011001001
- 6: 0000000000000000
- 7: 0000000000000001
- 8: 0000000000000010
- 9: 0000000000000011
- 10: 0000000000001001
- 11: 000000000100001
- 12: 0111100000000001
- 13: 000000000010001
- 14: 0000000000000000

Run Halt Single Step IPL Refresh Debug

Input Data MFR 0000

PC 000000000000010 MAR 000000000000000

IR 000000000000000 MDR 000000000000000

R0 000000000000100 R1 000000000000000

R2 000000000000000 R3 000000000000000

X0 000000000000000 MSR 000000000000000

FR0 00000000000000000000000000000000

FR1 00000000000000000000000000000000

Congratulation! The data has been changed successfully.

2.2.2 Enter Data into R1

Simulator

Memory:

- 2: 0000010000000110
- 3: 0000010001000111
- 4: 0000010010001000
- 5: 0000010011001001
- 6: 0000000000000000
- 7: 0000000000000001
- 8: 0000000000000010
- 9: 0000000000000011
- 10: 0000000000001001
- 11: 000000000100001
- 12: 0111100000000001
- 13: 000000000010001
- 14: 0000000000000000

Run Halt Single Step IPL Refresh Debug

Input Data MFR 0000

PC 000000000000010 MAR 000000000000000

IR 000000000000000 MDR 000000000000000

R0 000000000000100 R1 000000000000000

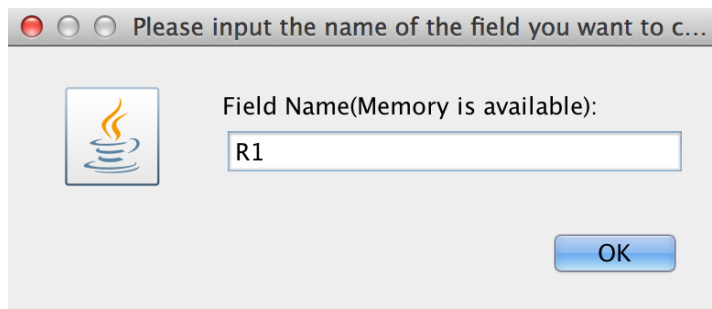
R2 000000000000000 R3 000000000000000

X0 000000000000000 MSR 000000000000000

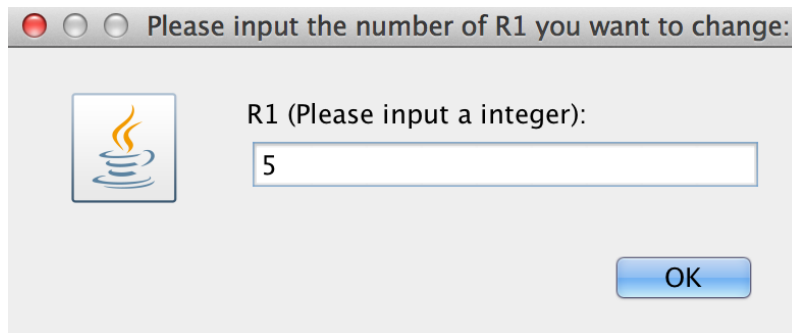
FR0 00000000000000000000000000000000

FR1 00000000000000000000000000000000

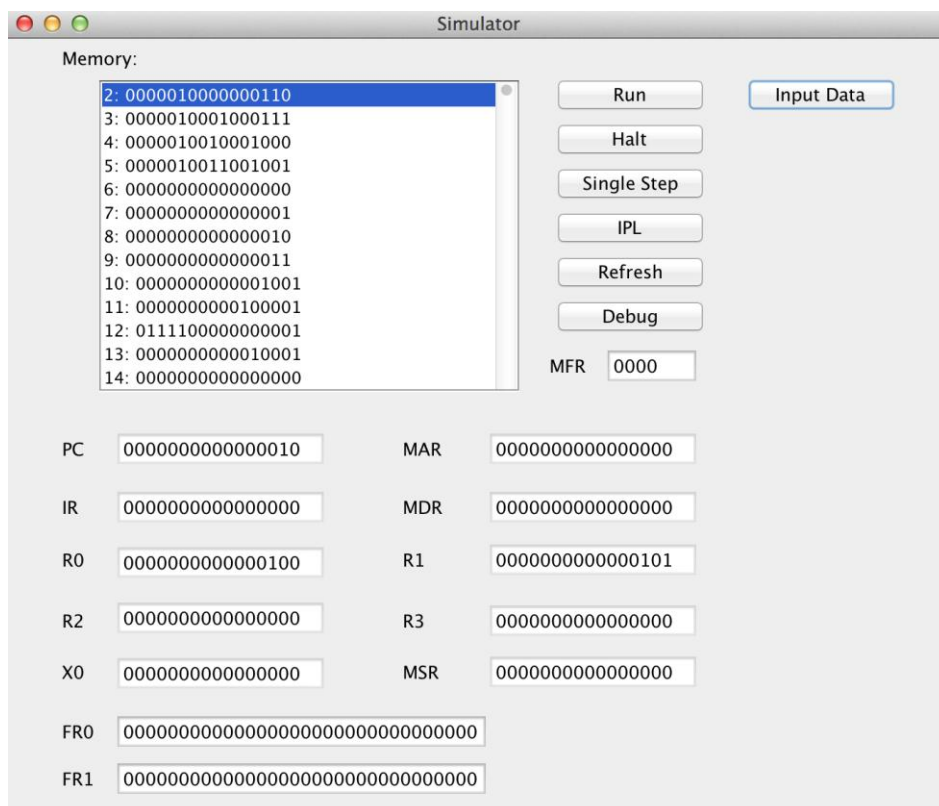
Click Button “Input data”, and you will see a window like following.



Input the field name“R1”, and click Button “OK”.

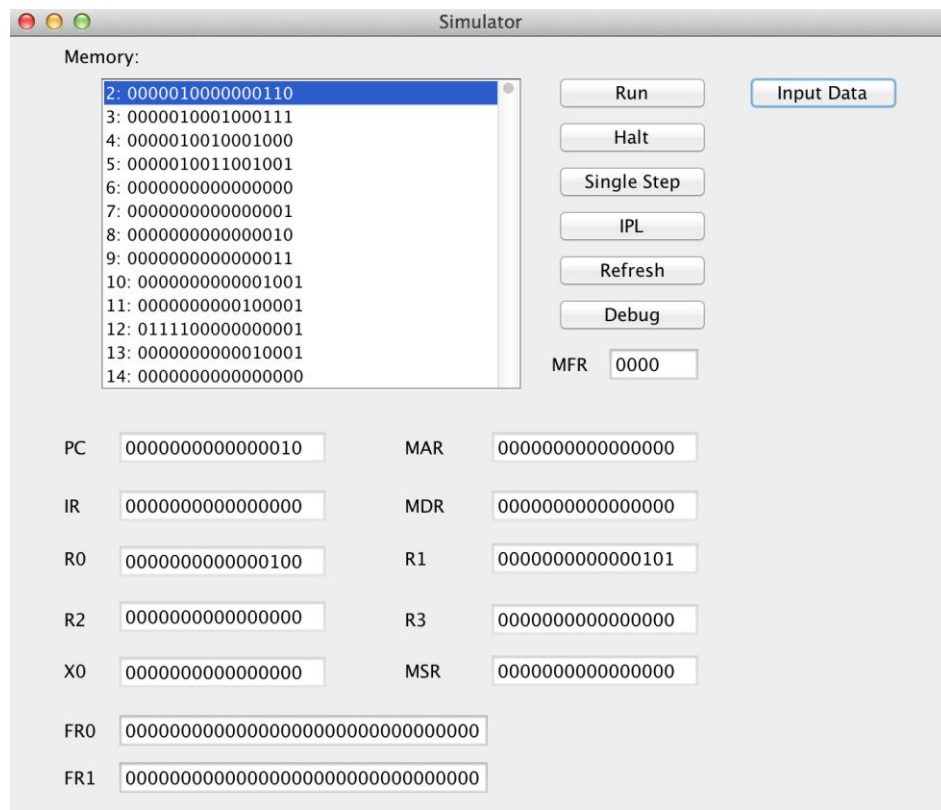


Input the data“5”, and click Button “OK”.

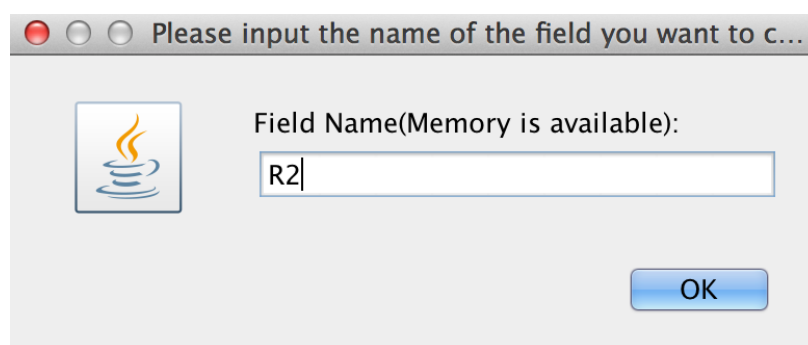


Congratulation! The data has been changed successfully.

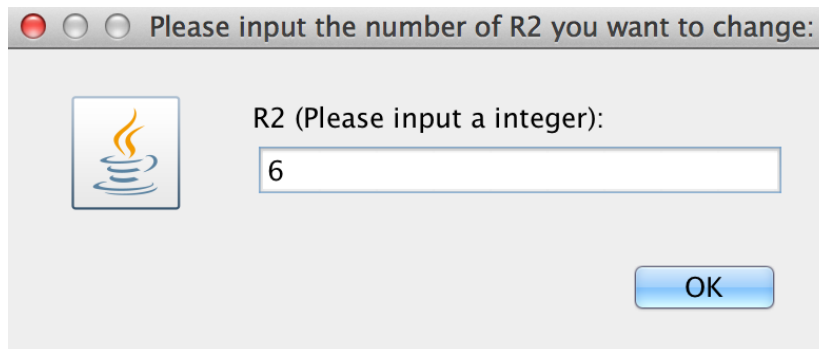
2.2.3 Enter Data into R2



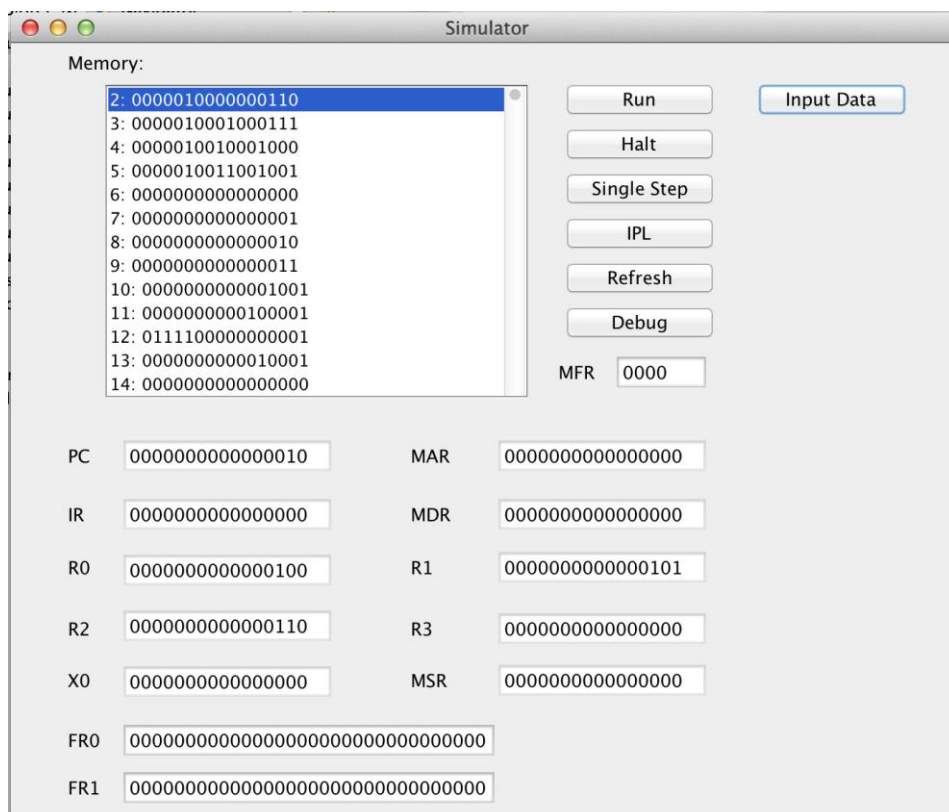
Click Button "Input data", and you will see a window like following.



Input the field name "R2", and click Button "OK".

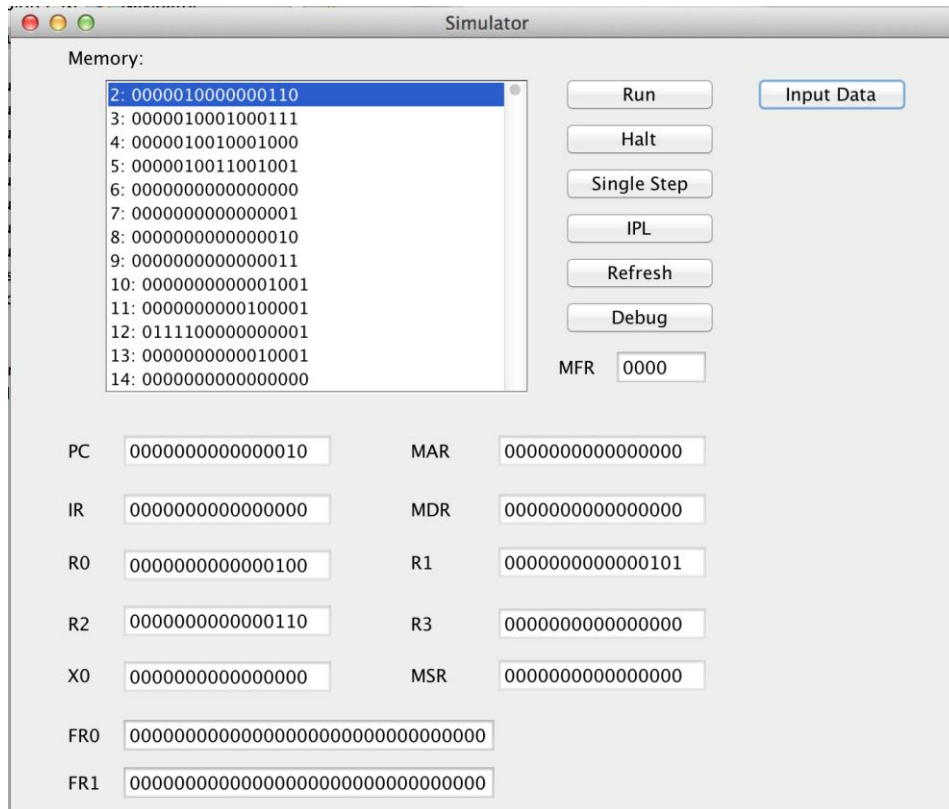


Input the data“6”, and click Button “OK”.



Congratulation! The data has been changed successfully.

2.2.4 Enter Data into R3



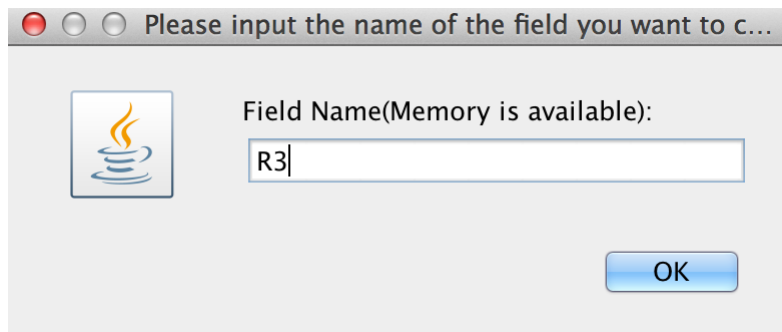
The Simulator window displays the following components:

- Memory:** A list of memory addresses and their corresponding binary values. Address 2 is highlighted.
- Control Buttons:** Run, Halt, Single Step, IPL, Refresh, Debug, and Input Data.
- MFR:** A text field containing the value 0000.
- Registers:** PC, MAR, IR, MDR, R0, R1, R2, R3, X0, MSR, FR0, and FR1, each with a corresponding binary value.

Address	Value
2:	0000010000000110
3:	0000010001000111
4:	0000010010001000
5:	0000010011001001
6:	0000000000000000
7:	0000000000000001
8:	0000000000000010
9:	0000000000000011
10:	0000000000001001
11:	0000000000100001
12:	0111100000000001
13:	000000000010001
14:	0000000000000000

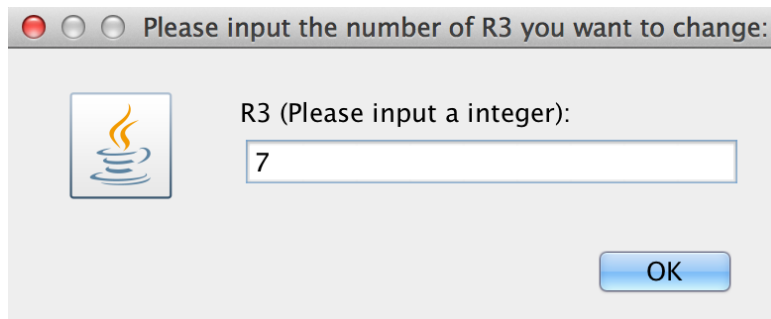
Register	Value
PC	0000000000000010
MAR	0000000000000000
IR	0000000000000000
MDR	0000000000000000
R0	0000000000000100
R1	0000000000000101
R2	0000000000000110
R3	0000000000000000
X0	0000000000000000
MSR	0000000000000000
FR0	00000000000000000000000000000000
FR1	00000000000000000000000000000000

Click Button “Input data”, and you will see a window like following.



The dialog box titled "Please input the name of the field you want to change:" contains a text input field with the value "R3" and an "OK" button.

Input the field name “R3”, and click Button “OK”.



The dialog box titled "Please input the number of R3 you want to change:" contains a text input field with the value "7" and an "OK" button.

Input the data “7”, and click Button “OK”.

Simulator

Memory:

2:	0000010000000110
3:	0000010001000111
4:	0000010010001000
5:	0000010011001001
6:	0000000000000000
7:	0000000000000001
8:	0000000000000010
9:	0000000000000011
10:	0000000000001001
11:	0000000000010001
12:	0111100000000001
13:	0000000000010001
14:	0000000000000000

Run Input Data

Halt

Single Step

IPL

Refresh

Debug

MFR 0000

PC 0000000000000010 MAR 0000000000000000

IR 0000000000000000 MDR 0000000000000000

R0 0000000000000100 R1 0000000000000101

R2 0000000000000110 R3 0000000000000111

X0 0000000000000000 MSR 0000000000000000

FR0 00000000000000000000000000000000

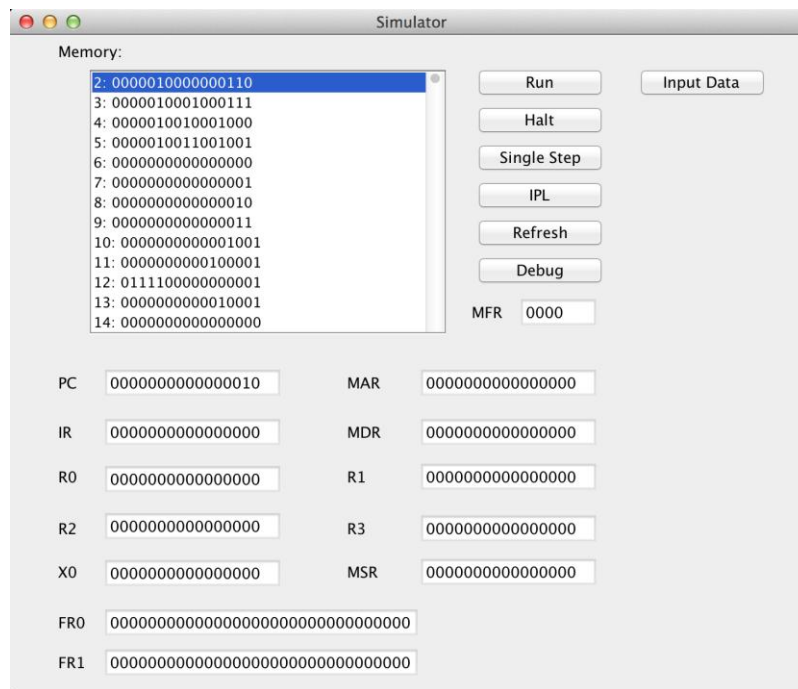
FR1 00000000000000000000000000000000

Congratulation! The data has been changed successfully.

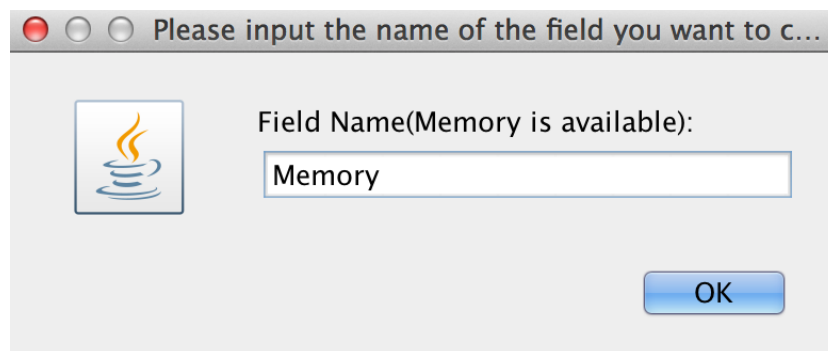
3. Run AMR, SMR, AIR,SIR Instructions

3.1 Run AMR

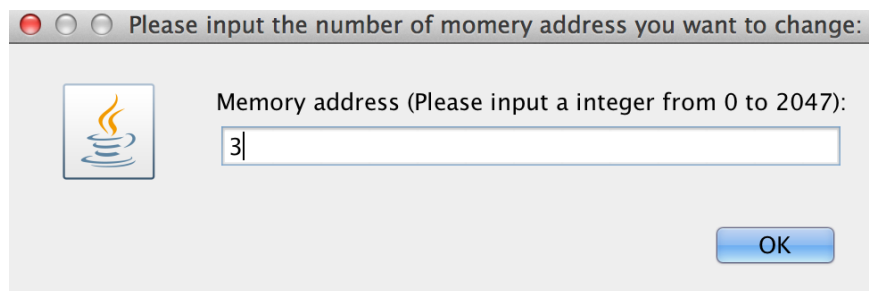
When you finish the initialization and all data in this simulator are correct, you can see the window as following.



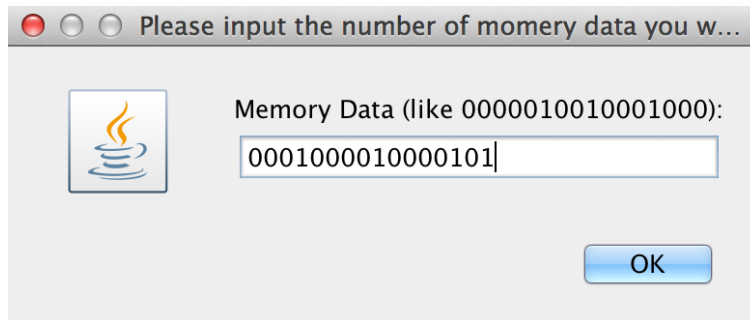
Then click Button “Input data”, and you will see a window like following.



Input the field name “Memory”, and click Button “OK”.



Input the data “3”, and click Button “OK”.



Please input the number of momery data you w...

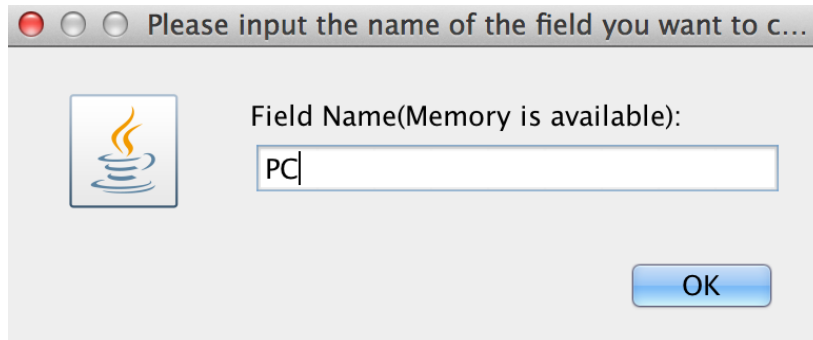
Memory Data (like 0000010010001000):

0001000010000101

OK

Input the AMR instruction, and click Button “OK”.

Click Button “Input data”, again.



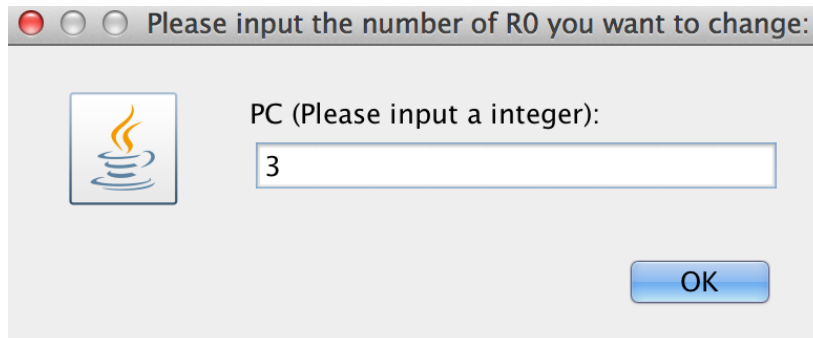
Please input the name of the field you want to c...

Field Name(Memory is available):

PC

OK

Input the field name “PC”, and click Button “OK”.



Please input the number of R0 you want to change:

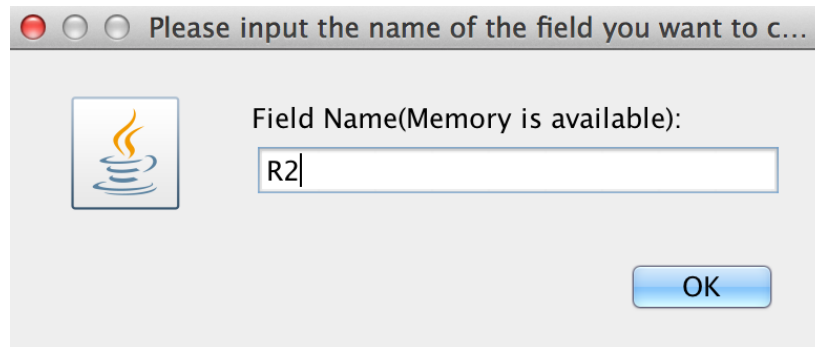
PC (Please input a integer):

3

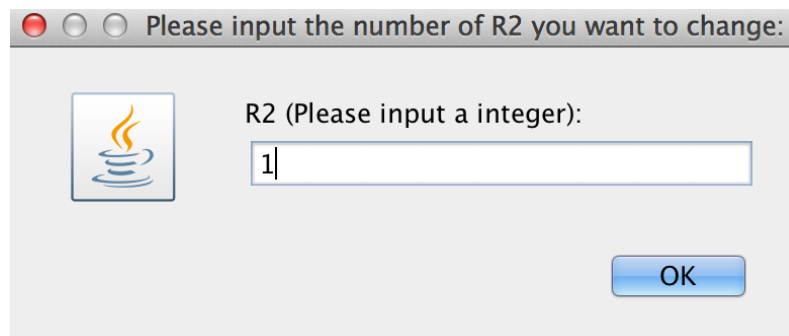
OK

Input the data “3”, and click Button “OK”.

Click Button “Input data”, again.

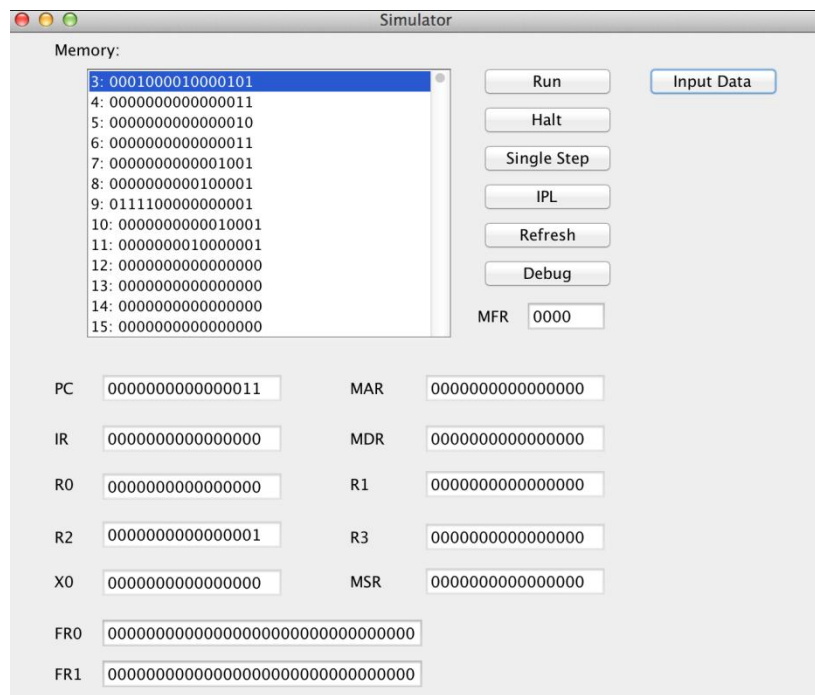


Input the field name “R2”, and click Button “OK”.

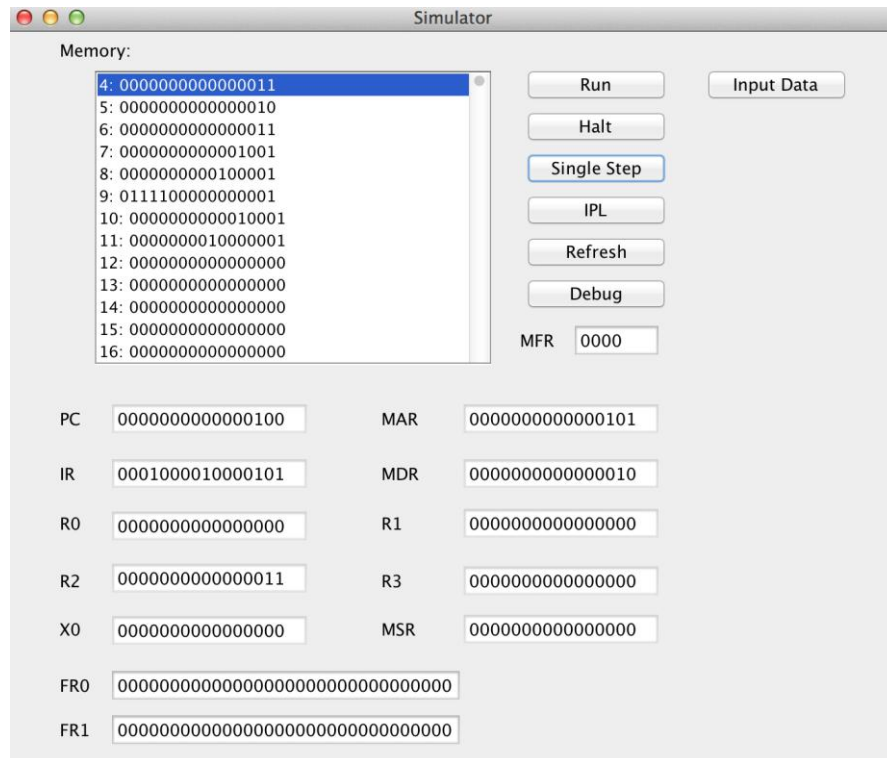


Input the data “1”, and click Button “OK”.

Then you can see the window as following.



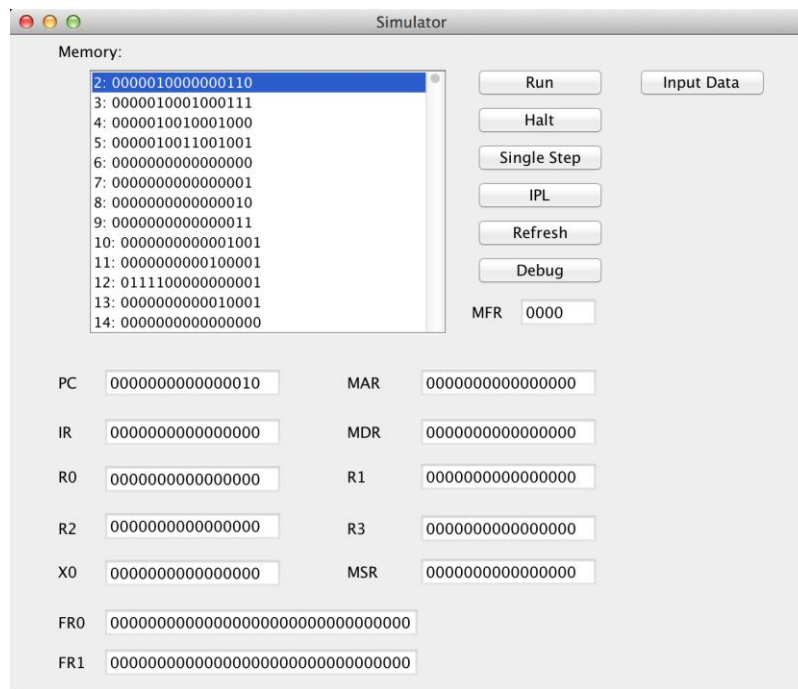
Click Button “Single Step”.



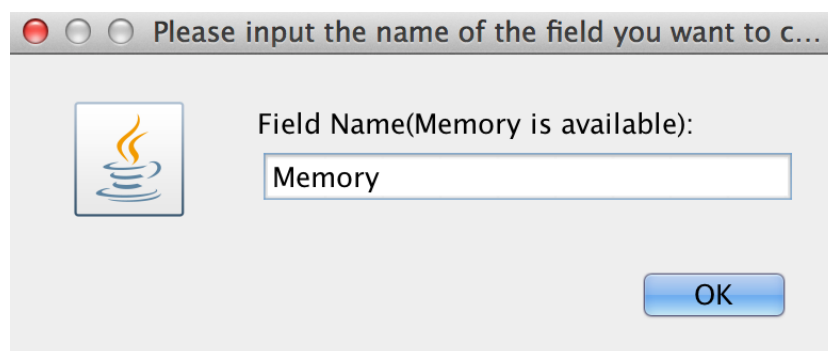
Congratulation! The AMR instruction has been done successfully.

3.2 Run SMR

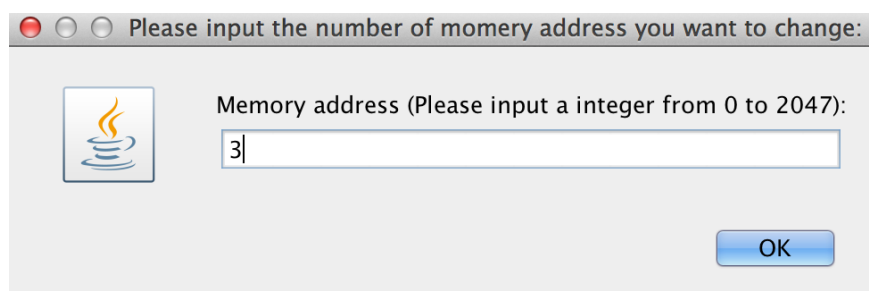
When you finish the initialization and all data in this simulator are correct, you can see the window as following.



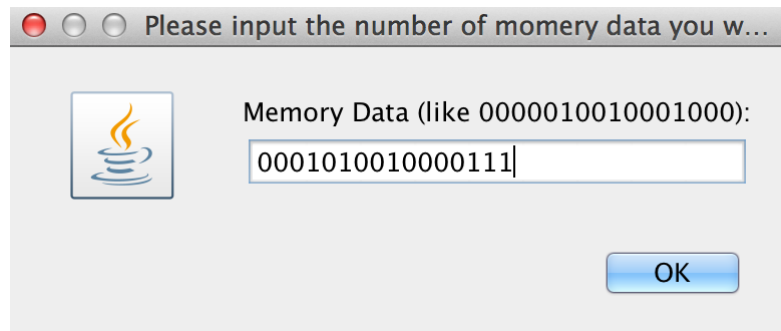
Click Button “Input data”, and you will see a window like following.



Input the field name “Memory”, and click Button “OK”.

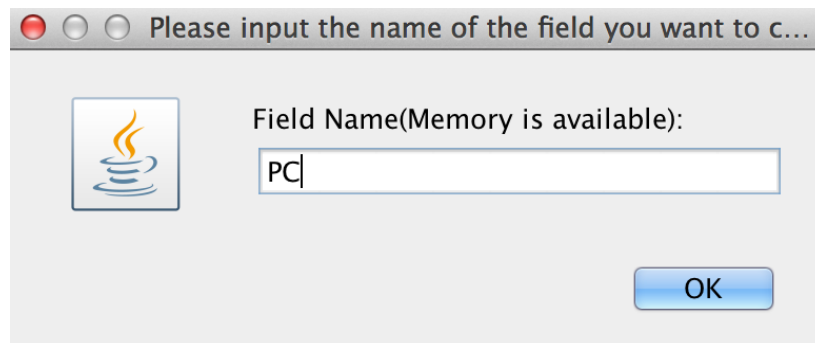


Input the data “3”, and click Button “OK”.

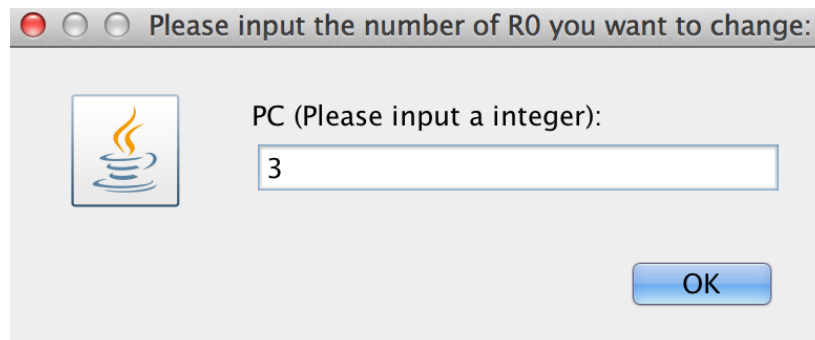


Input the SMR instruction, and click Button “OK”.

Click Button “Input data”, again.

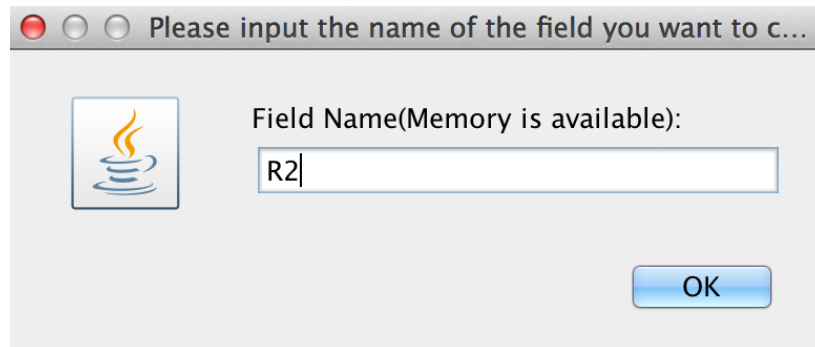


Input the field name “PC”, and click Button “OK”.

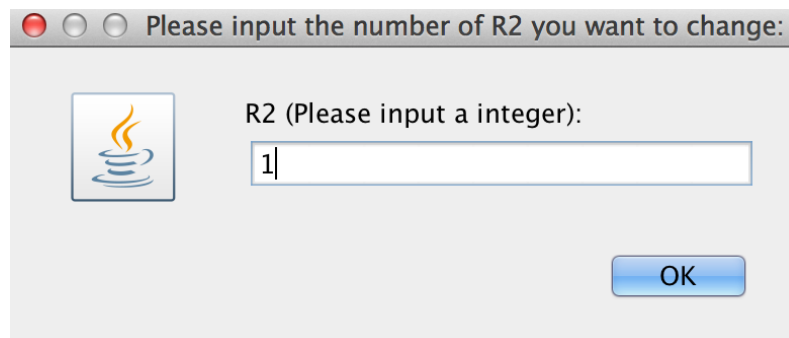


Input the data “3”, and click Button “OK”.

Click Button “Input data”, again.



Input the field name "R2", and click Button "OK".



Input the data "1", and click Button "OK".

Then you can see the window as following.

Simulator

Memory:

```

3: 0001010010000111
4: 0000010010001000
5: 0000010011001001
6: 0000000000000000
7: 0000000000000001
8: 0000000000000010
9: 0000000000000011
10: 0000000000001001
11: 0000000000100001
12: 0111100000000001
13: 0000000000010001
14: 0000000000000000
15: 0000000000000000

```

Run Input Data

Halt

Single Step

IPL

Refresh

Debug

MFR 0000

PC 0000000000000011 MAR 0000000000000000

IR 0000000000000000 MDR 0000000000000000

R0 0000000000000000 R1 0000000000000000

R2 0000000000000001 R3 0000000000000000

X0 0000000000000000 MSR 0000000000000000

FR0 00000000000000000000000000000000

FR1 00000000000000000000000000000000

Click Button “Single Step”.

Simulator

Memory:

```

4: 0000010010001000
5: 0000010011001001
6: 0000000000000000
7: 0000000000000001
8: 0000000000000010
9: 0000000000000011
10: 0000000000001001
11: 0000000000100001
12: 0111100000000001
13: 0000000000010001
14: 0000000000000000
15: 0000000000000000
16: 0000000000000000

```

Run Input Data

Halt

Single Step

IPL

Refresh

Debug

MFR 0000

PC 0000000000000100 MAR 0000000000000111

IR 0001010010000111 MDR 0000000000000001

R0 0000000000000000 R1 0000000000000000

R2 0000000000000000 R3 0000000000000000

X0 0000000000000000 MSR 0000000000000000

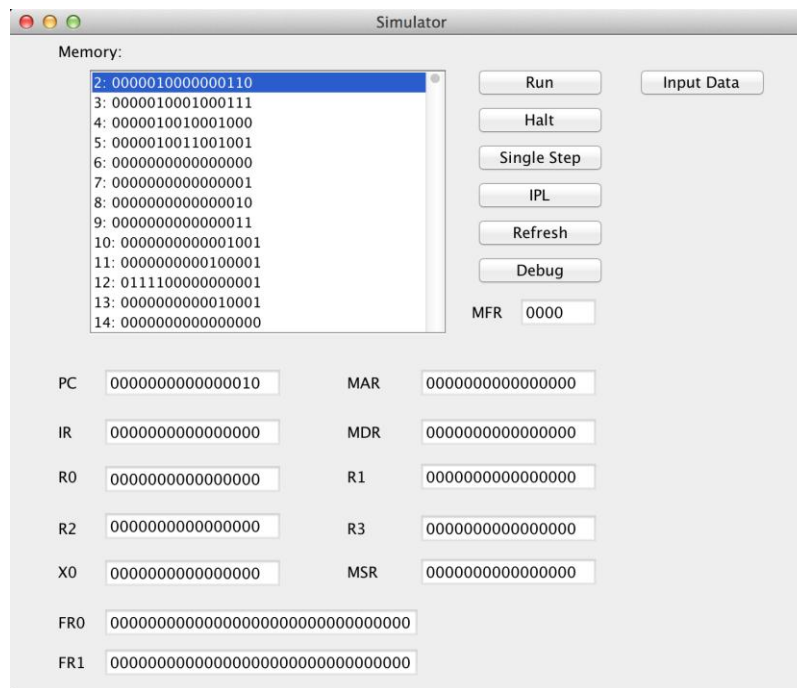
FR0 00000000000000000000000000000000

FR1 00000000000000000000000000000000

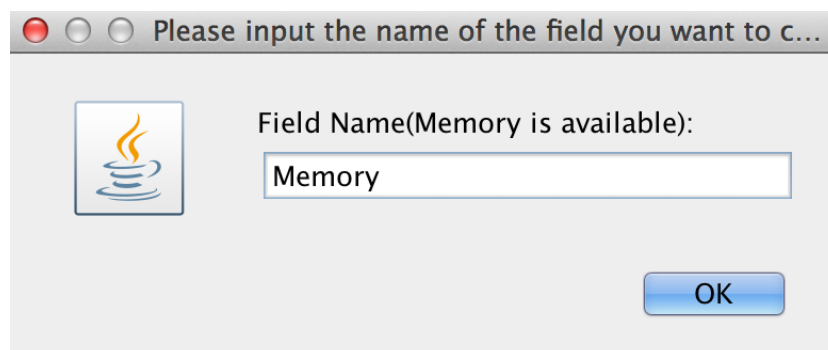
Congratulation! The SMR instruction has been done successfully.

3.3 Run AIR

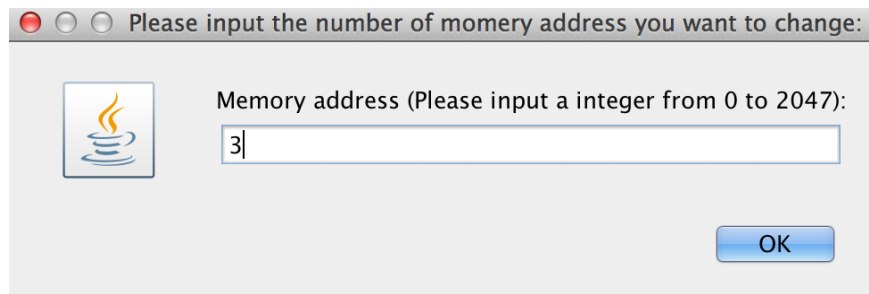
When you finish the initialization and all data in this simulator are correct, you can see the window as following.



Click Button "Input data", and you will see a window like following.



Input the field name "Memory", and click Button "OK".



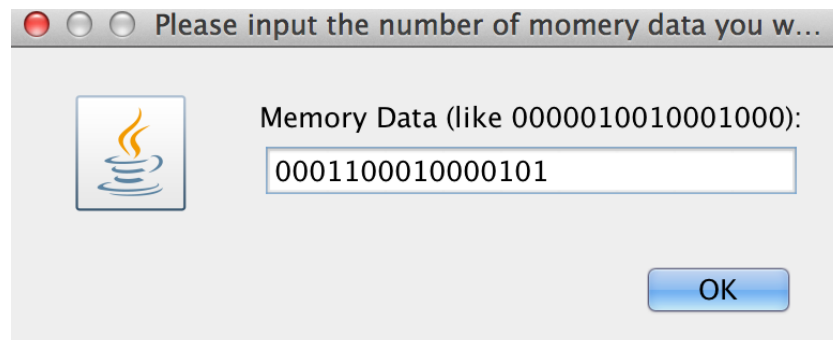
Please input the number of momery address you want to change:

Memory address (Please input a integer from 0 to 2047):

3

OK

Input the data“3”, and click Button “OK”.



Please input the number of momery data you w...

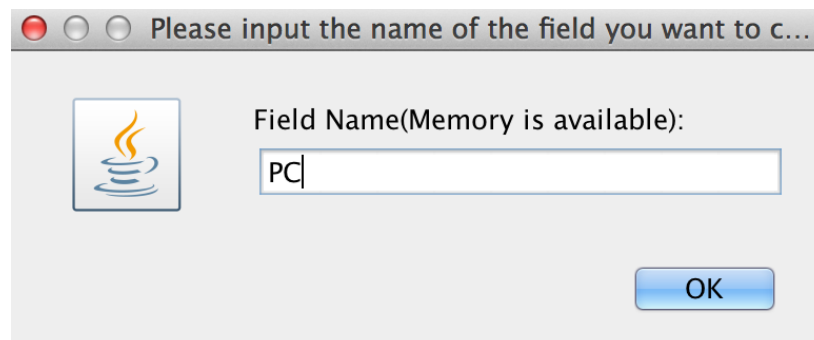
Memory Data (like 0000010010001000):

0001100010000101

OK

Input the AMR instruction, and click Button “OK”.

Click Button “Input data”, again.



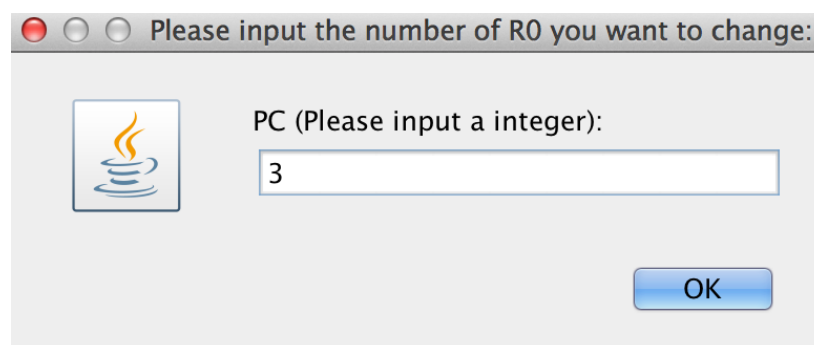
Please input the name of the field you want to c...

Field Name(Memory is available):

PC

OK

Input the field name “PC”, and click Button “OK”.



Please input the number of R0 you want to change:

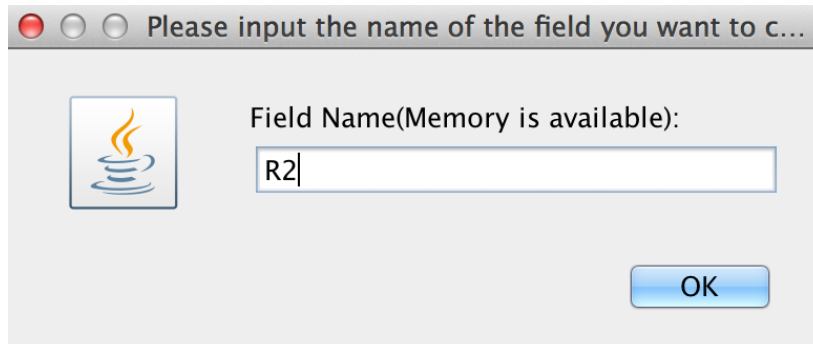
PC (Please input a integer):

3

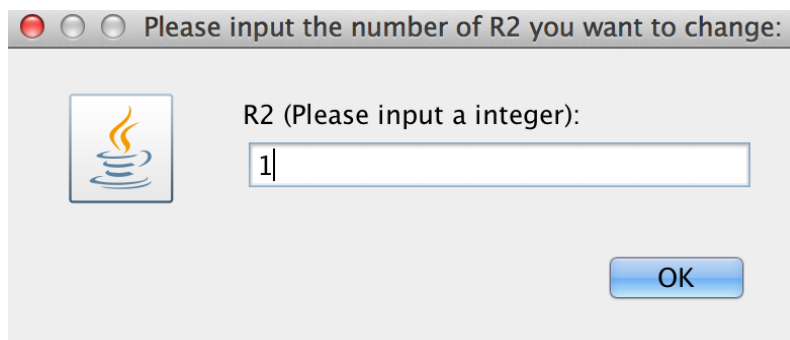
OK

Input the data“3”, and click Button “OK”.

Click Button “Input data”, again.



Input the field name “R2”, and click Button “OK”.



Input the data“1”, and click Button “OK”.

Then you can see the window as following.

Simulator

Memory:

3:	0001100010000101
4:	0000010010001000
5:	0000010011001001
6:	0000000000000000
7:	0000000000000001
8:	0000000000000010
9:	0000000000000011
10:	0000000000001001
11:	0000000000100001
12:	0111100000000001
13:	0000000000010001
14:	0000000000000000
15:	0000000000000000

Run Input Data

Halt

Single Step

IPL

Refresh

Debug

MFR 0000

PC 0000000000000011 MAR 0000000000000000

IR 0000000000000000 MDR 0000000000000000

R0 0000000000000000 R1 0000000000000000

R2 0000000000000001 R3 0000000000000000

X0 0000000000000000 MSR 0000000000000000

FR0 00000000000000000000000000000000

FR1 00000000000000000000000000000000

Click Button “Single Step”.

Simulator

Memory:

4:	0000010010001000
5:	0000010011001001
6:	0000000000000000
7:	0000000000000001
8:	0000000000000010
9:	0000000000000011
10:	0000000000001001
11:	0000000000100001
12:	0111100000000001
13:	0000000000010001
14:	0000000000000000
15:	0000000000000000
16:	0000000000000000

Run Input Data

Halt

Single Step

IPL

Refresh

Debug

MFR 0000

PC 0000000000000100 MAR 0000000000000011

IR 0001100010000101 MDR 0001100010000101

R0 0000000000000000 R1 0000000000000000

R2 0000000000000110 R3 0000000000000000

X0 0000000000000000 MSR 0000000000000000

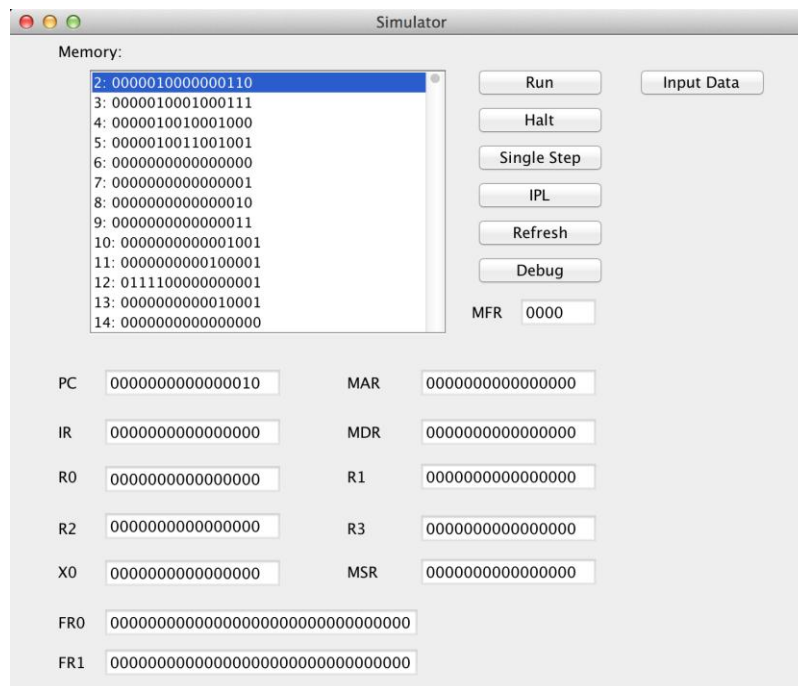
FR0 00000000000000000000000000000000

FR1 00000000000000000000000000000000

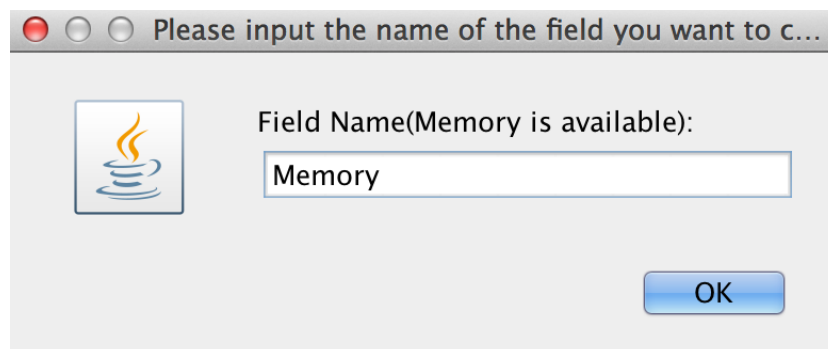
Congratulation! The AIR instruction has been done successfully.

3.4 Run SIR

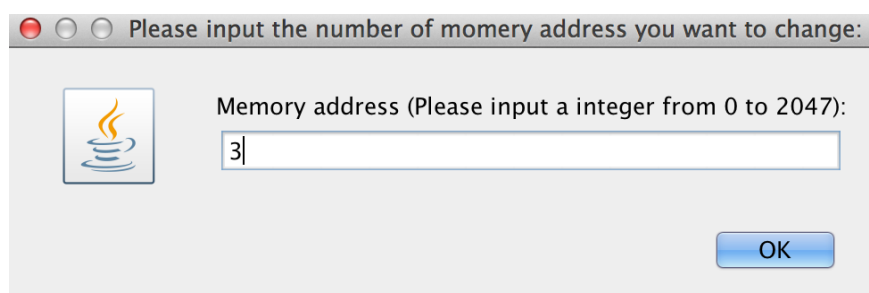
When you finish the initialization and all data in this simulator are correct, you can see the window as following.



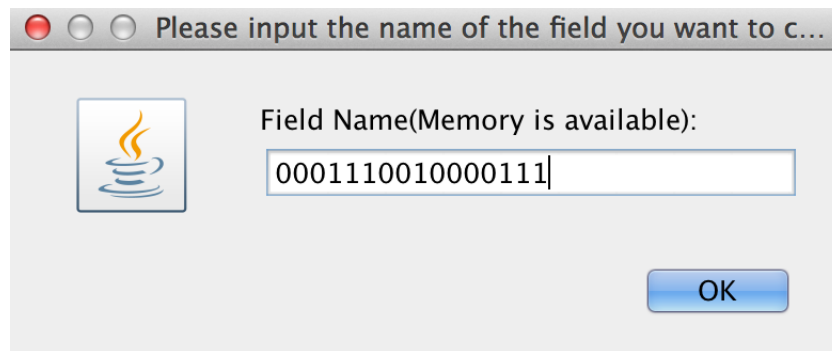
Click Button “Input data”, and you will see a window like following.



Input the field name “Memory”, and click Button “OK”.

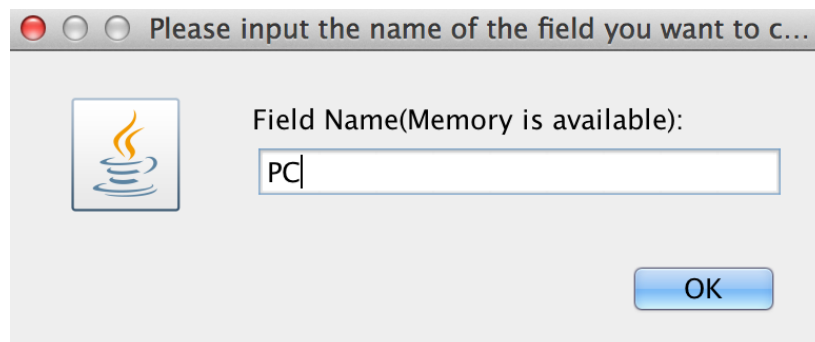


Input the data “3”, and click Button “OK”.

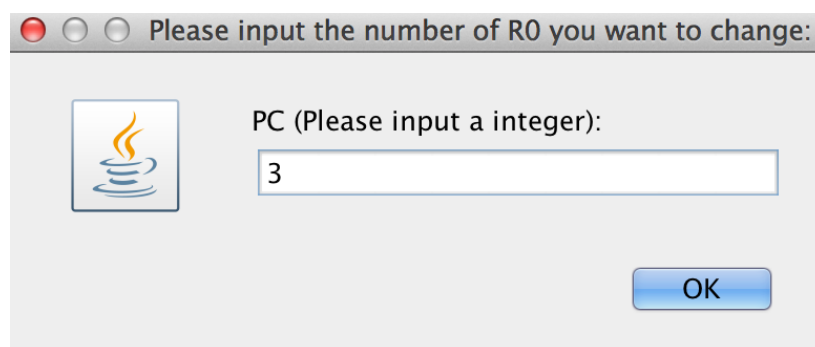


Input the SIR instruction, and click Button "OK".

Click Button "Input data", again.

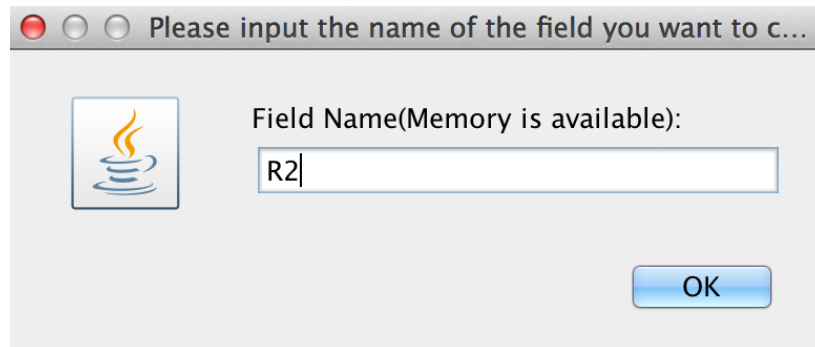


Input the field name "PC", and click Button "OK".

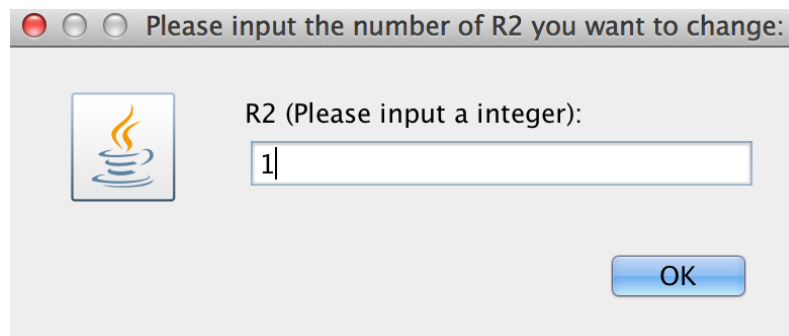


Input the data "3", and click Button "OK".

Click Button "Input data", again.

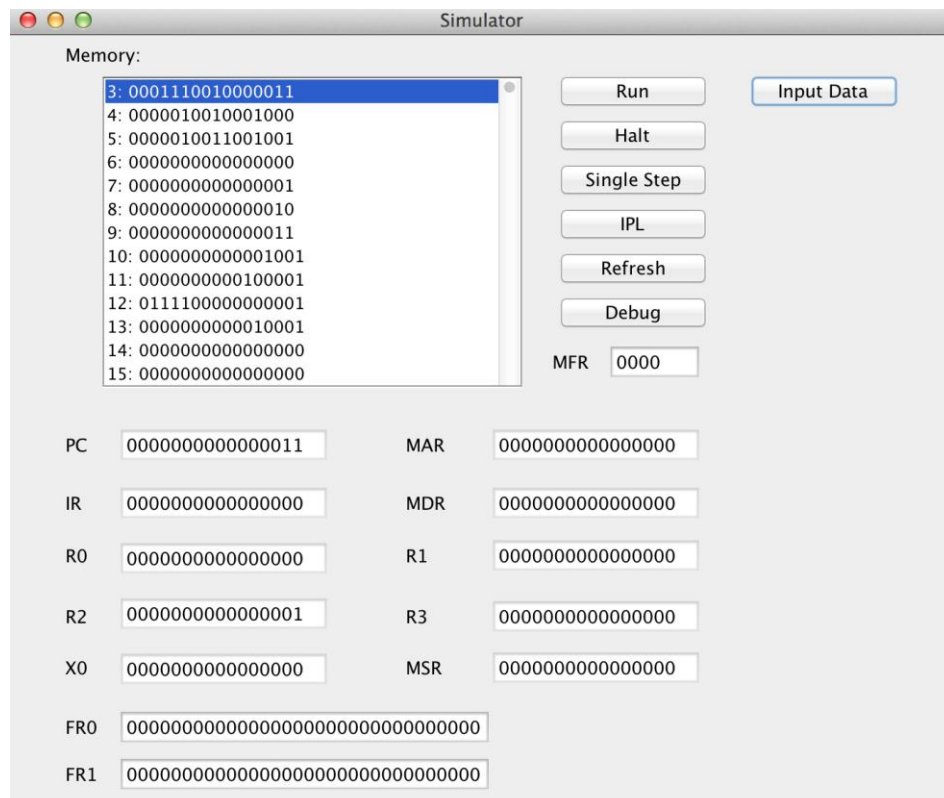


Input the field name “R2”, and click Button “OK”.



Input the data “1”, and click Button “OK”.

Then you can see the window as following.



Click Button “Single Step”.

Simulator

Memory:

4:	0000010010001000
5:	0000010011001001
6:	0000000000000000
7:	0000000000000001
8:	0000000000000010
9:	0000000000000011
10:	0000000000001001
11:	0000000000100001
12:	0111100000000001
13:	0000000000010001
14:	0000000000000000
15:	0000000000000000
16:	0000000000000000

Run Halt Single Step IPL Refresh Debug

MFR 0000

PC 0000000000000100 MAR 0000000000000011

IR 0001110010000011 MDR 0001110010000011

R0 0000000000000000 R1 0000000000000000

R2 1111111111111110 R3 0000000000000000

X0 0000000000000000 MSR 0000000000000000

FR0 00000000000000000000000000000000

FR1 00000000000000000000000000000000

Congratulation! The SIR instruction has been done successfully.