

21AIE112: Elements of Computing Part 2

Assignment 3: VM Translator-1

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Submit successful comparison snapshots for SimpleAdd.vm, StackTest.vm.
Make sure your Name, Roll number and successful comparison message is visible in the snapshots.

1.SimpleAdd.vm

CPU Emulator (2.5) - C:\Users\Ronak\OneDrive\Documents\Ronak_Agrawal\AM.EN.U4AIE21087\nand2tetris\projects\07\StackArithmetic\SimpleAdd\SimpleAdd.asm

File View Run Help

Slow Fast Animate: No animation View: Compare Format: Decimal

ROM	Asm
0	@7
1	D=A
2	@0
3	A=M
4	M=D
5	@0
6	M=M+1
7	@8
8	D=A
9	@0
10	A=M
11	M=D
12	@0
13	M=M+1
14	@0
15	AM=M-1
16	D=M
17	@0
18	AM=M-1
19	M=D+M
20	@0
21	M=M+1
22	
23	
24	
25	
26	
27	
28	

RAM	
0	257
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0

RAM[0]	RAM[256]
257	15

PC: 60 A: 0

D: 8

ALU

D Input: 8

M/A Input: 256

ALU output: 257

End of script - Comparison ended successfully

2.StackTest.vm

CPU Emulator (2.5) - C:\Users\Ronak\OneDrive\Documents\Ronak_Agrawal\AM.EN.U4AIE21087\nand2tetris\projects\07\StackArithmetic\StackTest\StackTest.asm

File View Run Help

Slow Fast Animate: No animation View: Script Format: Decimal

ROM	Asm
0	@17
1	D=A
2	@0
3	A=M
4	M=D
5	@0
6	M=M+1
7	@17
8	D=A
9	@0
10	A=M
11	M=D
12	@0
13	M=M+1
14	@0
15	AM=M-1
16	D=M
17	@0
18	AM=M-1
19	D=M-D
20	@27
21	D;JEQ
22	@0
23	A=M
24	M=0
25	@30
26	O:JMP
27	@0
28	A=M

PC 1033

RAM	
0	266
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0

A 0

```
// This file is part of www.nand2tetris.org
// and the book "The Elements of Computing Systems"
// by Nisan and Schocken, MIT Press.
// File name: projects/07/StackArithmetic/StackTest/StackTest.tst

load StackTest.asm,
output-file StackTest.out,
compare-to StackTest.cmp,
output-list RAM[0]&D2.6.2
        RAM[256]&D2.6.2 RAM[257]&D2.6.2

set RAM[0] 256, // initializes the stack

repeat 1000 { // enough cycles to
ticktock;
}
```

D 82

ALU

D Input: 82

M/A Input: 265

ALU output: 266

End of script - Comparison ended successfully