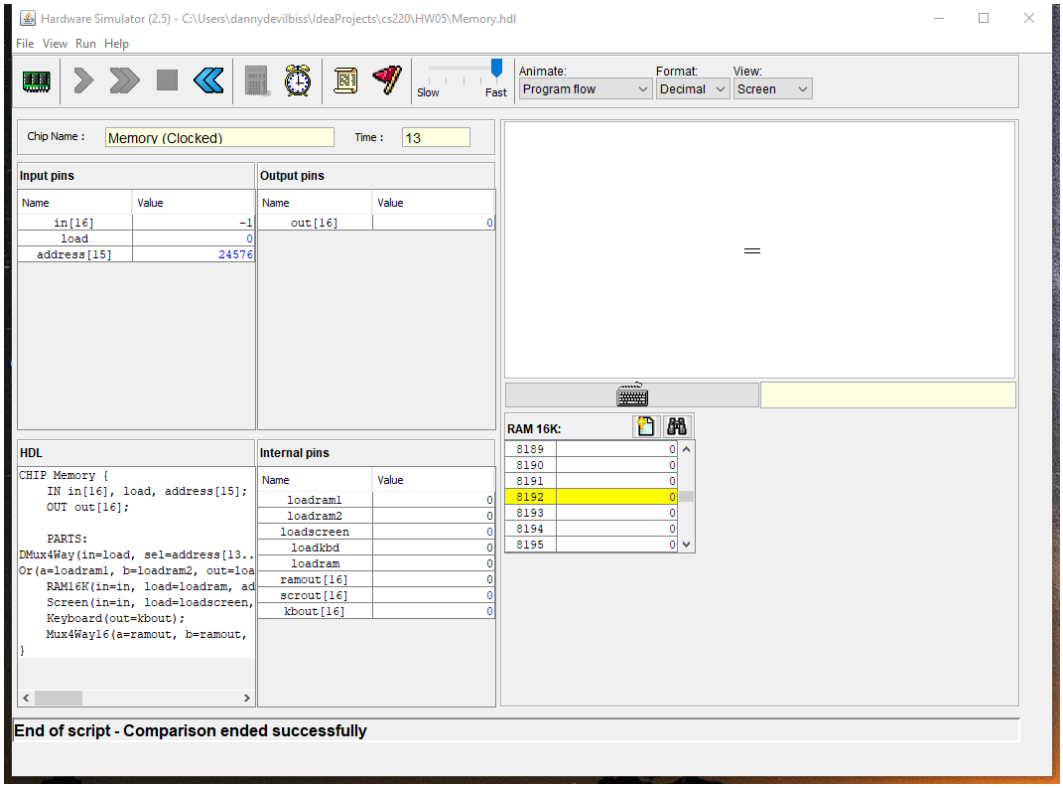
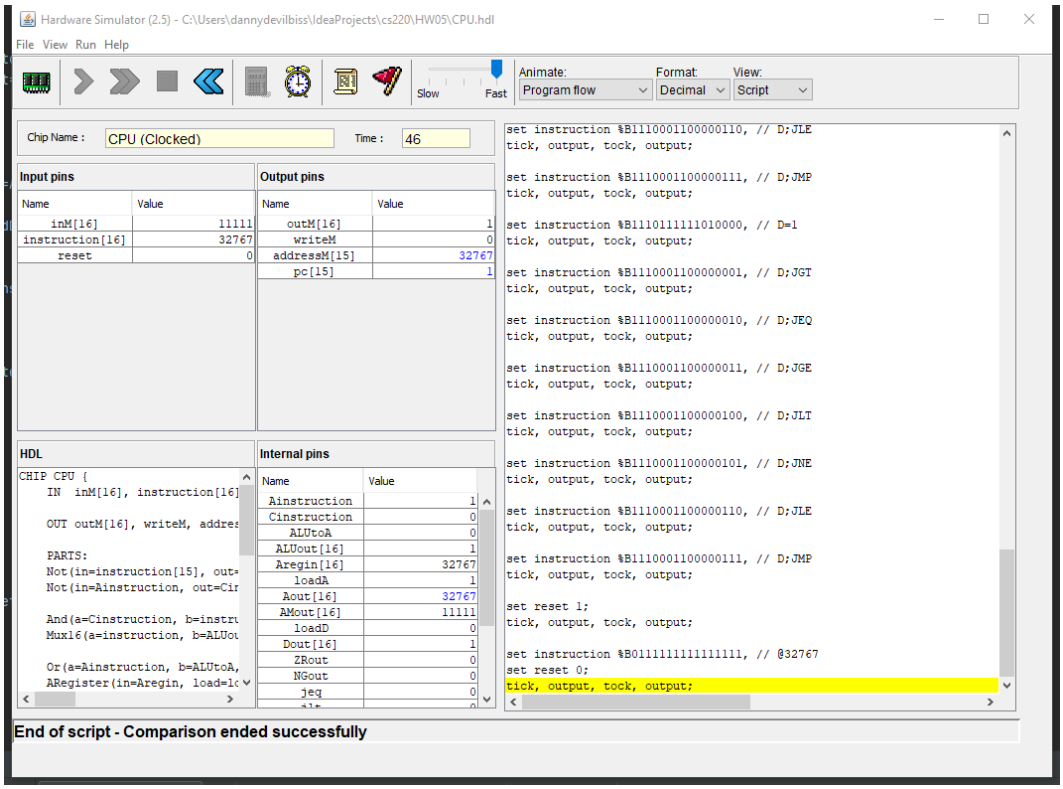
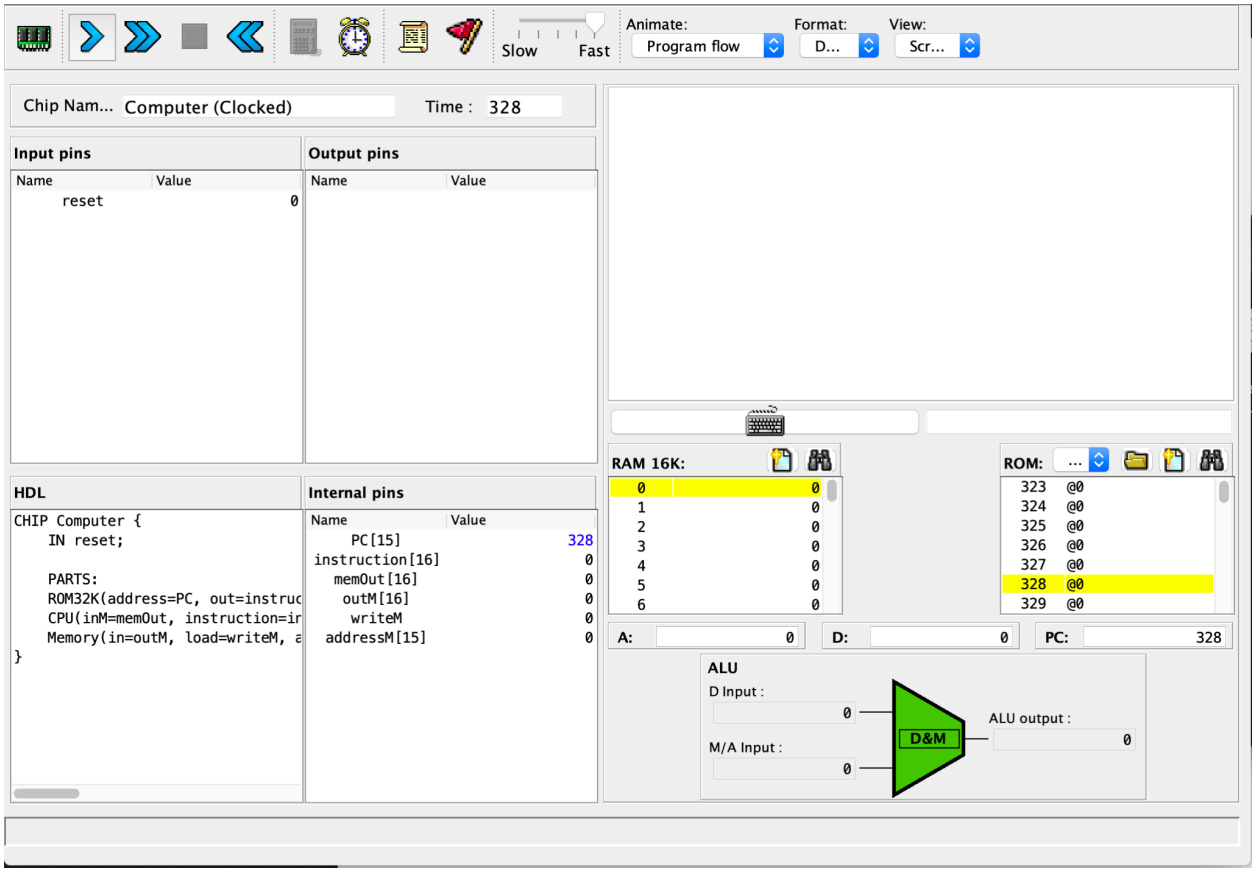

Hardware Simulator (2.5) - C:\Users\dannydevilbiss\IdeaProjects\cs220\HW05\Memory.hdl
File View Run Help
Slow
Fast
Animate:
Program flow
Format:
Decimal
View:
Screen
Chip Name :
Memory (Clocked)
Time :
13
Input pins
Name
Value
in[16]
-1
load
0
address[15]
24576
Output pins
Name
Value
out[16]
0
RAM 16K:
8189
0
8190
0
8191
0
8192
0
8193
0
8194
0
8195
0
HDL
CHIP Memory {
IN in[16], load, address[15];
OUT out[16];
PARTS:
DMux4Way(in=load, sel=address[13..
Or(a=loadram1, b=loadram2, out=loa
RAM16K(in=in, load=loadram, ad
Screen(in=in, load=loadscreen,
Keyboard(out=kbout);
Mux4Way16(a=ramout, b=ramout,
}
Internal pins
Name
Value
loadram1
0
loadram2
0
loadscreen
0
loadkbd
0
loadram
0
ramout[16]
0
scrout[16]
0
kbout[16]
0
End of script - Comparison ended successfully


Hardware Simulator (2.5) - C:\Users\dannydevilbiss\IdeaProjects\cs220\HW05\CPU.hdl
File View Run Help
Slow
Fast
Animate:
Program flow
Format:
Decimal
View:
Script
Chip Name :
CPU (Clocked)
Time :
46
Input pins
Name
Value
inM[16]
11111
instruction[16]
32767
reset
0
Output pins
Name
Value
outM[16]
1
writeM
0
addressM[15]
32767
pc[15]
1
HDL
CHIP CPU {
IN inM[16], instruction[16]
OUT outM[16], writeM, addres
PARTS:
Not(in=instruction[15], out=
Not(in=Ainstruction, out=Cir
And(a=Cinstruction, b=instru
Mux16(a=instruction, b=ALUou
Or(a=Ainstruction, b=ALUtoA,
ARegister(in=Aregin, load=lc
Internal pins
Name
Value
Ainstruction
1
Cinstruction
0
ALUtoA
0
ALUout[16]
1
Aregin[16]
32767
loadA
1
Aout[16]
32767
AMout[16]
11111
loadD
0
Dout[16]
1
ZRout
0
NGout
0
jeq
0
set instruction %B1110001100000110, // D;JLE
tick, output, tock, output;
set instruction %B1110001100000111, // D;JMP
tick, output, tock, output;
set instruction %B1110111111010000, // D=1
tick, output, tock, output;
set instruction %B1110001100000001, // D;JGT
tick, output, tock, output;
set instruction %B1110001100000010, // D;JEQ
tick, output, tock, output;
set instruction %B1110001100000011, // D;JGE
tick, output, tock, output;
set instruction %B1110001100000100, // D;JLT
tick, output, tock, output;
set instruction %B1110001100000101, // D;JNE
tick, output, tock, output;
set instruction %B1110001100000110, // D;JLE
tick, output, tock, output;
set instruction %B1110001100000111, // D;JMP
tick, output, tock, output;
set reset 1;
tick, output, tock, output;
set instruction %B0111111111111111, // @32767
set reset 0;
tick, output, tock, output;
End of script - Comparison ended successfully


Slow
Fast
Animate:
Program flow
Format:
D...
View:
Scr...
Chip Nam...
Computer (Clocked)
Time :
328
Input pins
Name
Value
reset
0
Output pins
Name
Value
HDL
CHIP Computer {
IN reset;
PARTS:
ROM32K(address=PC, out=instruc
CPU(inM=memOut, instruction=ir
Memory(in=outM, load=writeM, a
}
Internal pins
Name
Value
PC[15]
328
instruction[16]
0
memOut[16]
0
outM[16]
0
writeM
0
addressM[15]
0
RAM 16K:
0
0
1
0
2
0
3
0
4
0
5
0
6
0
ROM:
323 @0
324 @0
325 @0
326 @0
327 @0
328 @0
329 @0
A:
0
D:
0
PC:
328
ALU
D Input :
0
M/A Input :
0
D&M
ALU output :
0