Hardware Simulator (2.5) - /Users/mayurgupta/Desktop/nand2tetris/projects/05/Memory.hdl

File View Run Help

Slow Fast Animate: Program flow Format: D... View: Scr...

Chip Nam... Time : 0

Input pins

Name	Value
in[16]	0
load	0
address[15]	0

Output pins

Name	Value
out[16]	0

HDL

```
 * to the value of the in input.
 * Address space rules:
 * Only the upper 16K + 8K + 1 v
 * Access to address 0 to 16383
 * Access to address 16384 to 24
 * Access to address 24576 (0x60
 */
CHIP Memory {
    IN in[16], load, address[15];
    OUT out[16];

    PARTS:
    //// Replace this comment wi
    DMux(in=load, sel=address[14
```

Internal pins

Name	Value
load-ram	0
load-devices	0
load-screen	0
ram-out[16]	0
screen-out[16]	0
keyboard-out[16]	0
devices-out[16]	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/05/Memory.tst

// Tests the Memory chip by inputting values to selected addresses,
// verifying that these addresses were indeed written to, and verifying
// that other addresses were not accessed by mistake. In particular, we
// focus on probing the registers in addresses 'lower RAM', 'upper RAM'
// and 'Screen', which correspond to 0, %X2000, and %X4000 in Hexadecim
// (0, 8192 (8K), and 16385 (16K+1) in decimal).

load Memory.hdl,
output-file Memory.out,
compare-to Memory.cmp,
// Outputs the values of the in, load, and address inputs,
// and the value of the out output.
output-list in%D1.6.1 load%B2.1.2 address%B1.15.1 out%D1.6.1;

echo "Before running this script, select the 'Screen' option from the '

set in -1,    // Sets RAM[0] = -1
set load 1,
set address 0,
tick,
output;
tock,
output;

set in 9999,   // Checks that RAM[0] was not written to when load == 0
set load 0,
tick,
output;
tock,
output;
```

New script loaded: /Users/mayurgupta/Desktop/nand2tetris/projects/05/Memory.tst