

Not Gate

Hardware Simulator (2.5) - C:\Users\april\Downloads\CS220\nand2tetris\nand2tetris\projects\01\Not.hdl










File View Run Help

[illegible]

And Gate

Hardware Simulator (2.5) - C:\Users\april\Downloads\CS220\nand2tetris\nand2tetris\projects\01\And.hdl

File View Run Help



Slow Fast

Animate: Program flow Format: Decimal View: Script

Chip Name: And Time: 0

Input pins		Output pins	
Name	Value	Name	Value
a	1	out	1
b	1		

Internal pins	
Name	Value
nandab	0

HDL

```
// 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/01/And.hdl

/**
 * And gate:
 * out = 1 if (a == 1 and b == 1)
 *      0 otherwise
 */

CHIP And {
//outside
    IN a, b;
```

```
// 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/01/And.tst

load And.hdl,
output-file And.out,
compare-to And.cmp,
output-list a%B3.1.3 b%B3.1.3 out%B3.1.3;

set a 0,
set b 0,
eval,
output;

set a 0,
set b 1,
eval,
output;

set a 1,
set b 0,
eval,
output;










set a 1,
set b 1,
eval,
output;
```

End of script - Comparison ended successfully

Or Gate

Hardware Simulator (2.5) - C:\Users\april\Downloads\CS220\nand2tetris\nand2tetris\projects\01\Or.hdl

File View Run Help



Animate:
Program flow

Format:
Decimal

View:
Script

Chip Name: Or Time: 0

Input pins		Output pins	
Name	Value	Name	Value
a	1	out	1
b	1		

Internal pins	
Name	Value
nandaa	0
nandbb	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/01/Or.tst

load Or.hdl,
output-file Or.out,
compare-to Or.comp,
output-list a%B3.1.3 b%B3.1.3 out%B3.1.3;

set a 0,
set b 0,
eval,
output;

set a 0,
set b 1,
eval,
output;

set a 1,
set b 0,
eval,
output;










set a 1,
set b 1,
eval,
output;
```

End of script - Comparison ended successfully

Xor Gate

Hardware Simulator (2.5) - C:\Users\april\Downloads\CS220\nand2tetris\nand2tetris\projects\01\Xor.hdl

File View Run Help



SlowFast

Animate: Program flowFormat: DecimalView: Script

Chip Name: XorTime: 0

Input pins		Output pins	
Name	Value	Name	Value
a	1	out	0
b	1		

Internal pins	
Name	Value
notb	0
nota	0
outand1	0
outand2	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/01/Xor.hdl

/**
 * Exclusive-or gate:
 * out = not (a == b)
 */

CHIP Xor {
    IN a, b;
    OUT out;
```

```
// 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/01/Xor.tst

load Xor.hdl,
output-file Xor.out,
compare-to Xor.comp,
output-list a%B3.1.3 b%B3.1.3 out%B3.1.3;

set a 0,
set b 0,
eval,
output;

set a 0,
set b 1,
eval,
output;

set a 1,
set b 0,
eval,
output;

set a 1,
set b 1,
eval,
output;
```

End of script - Comparison ended successfully