LEGEND:

NAND   NOT   AND
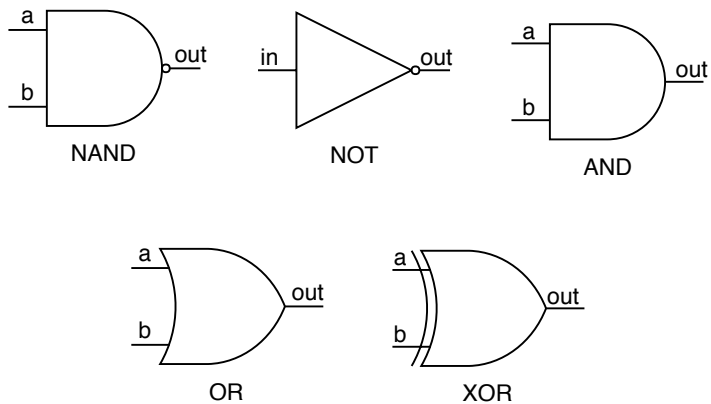
OR   XOR

Homework #1

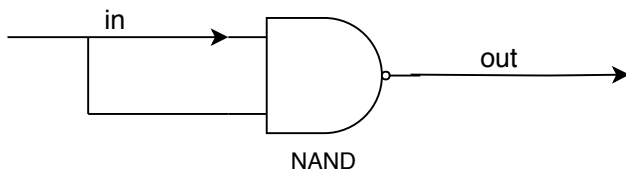**CS220 - Computer Architecture + Machine Language**

Author: Vinh Pham

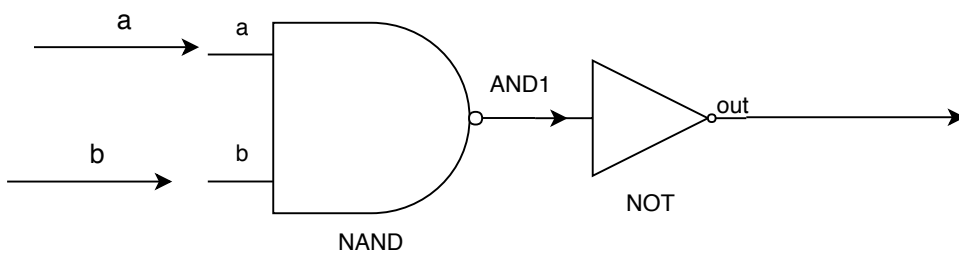Section: 2653 M/W 3:30pm - 5:20pm
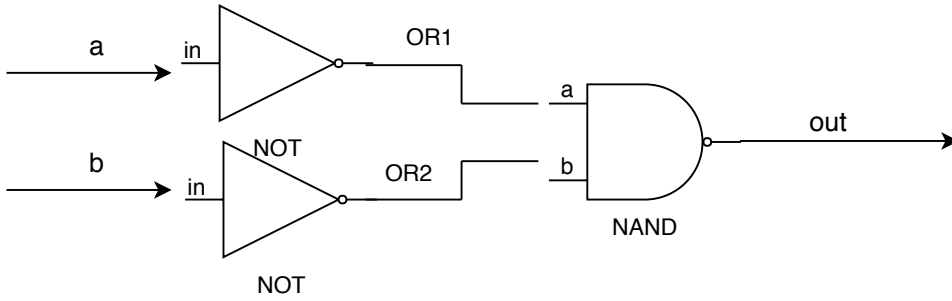
Last Modified: 1/22/2019

Not

NAND

in	out
0	1
1	0

And

Function: a * b

NAND   NOT

a	b	out
0	0	0
0	1	0
1	0	0
1	1	1

Or

Function: a + b

a	b	out
0	0	0
0	1	1
1	0	1
1	1	1

a → in

NOT

OR1

b → in

NOT

OR2

NOT

a
b

NAND

out →

Xor

Function:: a * b̄ + ā * b

a	b	out
0	0	0
0	1	1
1	0	1
1	1	0

a →

b →

a

in   out

notb

b

NOT

AND

out

w1

in   nota   a

out

NOT

b

AND

out

w2

a

b

out

OR