

Week 10

Thursday, April 1, 2021 20:39



CS232S21_
Recitation...

Recitation#10: Mini ALU

CS232 Spring 2021

When: April 2 at 2:00 pm

Build a miniALU using custom component of nandgame:

`f0-f2` are control bits. `a` and `b` are two 16-bit inputs.

<code>f2f1f0</code>	output
<code>000</code>	<code>a AND b</code>
<code>001</code>	<code>a OR b</code>
<code>010</code>	<code>a + b</code>
<code>011</code>	not used
<code>100</code>	<code>a AND NOT(b)</code>
<code>101</code>	<code>a OR NOT(b)</code>
<code>110</code>	<code>a - b</code>
<code>111</code>	SLT (SET LESS THAN) out is 1 if <code>a < b</code> else 0

<code>f2</code>	<code>f1</code>
0	0
0	0
0	1
0	1
1	0
1	0
1	1
1	1

f0	output
0	a AND b
1	a OR b
0	a + b
1	not used
0	a AND NOT(b)
1	a OR NOT(b)
0	a - b
1	SLT (SET LESS THAN) out is 1 if a < b ELSE 0

