

## Lab # 07 Magnitude Comparator Task

- Use Logic.ly to design circuit diagrams.
- Label your inputs and outputs properly on logic.ly

1. Implement the circuitry for a 1 bit Magnitude Comparator on Logicly.
2. Implement the circuitry for a 1 bit Magnitude Comparator (using only NOR Gate) on Logicly.
3. Implement the circuitry for a 1 bit Magnitude Comparator (using only NAND Gate) on Logicly.

Record the output for the given values of A and B for the above given task (1, 2, 3 ).

Inputs		Outputs		
A	B	$A > B$	$A = B$	$A < B$
0	0			
0	1			
1	0			
1	1			

4. Implement the circuitry for a 2 bit Magnitude Comparator on Logicly. Record the outputs for the given values of A and B.

Inputs		Outputs		
A	B	$A > B$	$A = B$	$A < B$
10	01			
11	11			
01	10			
00	00			

5. Implement the circuitry for a 4 bit Magnitude Comparator on Logically. Record the outputs for the given values of A and B.

Inputs		Outputs		
A	B	$A > B$	$A = B$	$A < B$
0111	1010			
1010	0101			
0000	0000			