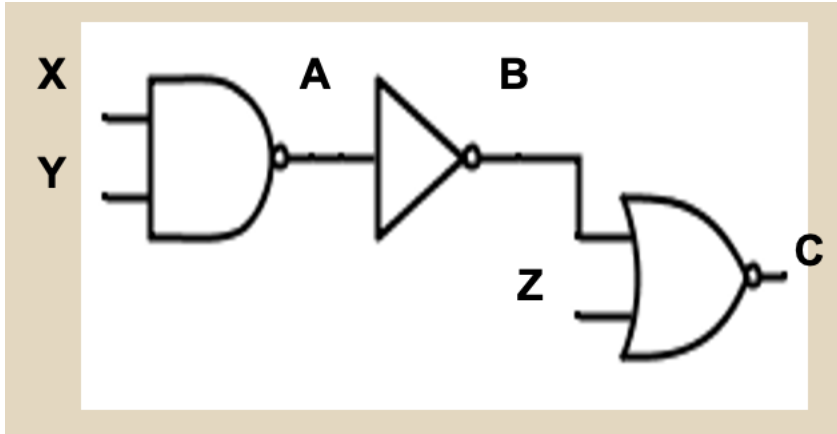


CS-230 - Homework Week 1 - Chapter 2

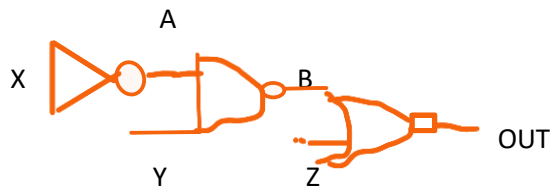
1. What is a transistor? **Small device to control flow of electrons.**
2. Write the Boolean Logic expression for the following diagram: **(X and Y) Nor Z**



3. Write the truth table for the expression/circuit from question 2.

X	Y	Z	B	C
0	0	0	0	1
0	0	1	0	0
0	1	0	0	1
0	1	1	0	0
1	0	0	1	0
1	0	1	0	0
1	1	0	1	0
1	1	1	1	0

4. Draw a circuit that represents this Boolean Logic: $((\text{not } X) \text{ nand } Y) \text{ nor } Z$



5. Write the truth table for the expression/circuit from question 4.

X	Y	Z	A	B	OUT
0	0	0	1	1	0
0	0	1	1	1	0
0	1	0	1	1	0
0	1	1	1	1	0
1	0	0	0	0	1
1	0	1	0	0	0
1	1	0	0	0	0
1	1	1	0	1	0