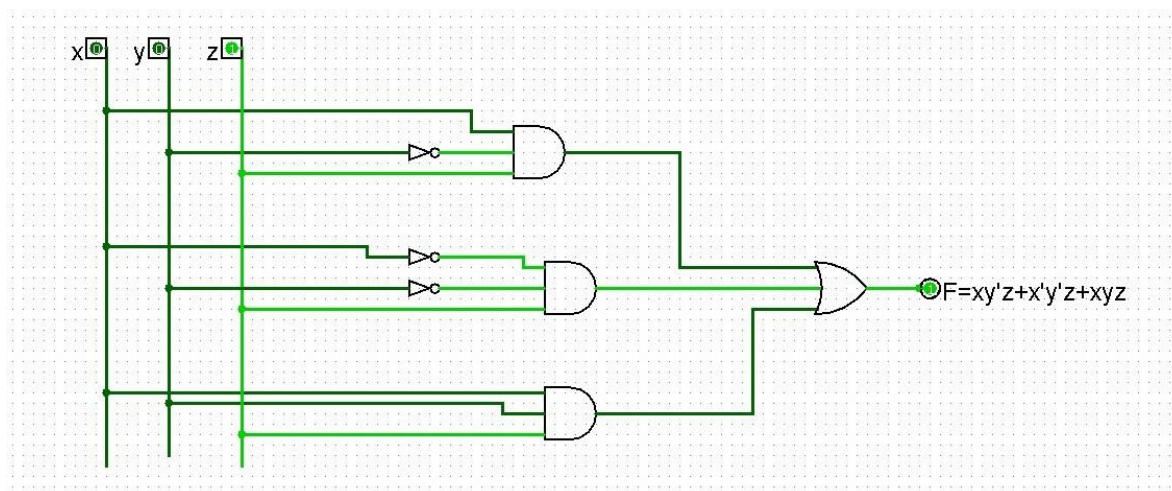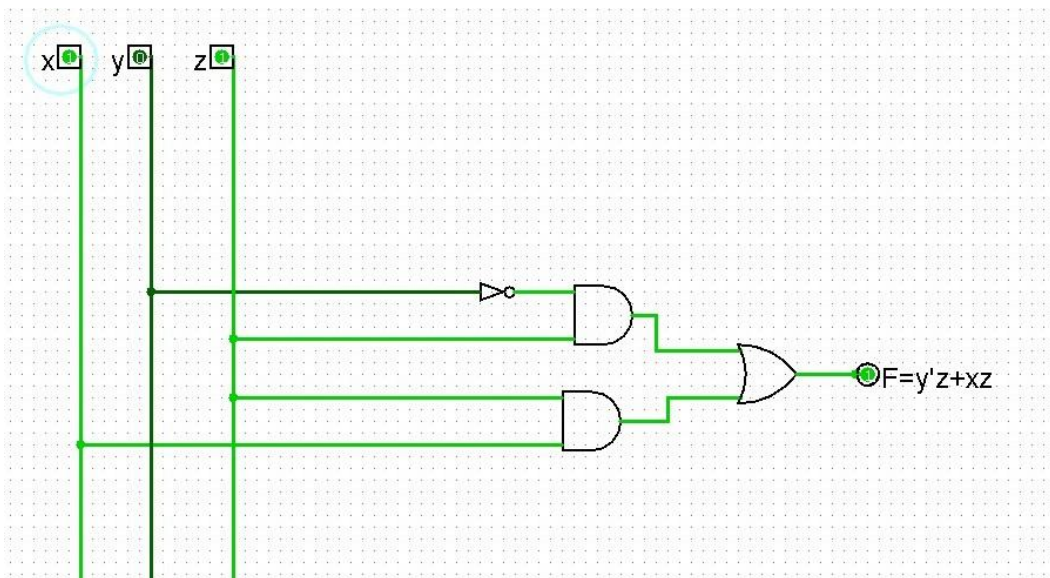**CSC 220: Computer Organization**

Labwork - # 3

Student Name: ID:

1. Introduction

We had a Boolean function, and we listed its truth table then we draw the circuit using Logisim, after that we simplified the function by using k-map then draw the circuit again.

2. Experiments

$F=y'z+xz$

$F=xy'z+x'y'z+xyz$

3. Results

truth table:

X	Y	Z	F=xy'z+x'y'z+zyz	F = y'z+xz
0	0	0	0	0
0	0	1	1	1
0	1	0	0	0
0	1	1	0	0
1	0	0	0	0
1	0	1	1	1
1	1	0	0	0
1	1	1	1	1

4. Discussion

Both circuits are producing same result. But the circuit has less number of gates is cheaper and faster than the circuit has more gate.