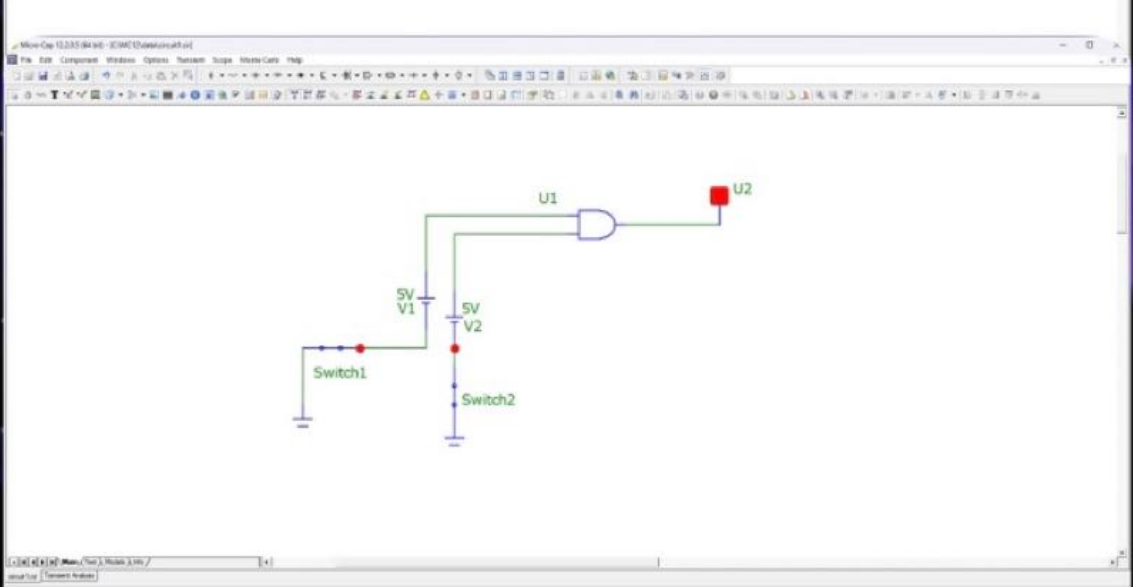
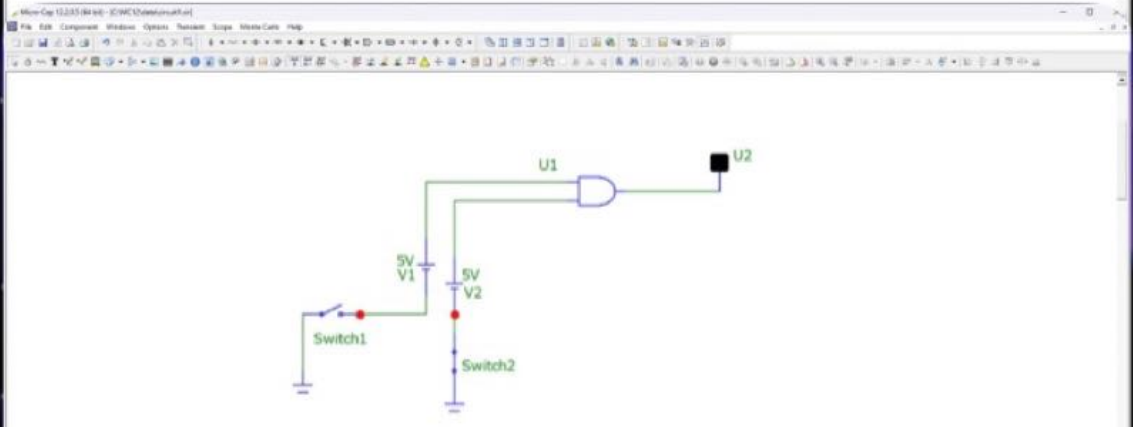
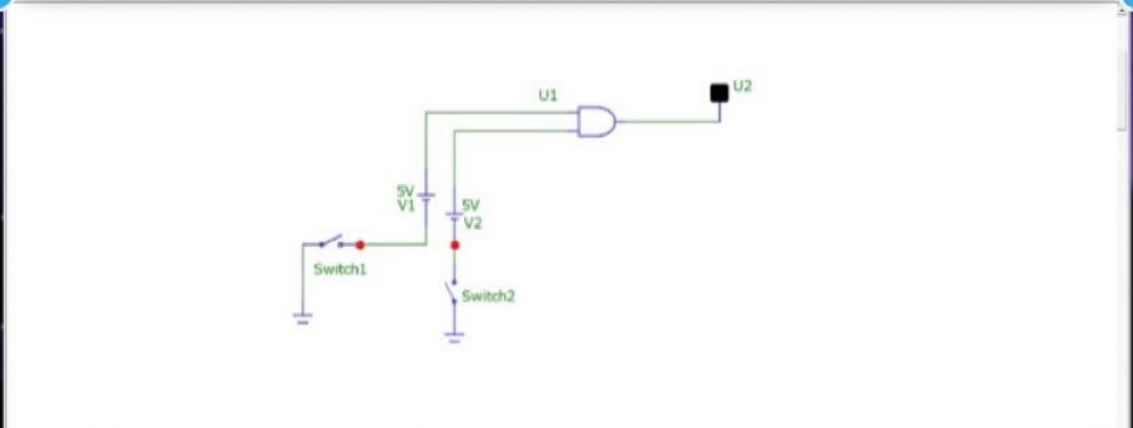
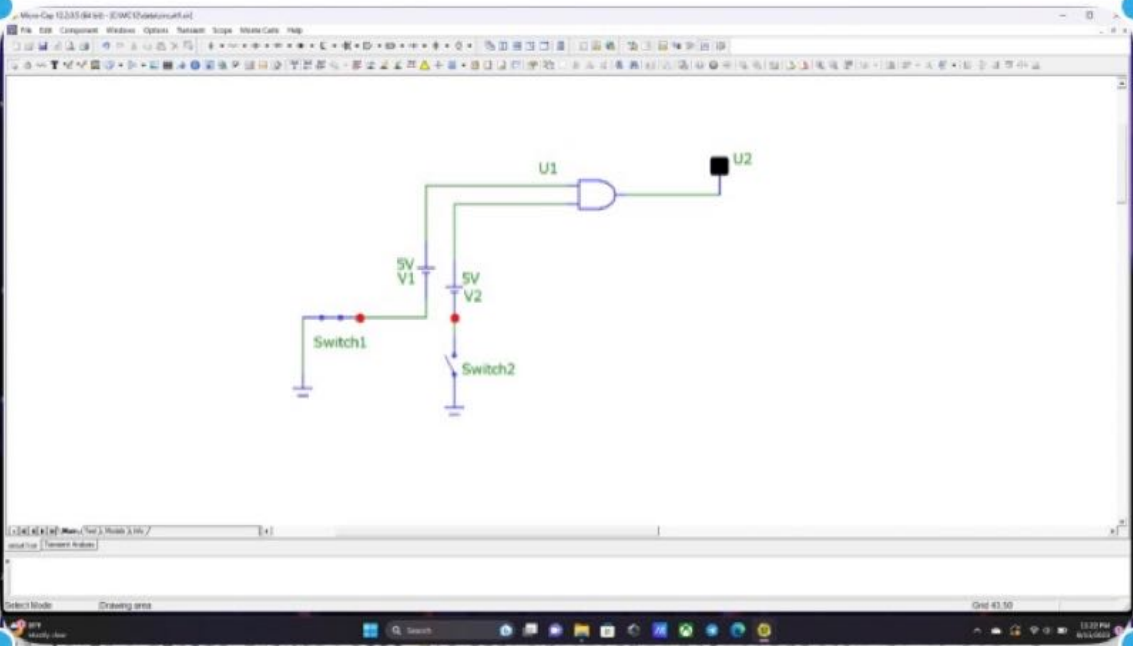
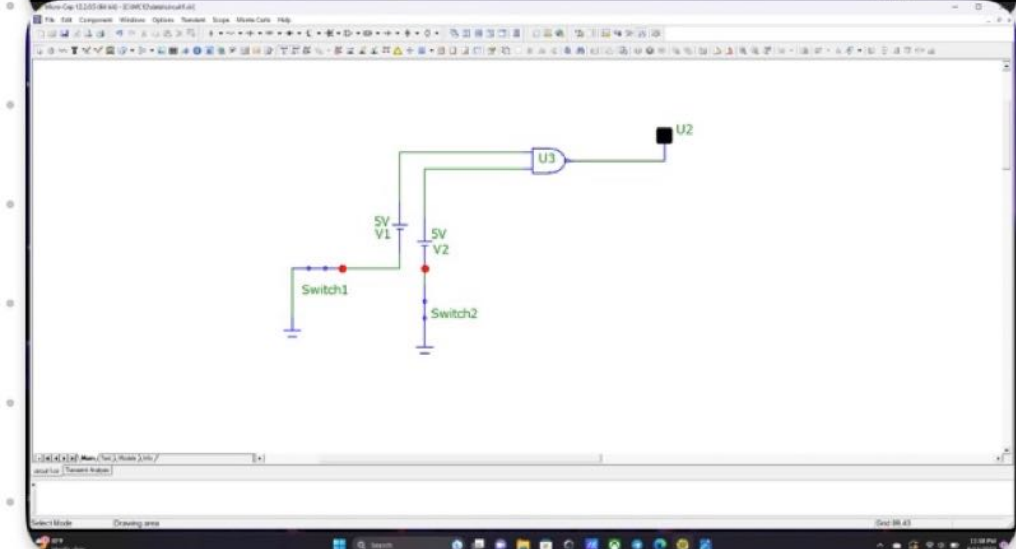
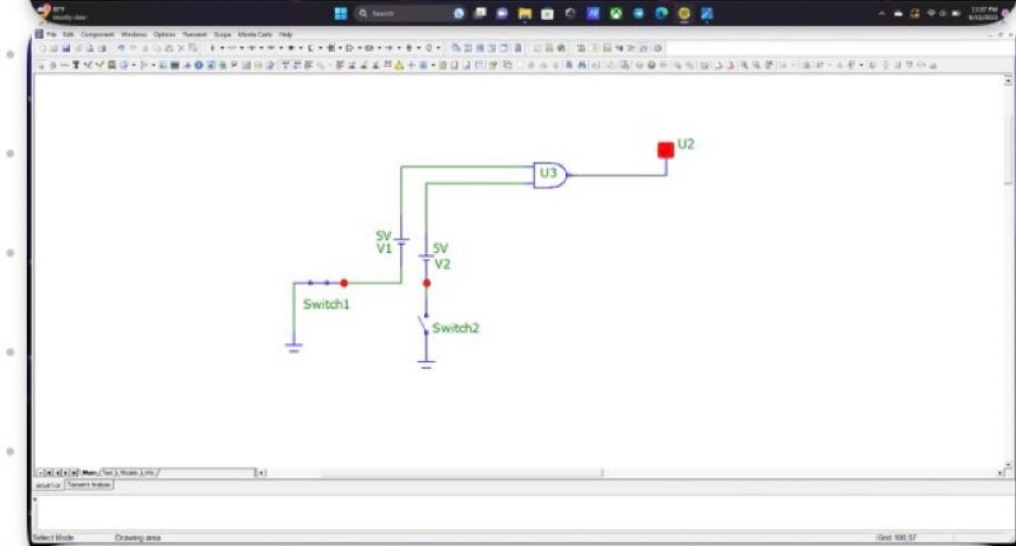
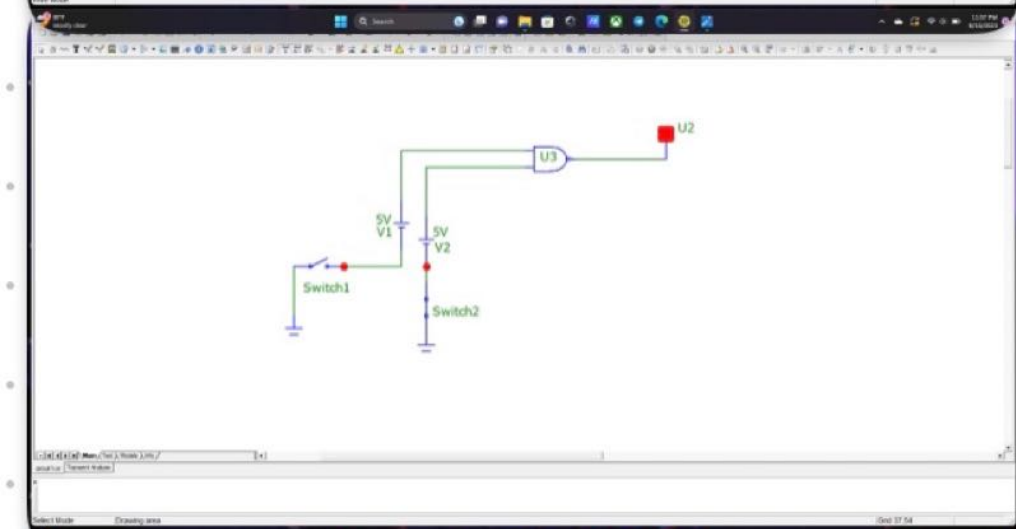
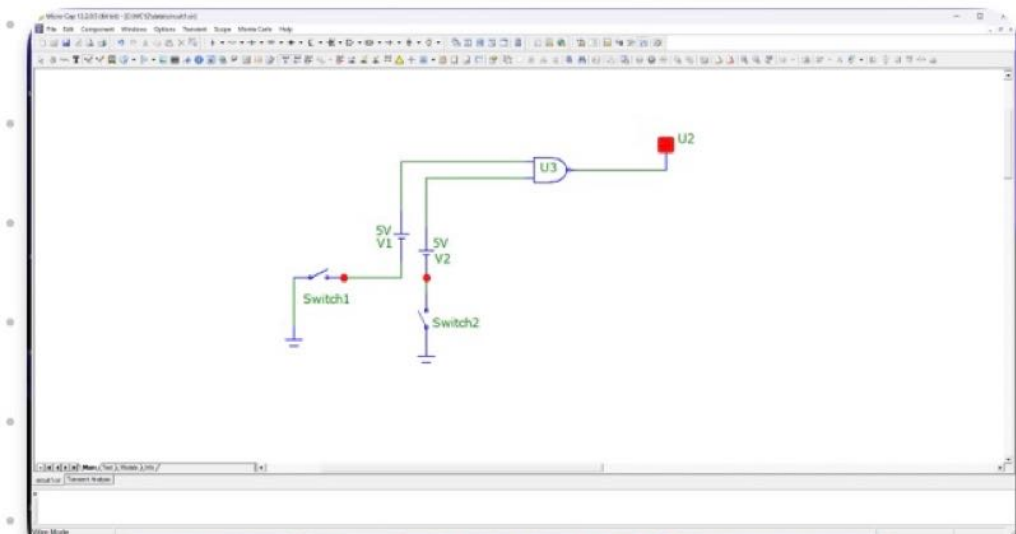


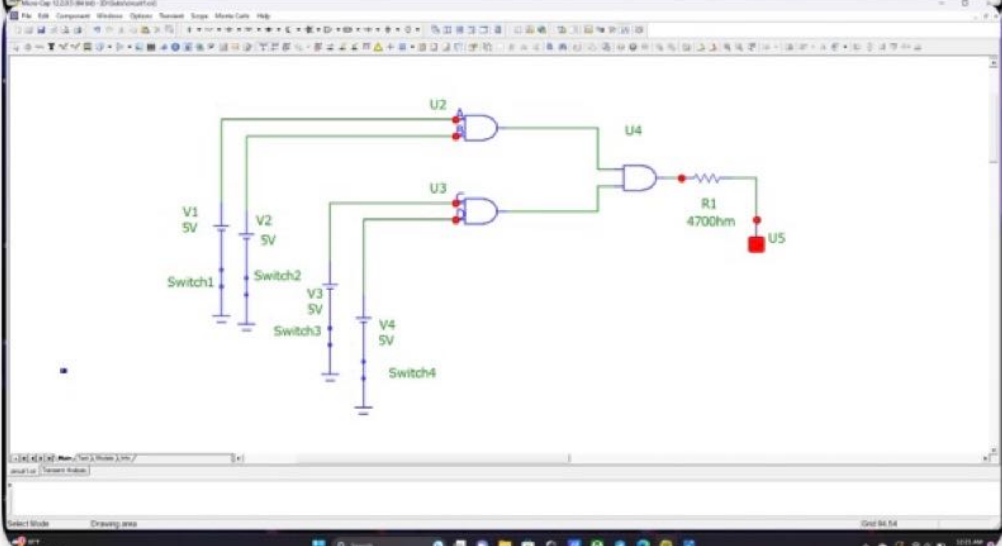
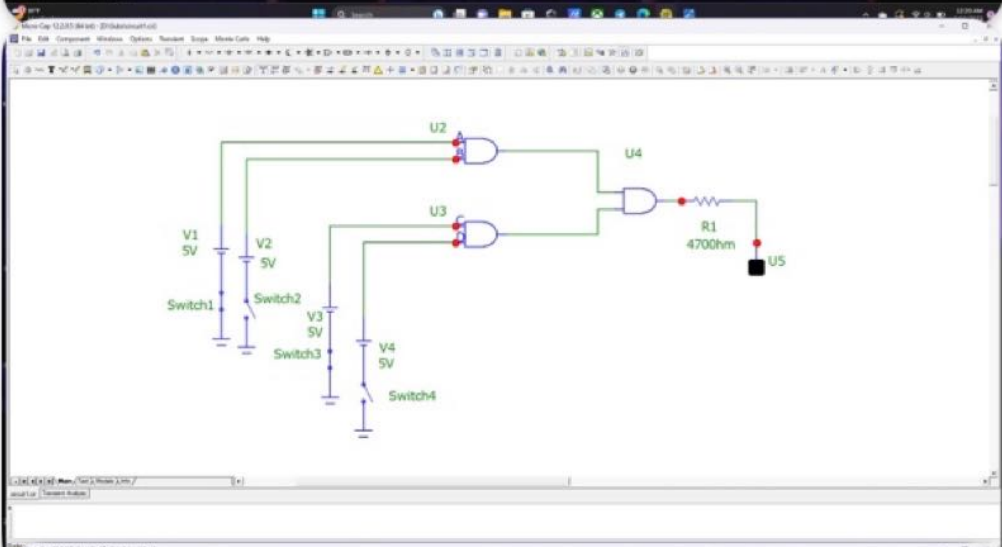
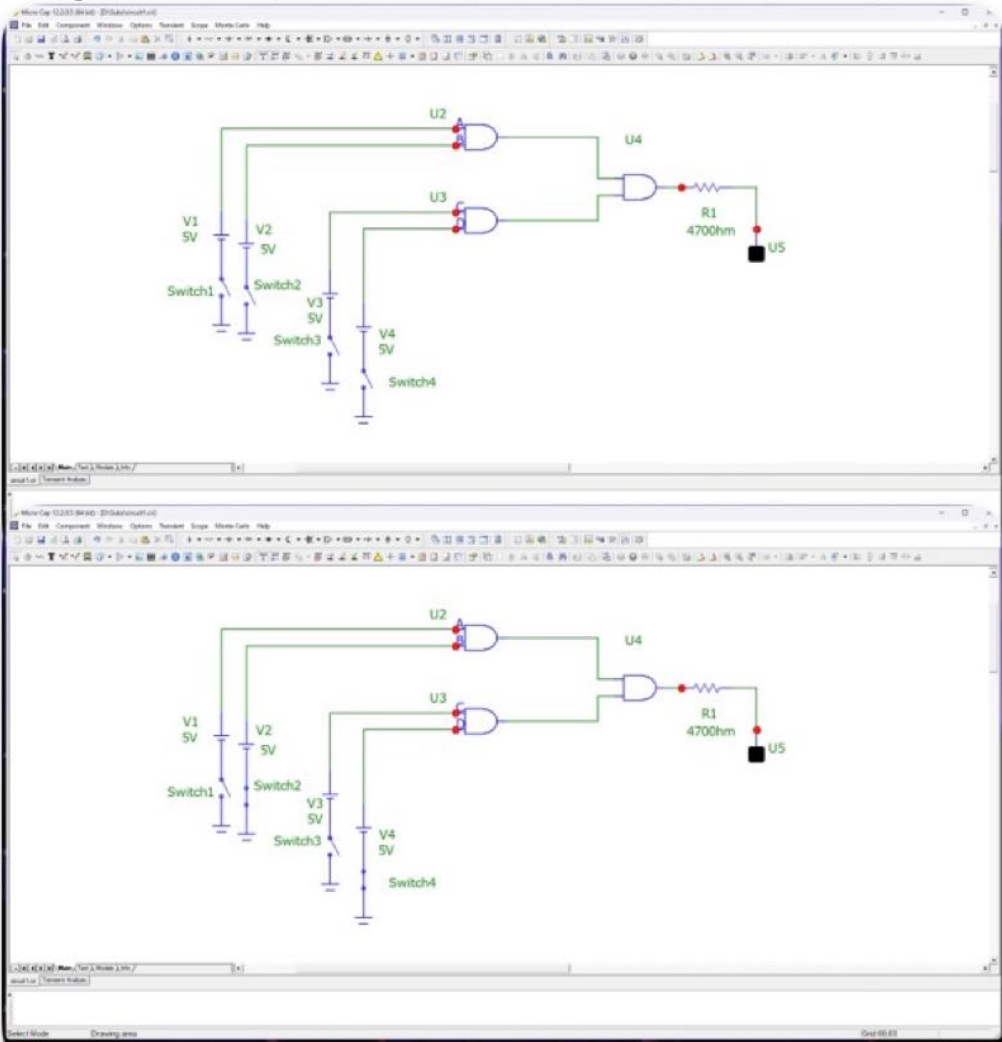
AND gate



NAND



A part



Experiment 1

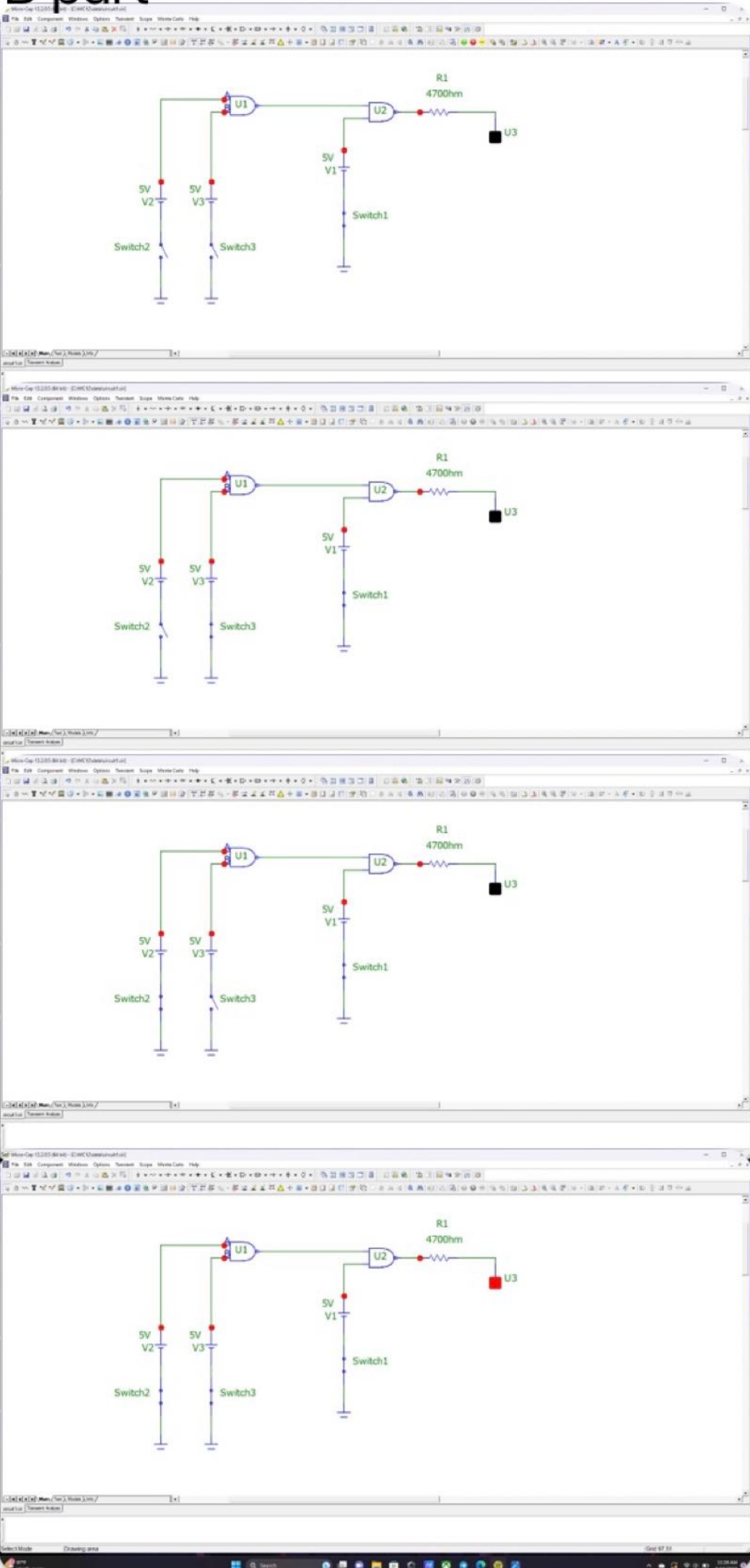
part (A)

A	B	C	D	Q
0	0	0	0	0
0	1	0	1	0
1	0	1	0	0
1	1	1	1	1

$$Q_1 = (A \cdot B) \cdot (C \cdot D)$$

- (2) Q_1 is 1, only when inputs are 1
 Q_1 is not 1, if one of the inputs is 0
- (3) 16 combinations

B part



part(B)

Q₁

A	B	Q ₁
0	0	0
0	1	0
1	0	0
1	1	1

(a)

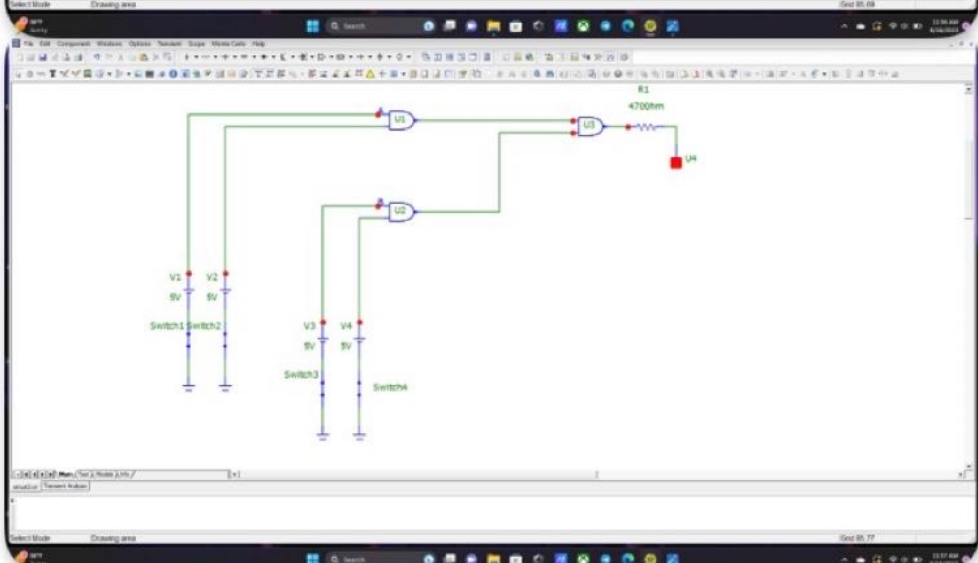
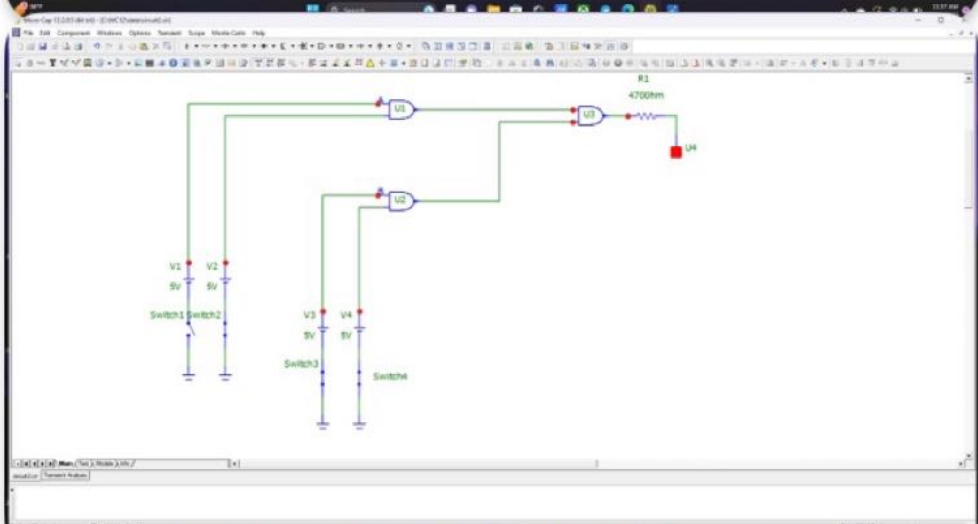
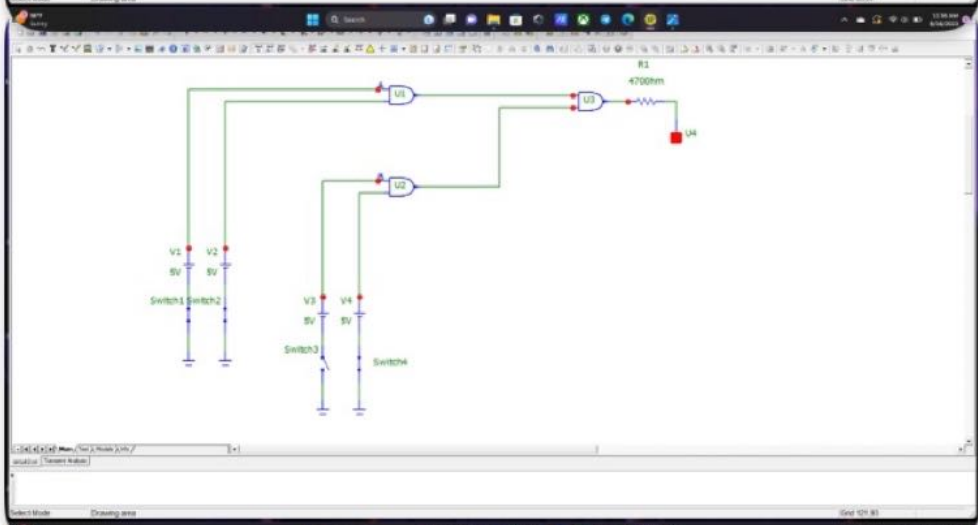
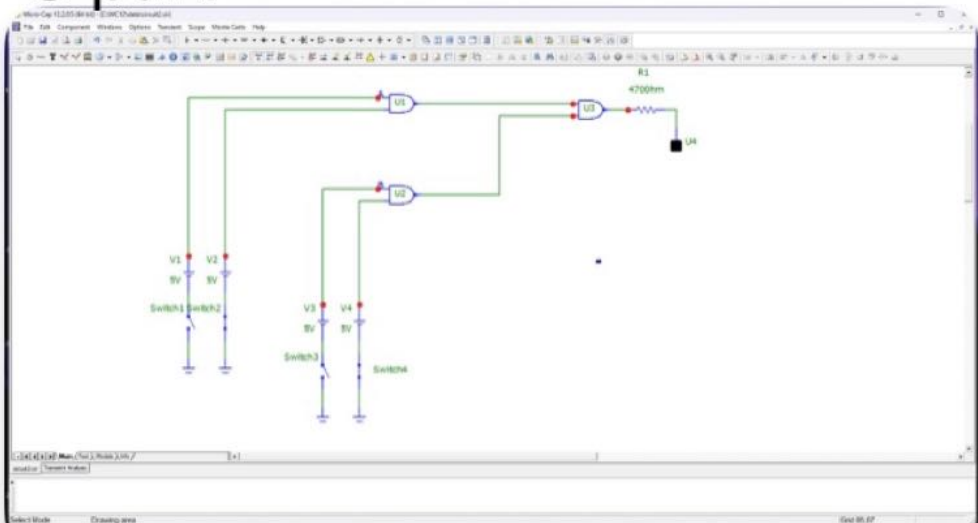
~~Q₁ = A.B~~

$$Q_1 = A \cdot B$$

(b)

A Logical And operation

C part



Part Cc)



A	B	Q_1
0	0	0
0	1	1
1	0	1
1	1	1

$$a) Q_1 = A + B$$

b) A logical or operation