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CMSC11 T-2L

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After class hours:

A	B	C	D	E	G
1	1	1	1	1	1
1	1	1	1	1	0
1	1	1	0	0	1
1	1	1	0	0	0
1	1	0	0	1	1
1	1	0	0	1	0
1	1	0	0	0	1
1	1	0	0	0	0
1	0	1	1	1	1
1	0	1	1	1	0
1	0	1	0	0	1
1	0	1	0	0	0
1	0	0	1	1	1
1	0	0	1	0	0
1	0	0	0	1	1
1	0	0	0	0	0
0	1	1	1	1	1
0	1	1	1	0	0
0	1	1	0	1	1
0	1	1	0	0	0
0	1	0	1	1	1
0	1	0	1	0	0
0	1	0	0	1	1
0	1	0	0	0	0
0	0	1	1	1	1
0	0	1	1	0	0
0	0	1	0	1	1
0	0	1	0	0	0
0	0	0	1	1	1
0	0	0	1	0	0
0	0	0	0	1	1
0	0	0	0	0	0
0	0	0	0	0	1

During class hours:

A	E	G
1	1	1
1	0	0
0	1	1
0	0	1

A – Student is at the gate
B – Student wears UPLB ID
C – Student passes Palm scanner
D – Student passes Retina scanner
E – Student is armed
G – Gate is locked

After class hours:

$$A \wedge B \wedge C \wedge D \wedge \sim E \rightarrow \sim G$$

Contrapositive:

$$\sim \sim G \rightarrow \sim (A \wedge B \wedge C \wedge D \wedge \sim E)$$

De Morgan's:

$$\sim A \vee \sim B \vee \sim C \vee \sim D \vee E$$

During class hours:

$$A \wedge \sim E \rightarrow \sim G$$

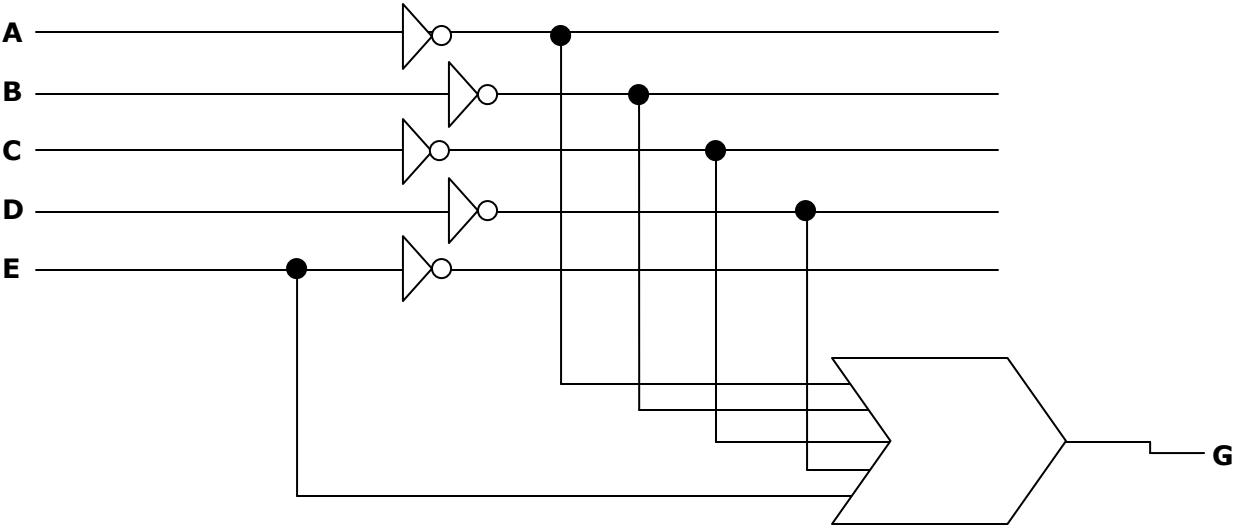
Contrapositive:

$$\sim \sim G \rightarrow \sim [A \wedge \sim E]$$

De Morgan's:

$$\sim A \vee E$$

Logic Diagram: $\sim A \vee \sim B \vee \sim C \vee \sim D \vee E$



Logic Diagram: $\sim A \vee E$

