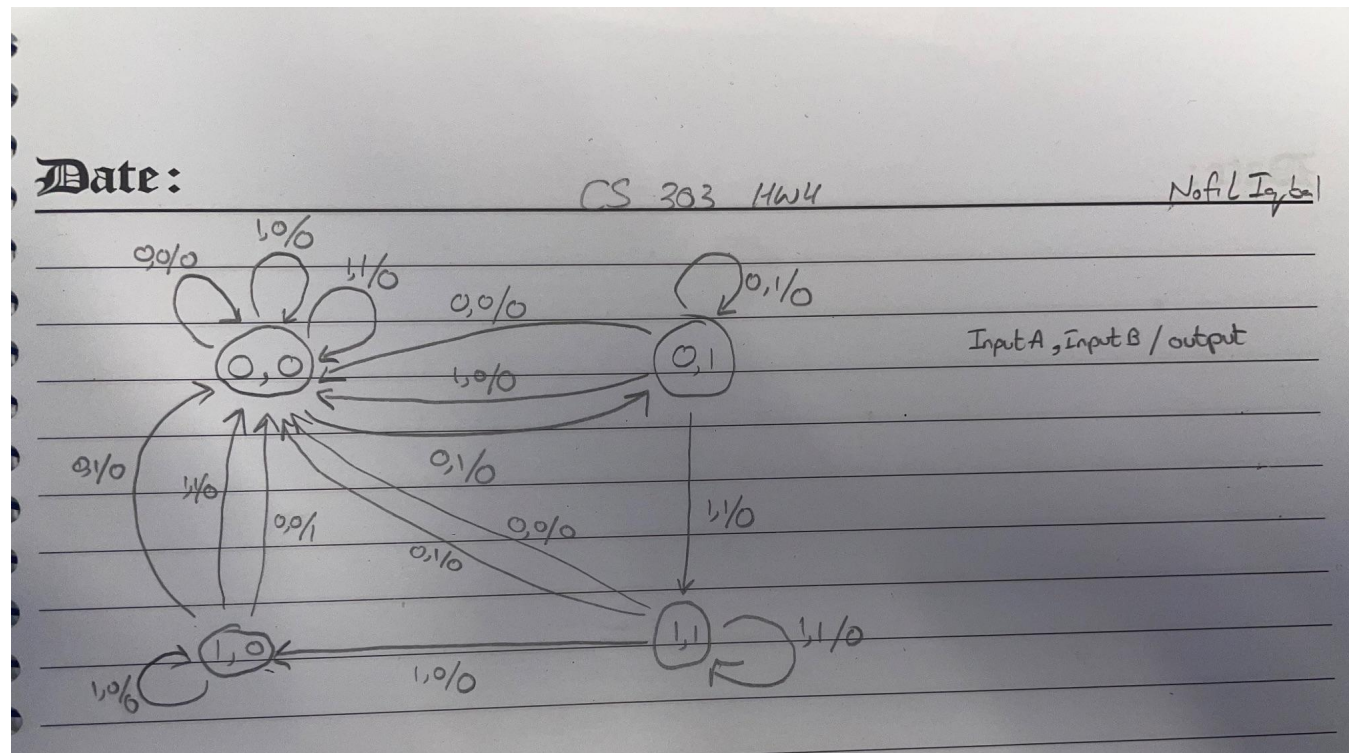


CS303 HW4

Nofil Iqbal 28631

1.



2.

Table						
File	New	Edit	Create	K-Map		
A	B	Q1n	Q0n	Q1n+1	Q0n+1	OUT
0	0	0	0	0	1	0
0	0	0	1	0	0	0
0	0	1	0	0	0	0
0	0	1	1	0	0	1
0	1	0	0	0	1	0
0	1	0	1	0	0	0
0	1	1	0	0	0	0
0	1	1	1	0	0	0
1	0	0	0	0	0	0
1	0	0	1	0	0	0
1	0	1	0	1	1	0
1	0	1	1	1	1	0
1	1	0	0	0	0	0
1	1	0	1	1	0	0
1	1	1	0	1	0	0
1	1	1	1	0	0	0

3.

$$Q_1^{n+1} = (A \wedge \bar{B} \wedge Q_1^n) \vee (A \wedge B \wedge Q_1^n \wedge \bar{Q}_0^n) \vee (A \wedge B \wedge \bar{Q}_1^n \wedge Q_0^n)$$

$$Q_0^{n+1} = (\bar{A} \wedge \bar{Q}_0^n \wedge \bar{Q}_1^n) \vee (A \wedge \bar{B} \wedge Q_1^n)$$

$$OUT = \bar{A} \wedge \bar{B} \wedge Q_0^n \wedge Q_1^n$$