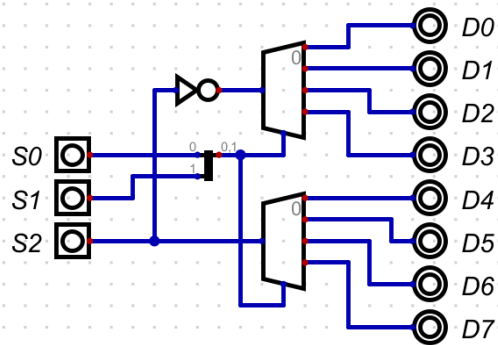


CS303 Homework 3

UĞUR ÖZTUNÇ

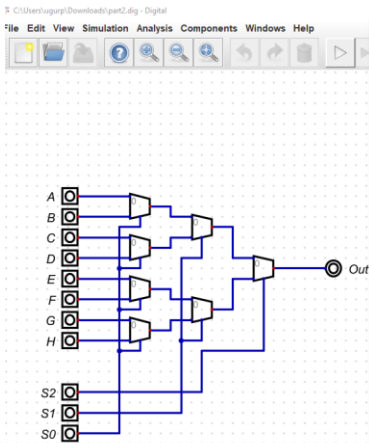
28176

Q1



S2	S1	S0	D0	D1	D2	D3	D4	D5	D6	D7
0	0	0	1	0	0	0	0	0	0	0
0	0	1	0	1	0	0	0	0	0	0
0	1	0	0	0	1	0	0	0	0	0
0	1	1	0	0	0	1	0	0	0	0
1	0	0	0	0	0	0	1	0	0	0
1	0	1	0	0	0	0	0	1	0	0
1	1	0	0	0	0	0	0	0	1	0
1	1	1	0	0	0	0	0	0	0	1

Q2



Table

File	New	Edit	Create	K-Map	A	B	C	D	E	F	G	H	S0	S1	S2	Out
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0
0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0
0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0
0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1
0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	0
0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	0
0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	0
0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	0
0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0
0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0
0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0
0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0
0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0

$$\text{Out} = (A \wedge \overline{S0} \wedge \overline{S1} \wedge \overline{S2}) \vee (B \wedge S0 \wedge \overline{S1} \wedge \overline{S2}) \vee (C \wedge \overline{S0} \wedge S1 \wedge \overline{S2}) \vee (D \wedge S0 \wedge S1 \wedge \overline{S2}) \vee (E \wedge \overline{S0} \wedge \overline{S1} \wedge S2) \vee (F \wedge S0 \wedge S1 \wedge S2) \vee (G \wedge \overline{S0} \wedge S1 \wedge S2) \vee (H \wedge S0 \wedge \overline{S1} \wedge S2)$$

Q3

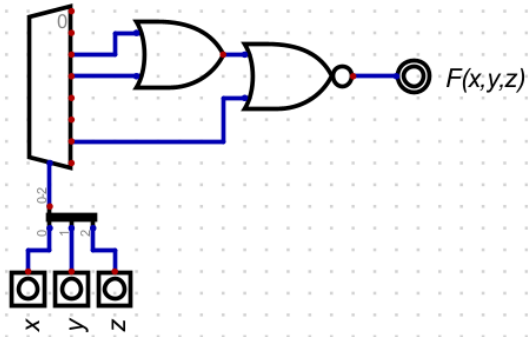


Table			
File	New	Edit	Create K-Map
x	y	z	F(x,y,z)
0	0	0	1
0	0	1	1
0	1	0	0
0	1	1	0
1	0	0	1
1	0	1	1
1	1	0	0
1	1	1	1

$$F(x,y,z) = (x \wedge z) \vee \bar{y}$$

Q4

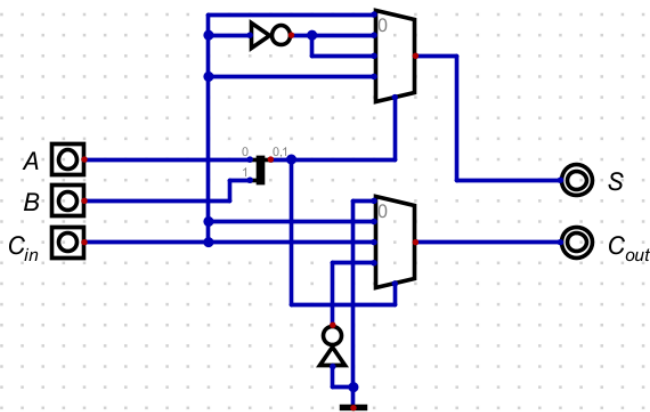


Table				
File	New	Edit	Create K-Map	
A	B	Cin	S	Cout
0	0	0	0	0
0	0	1	1	0
0	1	0	1	0
0	1	1	0	1
1	0	0	1	0
1	0	1	0	1
1	1	0	0	1
1	1	1	1	1