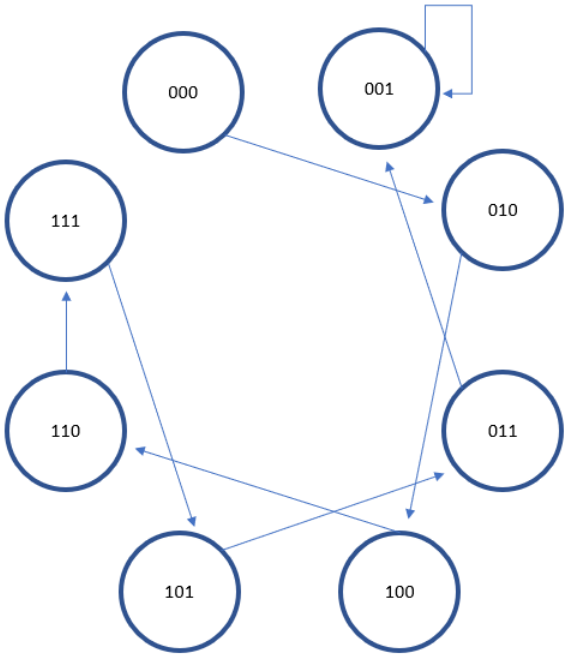
SECTION 3:

State Diagram:



Truth table:

#	PREVIOUS STATE			SUBSEQUENT STATE		
	Q3	Q2	Q1	Q3	Q2	Q1
0	0	0	0	0	1	0
1	0	0	1	0	0	1
2	0	1	0	1	0	0
3	0	1	1	0	0	1
4	1	0	0	1	1	0
5	1	0	1	0	1	1
6	1	1	0	1	1	1
7	1	1	1	1	0	1

JK Inputs:

FF3		FF2		FF1	
J3	K3	J2	K2	J1	K1
0	X	1	X	0	X
0	X	0	X	X	0
1	X	X	1	0	X
0	X	X	1	X	0
X	0	1	X	0	X
X	1	1	X	X	0
X	0	X	0	1	X
X	0	X	1	X	0

Karnaugh Maps / Expressions:

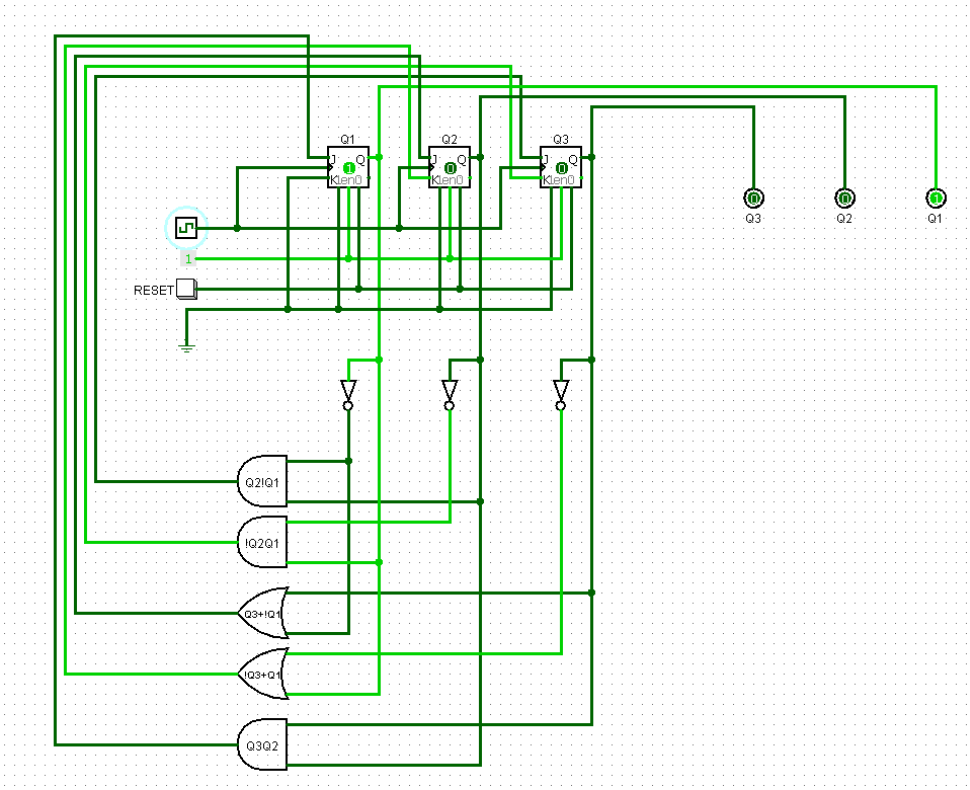
J3				
Q3\Q2Q1	00	01	11	10
0	0	0	0	1
1	X	X	X	X
Expression: Q2!Q1				

K3				
Q3\Q2Q1	00	01	11	10
0	X	X	X	X
1	0	1	0	0
Expression:!Q2Q1				

J2				
Q3\Q2Q1	00	01	11	10
0	1	0	X	X
1	1	1	X	X
Expression: Q3 + !Q1				

K2				
Q3\Q2Q1	00	01	11	10
0	X	X	1	1
1	X	X	1	0
Expression: !Q3 + Q1				

J1				
Q3\Q2Q1	00	01	11	10
0	0	X	X	0
1	0	X	X	1
Expression: Q3Q2				

K1				
Q3\Q2Q1	00	01	11	10
0	X	0	0	X
1	X	0	0	X
Expression: 0				

Circuit: