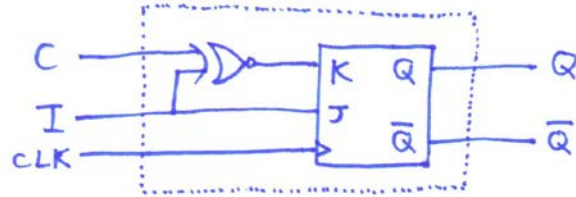


Recitation 08 Solutions

- The output Q will be a periodical signal which switches every 2 seconds.
- No solution provided.
- The truth table specifying the behavior of the TD FF and the input to JK FF required to produce the same behavior is given below. Therefore, $K = C \text{ XNOR } I$ and $J = I$.

C	I	Next Q	J	K
0	0	0	0	1
0	1	1	1	0
1	0	Q'	0	0
1	1	Q'	1	1



- The behavior of the universal flip-flop and the corresponding inputs to the JK flip-flop are given in the following truth table:

S2	S1	I2	I1	Next Q	J	K
0	0	0	0	Q	0	0
0	0	0	1	0	0	1
0	0	1	0	1	1	0
0	0	1	1	undesirable	d	d
0	1	0	0	0	0	1
0	1	0	1	1	1	0
0	1	1	0	1	1	0
0	1	1	1	0	0	1
1	0	0	0	Q	0	0
1	0	0	1	0	0	1
1	0	1	0	1	1	0
1	0	1	1	Q'	1	1
1	1	0	0	Q	0	0
1	1	0	1	Q'	1	1
1	1	1	0	Q'	1	1
1	1	1	1	Q	0	0

