

Problem 2 (Alternate Solution):

Present $Q_2\ Q_1\ Q_0$	Next $Q'_2\ Q'_1\ Q'_0$	$D_2\ S_1\ R_1\ J_0\ K_0$
0 0 0	X X X	X X X X X
0 0 1	0 1 1	0 1 0 X X 0
0 1 0	1 1 0	1 X 0 X 0 X
0 1 1	0 1 0	0 X 0 X 1
1 0 0	X X X	X X X X X
1 0 1	0 0 1	0 0 X X 0
1 1 0	1 1 1	1 X 0 1 X
1 1 1	1 0 1	1 0 1 X 0

D_2 :	$Q_2\ Q_1\ Q_0$	0 1
00	X 0	()
01	1 0	()
11	1 1	()
10	X 0	()

$$D_2 \leftarrow \bar{Q}_0 + Q_2 Q_1$$

S_1 :	$Q_2\ Q_1\ Q_0$	0 1
00	X 1	()
01	X X	()
11	X 0	()
10	X 0	()

$$S_1 \leftarrow \bar{Q}_2$$

R_1 :	$Q_2\ Q_1\ Q_0$	0 1
00	X 0	()
01	0 0	()
11	0 1	()
10	X X	()

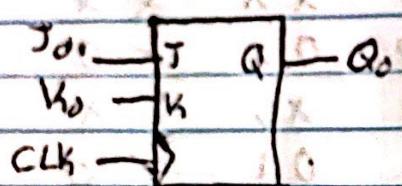
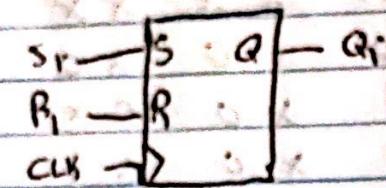
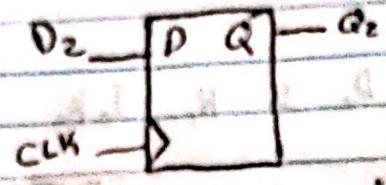
$$R_1 \leftarrow Q_0 Q_1$$

J_0 :	$Q_2\ Q_1\ Q_0$	0 1
00	X X	()
01	0 X	()
11	1 X	()
10	X X	()

$$J_0 \leftarrow Q_2$$

K_0 :	$Q_2\ Q_1\ Q_0$	0 1
00	X 0	()
01	X 1	()
11	X 0	()
10	X 0	()

$$K_0 \leftarrow \bar{Q}_2 Q_1$$



$$Q_2 \rightarrow \overline{Q}_2 \text{ wire}$$

$$Q_2 \rightarrow \overline{Q}_2$$

$$\overline{Q_2} \rightarrow D$$

$$R_i \quad | \quad 00 \\ 01 \\ 10 \\ 11$$

$$Q_1 = D \rightarrow D_2$$

1	0	0
0	0	0
1	0	1
1	1	1
x	x	0

$$Q_1 = D \rightarrow K_0$$

$$J_0 \quad | \quad 00 \\ 01 \\ 10 \\ 11$$

$$Q_2 \rightarrow J_0$$

1	0	0
0	0	0
1	0	1
0	x	1
0	x	0

$$Q_1 = D \rightarrow S_i$$

1	0	0
0	x	0
1	x	1
0	x	1
0	x	0

$$Q_1 = D \rightarrow R_i$$

1	0	0
x	x	0
0	x	1
1	x	1
1	x	1