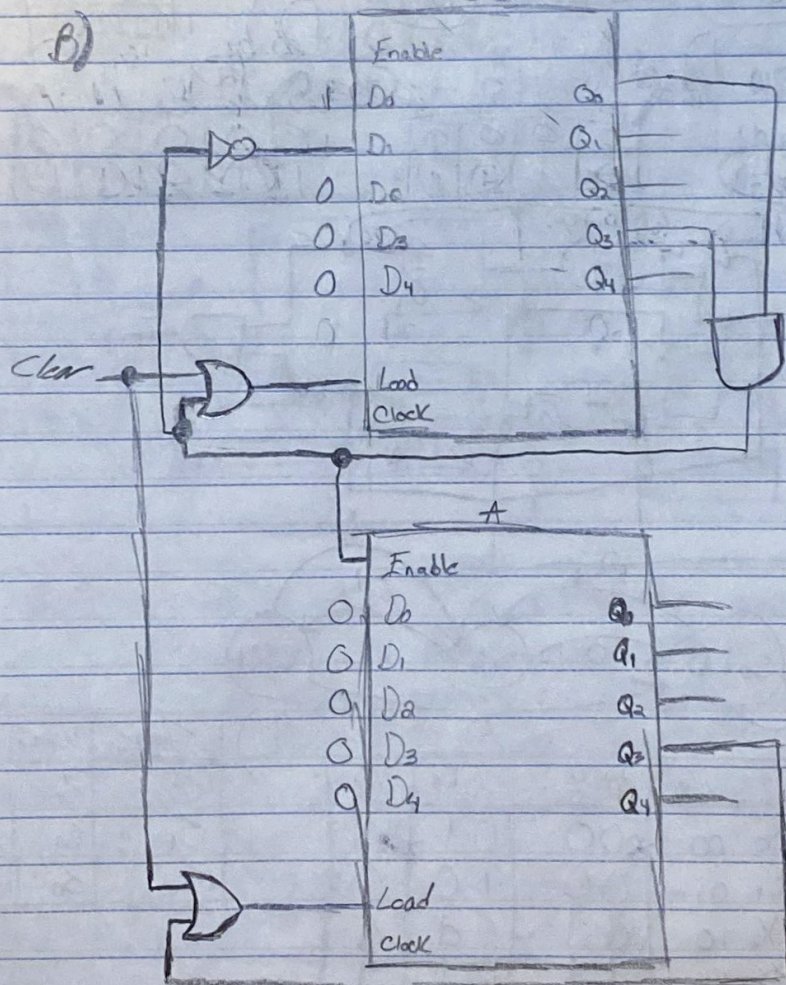
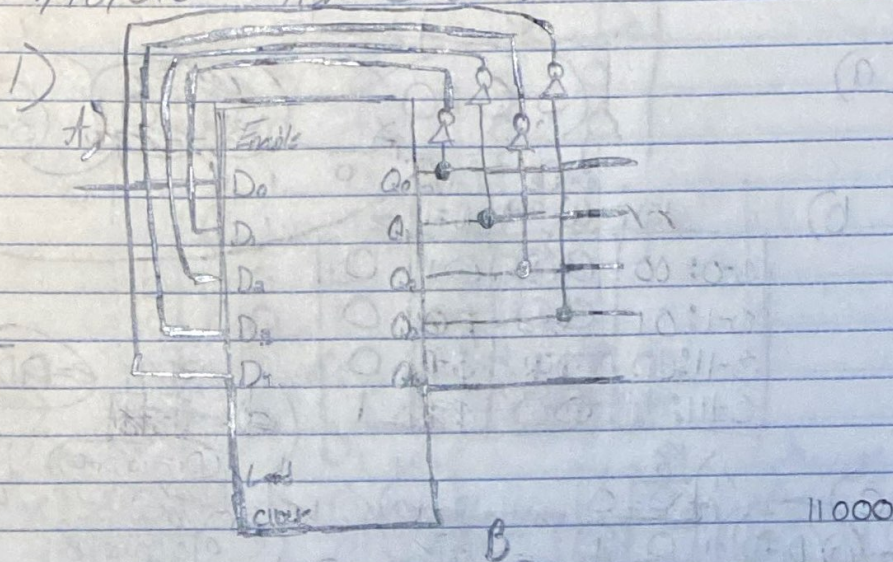
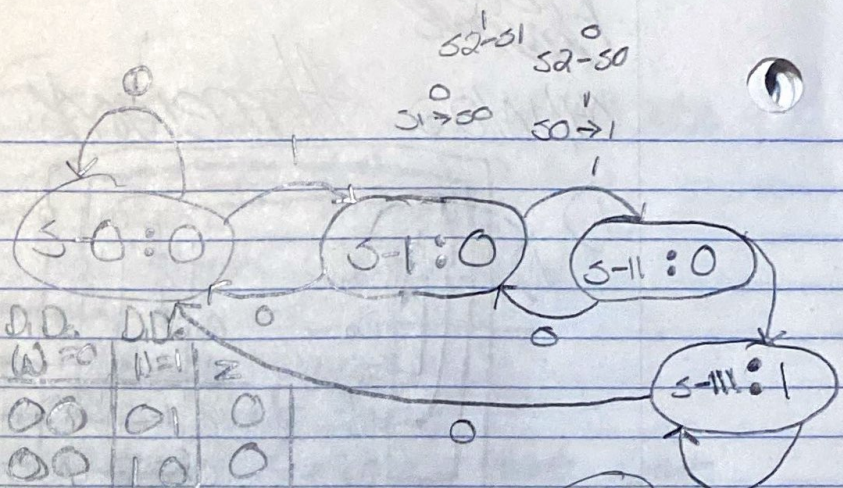


B. J. Hall

04/10/22 Homework #8



2) a)

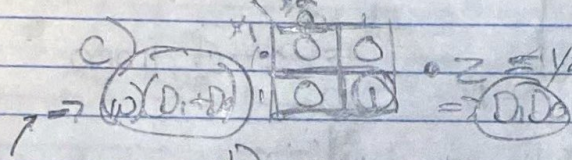
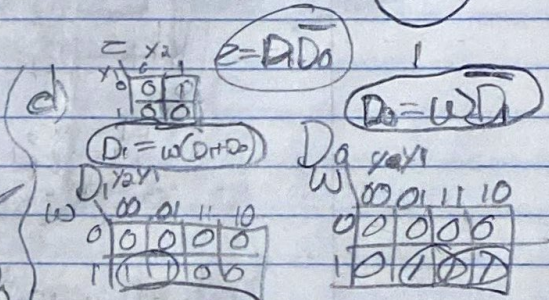


$s_2^1 = s_1$
 $s_2^0 = s_0$
 $s_1^0 \rightarrow \infty$
 $s_0^0 \rightarrow 1$

b)

$\infty = S-0$
 $01 = S-1$
 $10 = S-11$
 $11 = S-111$

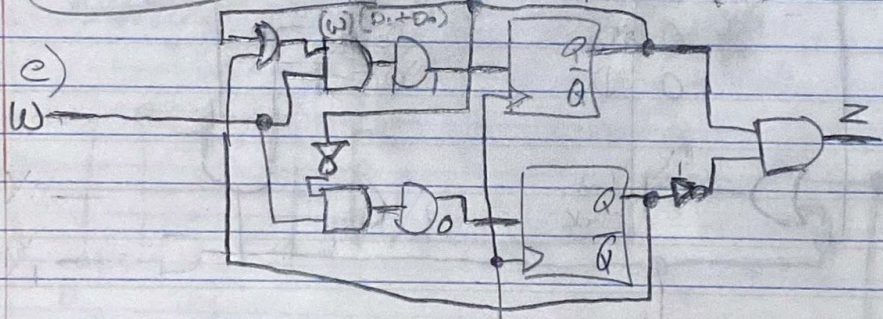
$x_2 x_1$	$w=0$	$w=1$	z
00	00	01	0
01	00	10	0
10	00	11	0
11	00	11	1



$D_1 = x_2 w + x_1 w$
 $D_0 = \overline{x_2} \overline{x_1} + x_2 w$
 $\Rightarrow (w D_1 + D_0)$

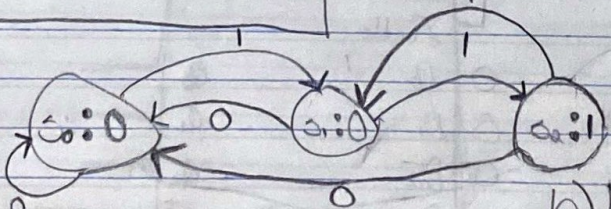
$x_2 x_1$	$w=0$	$w=1$	z
00	00	01	0
01	00	10	0
10	00	11	0
11	00	11	1

$x_2 x_1$	$w=0$	$w=1$	z
00	00	01	0
01	00	10	0
10	00	11	0
11	00	11	1



ck

3) a)



c)

$x_2 x_1$	$D_1 D_0$ $w=0$	$D_1 D_0$ $w=1$	Q
00	00	01	0
01	00	10	0
10	00	00	0
11	00	01	1

b)

State	$w=0$	$w=1$	Q
S0	S0	S1	0
S1	S0	S2	1
S2	S0	S1	0

d)

P	y_2	y_1	D_1	D_0
0	0	0	0	0
0	0	1	0	0
0	1	0	d	d
0	1	1	1	1
1	0	0	0	1
1	0	1	1	0
1	1	0	d	d
1	1	1	0	1

e)

x_1	x_2	Q
0	0	d
1	0	1

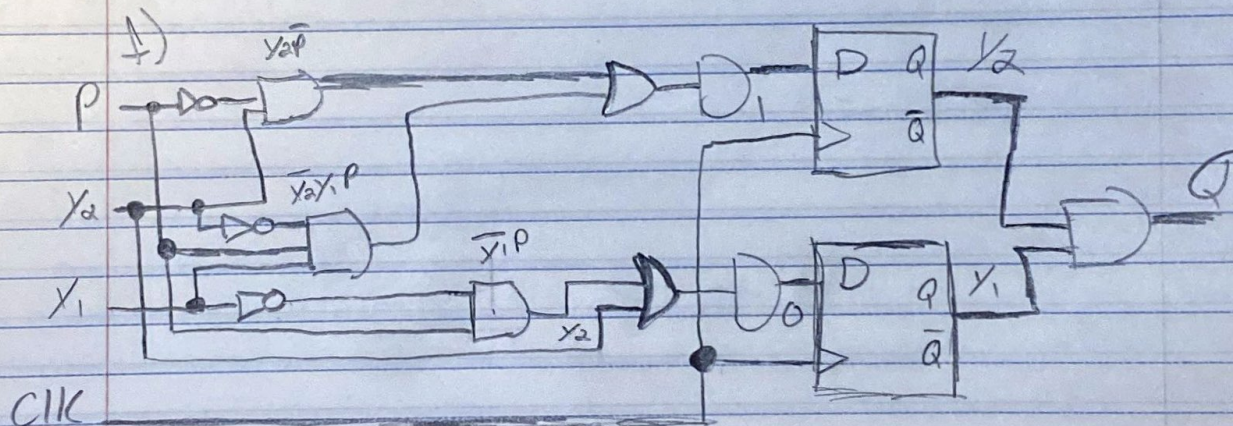
P	y_2	y_1	D_1	D_0
0	0	0	1	d
1	0	1	0	d

P	y_2	y_1	D_1	D_0
0	0	0	1	d
1	1	0	1	1

$Q = y_2 x_1$

$D_1 = \bar{y}_2 y_1 P + y_2 \bar{P}$

$D_0 = \bar{y}_1 P + y_2$



Not sure I did it correctly, because I don't recognize it. Maybe a master slave D-flip flop, because of the two D flip flops?

