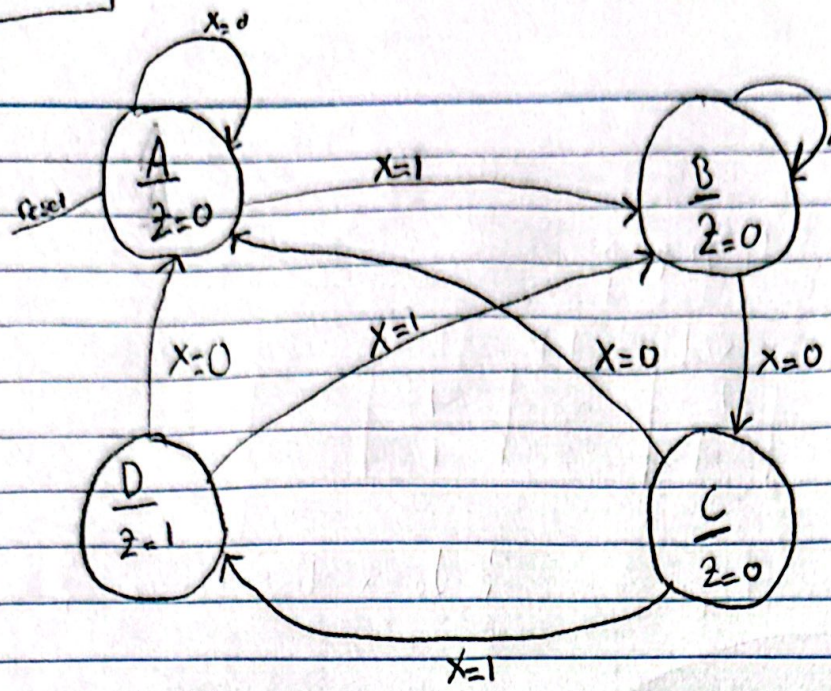
insert star here

Create Moore Finite State Diagram



101101
10101

Non overlapping Moore Machine sequence 101

A=00 B=01 C=10 D=11

Generate Truth Table

	Current State q_1	q_0	Input x	d_1	d_0	
A	0	0	0	0	0	A
	0	0	1	0	1	B
B	0	1	0	1	0	C
	0	1	1	0	1	B
C	1	0	0	0	0	A
	1	0	1	0	1	D
D	1	1	0	0	0	A
	1	1	1	0	1	B

OG Table

	Current State q_1	q_0	Output Z
A	0	0	0
B	0	1	0
C	1	0	0
D	1	1	1

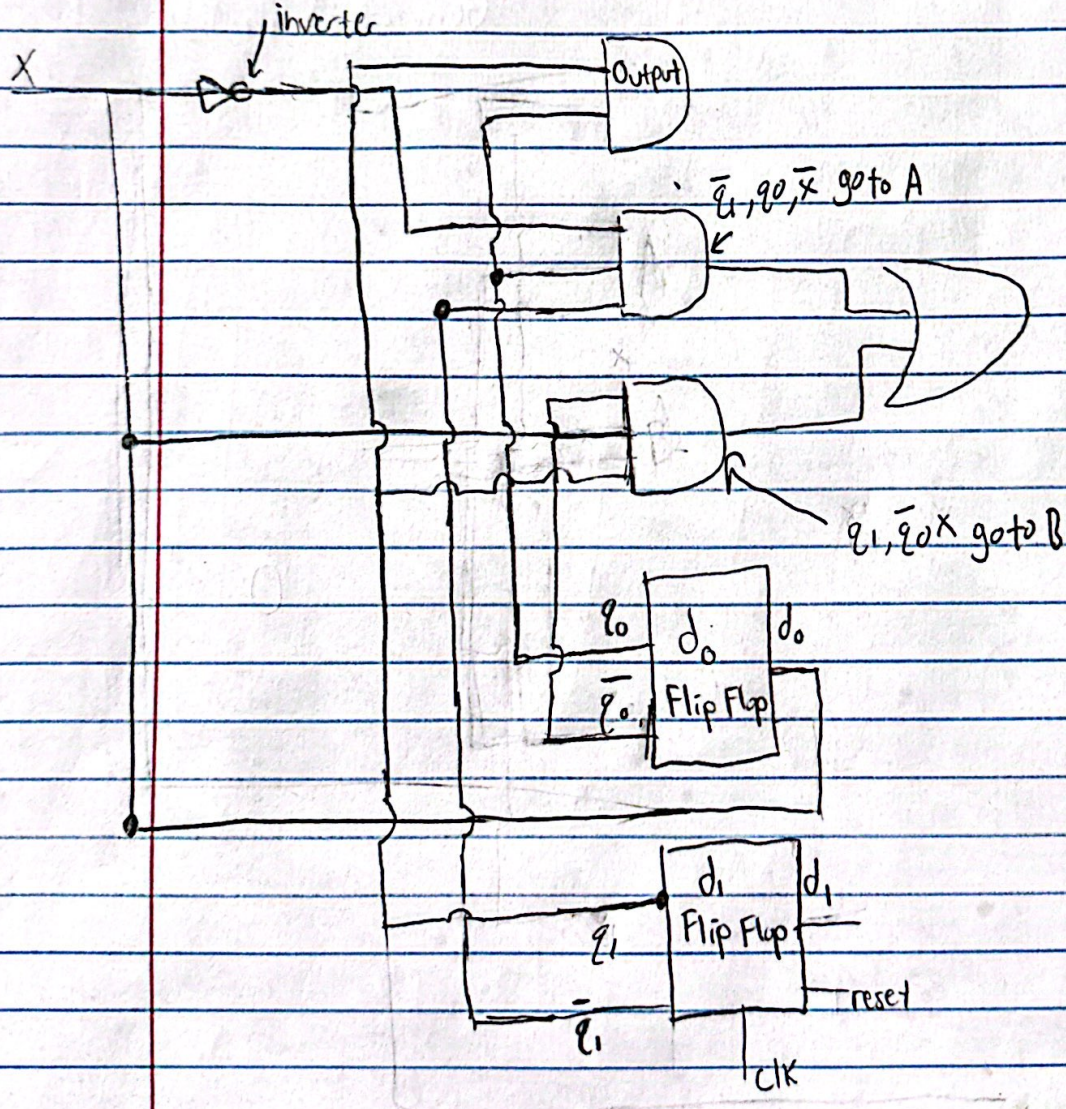
$d_0 = x$

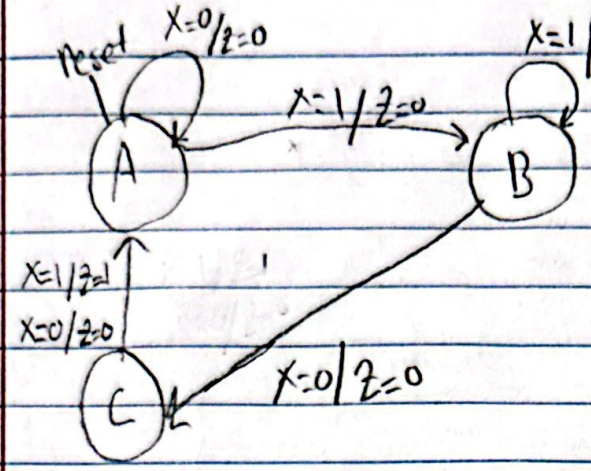
$d_1 = \bar{q}_1 q_0 \bar{x} + q_1 \bar{q}_0 x$

$0\ 1\ 0 \quad 1\ 0\ 1$

q_1 \ q_0x (lb)	01	11	10
1	1		1
0	1		1

$d_1 = \bar{q}_1 q_0 \bar{x} + q_1 \bar{q}_0 x$ } $d_0 = x$ from before } $z = q_1 q_0$





00=A 01=B 10=C D=11

Non overlapping Mealy Machine

Current State		Input X	Next State			
q_1	q_0		d_1	d_0		Z
0	0	0	0	0	A	0
0	0	1	0	1	B	0
0	1	0	1	0	C	0
0	1	1	0	1	B	0
1	0	0	0	0	A	0
1	0	1	0	0	A	1
1	1	0	X	X	X	0
1	1	1	X	X	X	0

$d_1 = \bar{q}_1 q_0 \bar{x}$

$d_0 = \bar{q}_1 \bar{q}_0 x + \bar{q}_1 q_0 x$

$\bar{q}_1 x (\bar{q}_0 + q_0)$

1

$d_0 = (\bar{q}_1 x)$

$Z = q_1 \bar{q}_0 x$

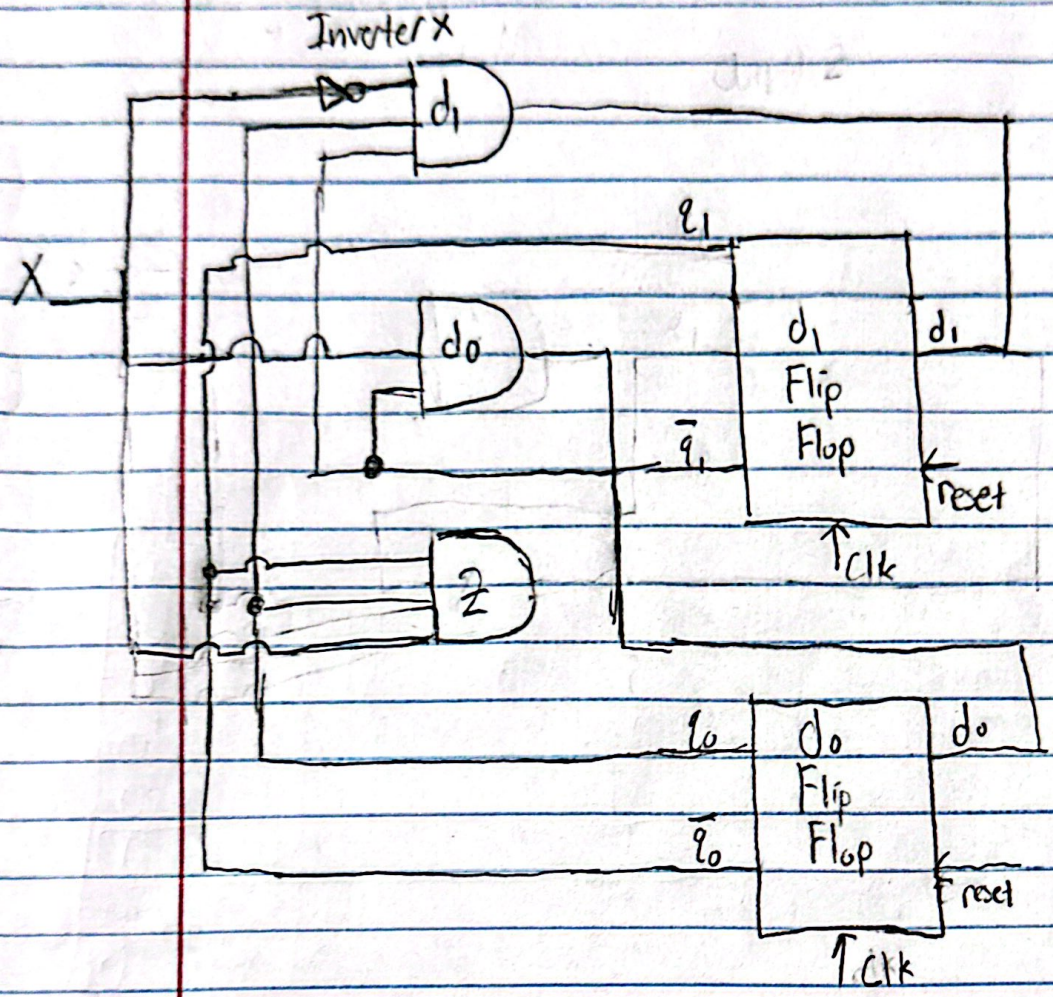
$d_1 = \bar{q}_1 q_0 \bar{x}$

$d_0 = \bar{q}_1 x$

$Z = q_1 \bar{q}_0 x$

Draw circuit

$d_1 = \bar{q}_1 q_0 \bar{x}$ $d_0 = \bar{q}_1 x$ $z = q_1 \bar{q}_0 x$



Moore Sequence recognizer dectects overlapping sequence 1001