1. Recap of FSM design steps
    a. Turn a word description into a state diagram
    b. Turn the state diagram into a transition table
    c. Use transition table to make K-maps to simplify circuit
    d. Implement simplified circuit

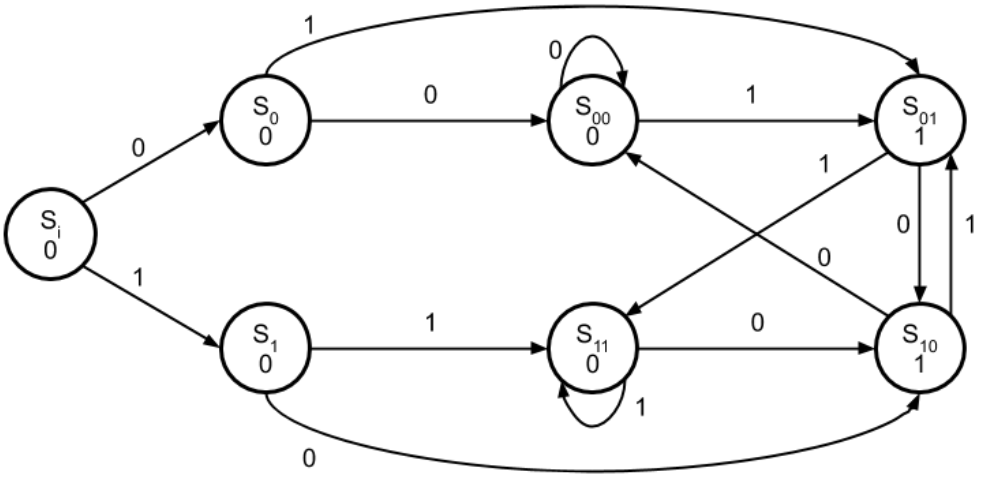
2. Our word problem
    a. Want to create an edge detecting circuit

3. State transition diagram to minimize the number of states
    a. Convert word description

    b. For this problem

c. Mealy model differences

4. State table



Present State	Next State		Output
	$x = 0$	$x = 1$	z
i			
0			
1			
00			
01			
10			
11			

a. Choice of flip-flops

5. Derivation of next-state and output expressions

Present State	Next State		Output
	$x = 0$	$x = 1$	z
i	0	1	0
0	00	01	0
1	10	11	0
00	00	01	0
01	10	11	1
10	00	01	1
11	10	11	0

Present State	Binary Code	Present State			Input	Next State			Output
		A	*B*	*C*	*x*	*A'*	*B'*	*C'*	*z*
i	000								
i	000								
0	001								
0	001								
1	010								
1	010								
00	011								
00	011								
01	100								
01	100								
10	101								
10	101								
11	110								
11	110								
	111								
	111								

Present State	Binary Code	Present State			Input	Next State			Output
		A	*B*	*C*	*x*	*A'*	*B'*	*C'*	*z*
i	000	0	0	0	0	0	0	1	0
i	000	0	0	0	1	0	1	0	0
0	001	0	0	1	0	0	1	1	0
0	001	0	0	1	1	1	0	0	0
1	010	0	1	0	0	1	0	1	0
1	010	0	1	0	1	1	1	0	0
00	011	0	1	1	0	0	1	1	0
00	011	0	1	1	1	1	0	0	0
01	100	1	0	0	0	1	0	1	1
01	100	1	0	0	1	1	1	0	1
10	101	1	0	1	0	0	1	1	1
10	101	1	0	1	1	1	0	0	1
11	110	1	1	0	0	1	0	1	0
11	110	1	1	0	1	1	1	0	0
	111	1	1	1	0	d	d	d	d
	111	1	1	1	1	d	d	d	d

a. Use above to create K-maps for FF input combinational circuits
b. Create K-map to determine the output combinational circuit
    i. Mealy model differences

A'

Cx \ AB	**00**	**01**	**11**	**10**
00				
01				
11				
10				

B'

Cx \ AB	**00**	**01**	**11**	**10**
00				
01				
11				
10				

C'

Cx \ AB	**00**	**01**	**11**	**10**
00				
01				
11				
10				

z

C \ AB	**00**	**01**	**11**	**10**
0				
1				

6. Finishing steps

    a. Mealy model differences