

# Finite State Machine

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## 1 List of inputs given

Signal Name	Signal Symbol	I1	I2
Right	R	0	1
Left	L	1	0
Hazard	X	1	1

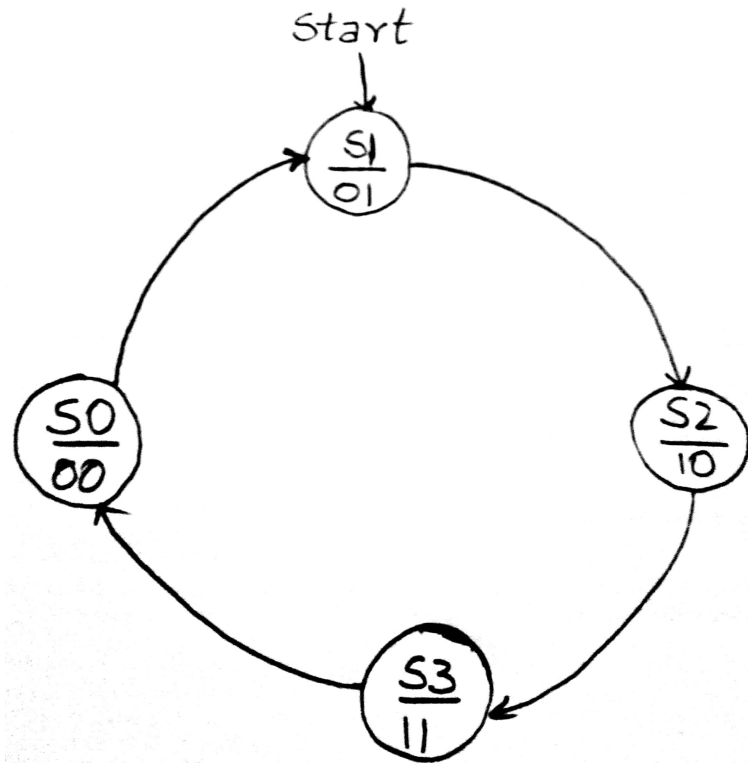
## 2 List of possible states

A	B	C	State Name	Q1	Q2
1	0	0	S1	0	1
0	1	0	S2	1	0
0	0	1	S3	1	1
0	0	0	S0	0	0

## 3 Number of Flip Flops used

No. of D-Flip Flops used = 2

#### 4 State Transition Diagram



#### 5 Transition Table

Q1	Q2	D1	D2
0	0	0	1
0	1	1	0
1	0	1	1
1	1	0	0

#### 6 Transition Equations of the circuit

$$D1 = (Q1 \cdot !Q2) + (!Q1 \cdot Q2)$$
$$D2 = (!Q2)$$

## 7 circuit using D flip flop

