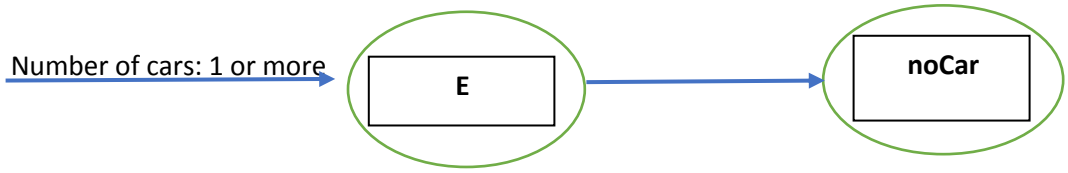
STATE PATTERN

We have the following states in our state diagram.

No	*.java*	*Shorthand abbreviations*
1	NoCarAtIntersection	noCar
2	StartStateImplAllRed	allRed
3	StartStateImplEast	E
4	StartStateImplWest	W
5	StartStateImplNorth	N
6	StartStateImplSouth	S
7	StartStateImplEastWest	EW
8	StartStateImplNorthEast	NE
9	StartStateImplNorthSouth	NS
10	StartStateImplNorthWest	NW
11	StartStateImplSouthEast	SE
12	StartStateImplSouthWest	SW
13	StartStateImplEastWestNorth	EWN
14	StartStateImplNorthSouthEast	NSE
15	StartStateImplSouthEastWest	SEW
16	StartStateImplWestNorthSouth	WNS
17	StartStateImplNorthSouthEastWest	NSEW

a.) State Diagram when one traffic light is green:

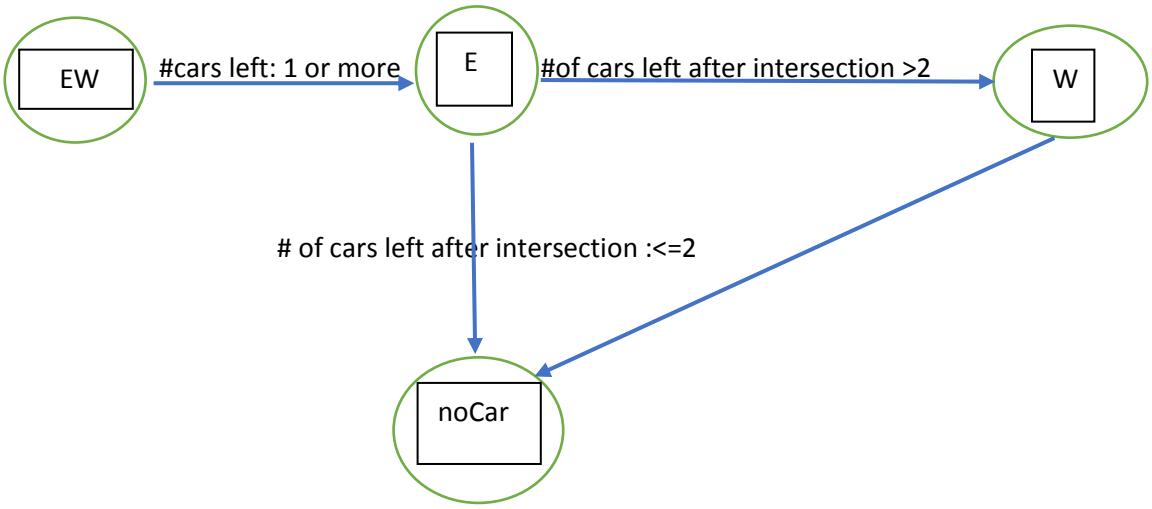
Example: Traffic Light at The East is green



Note: The approach of design is same for the states from index 3 to 6.

b.) State Diagram when two traffic lights are green:

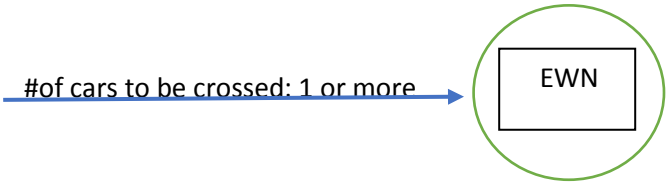
Example: Traffic light at the East and the West are green. ie.EW



Note: The approach of design is same for the states from index 7 to 12

c.) State Diagram when three traffic lights are green.

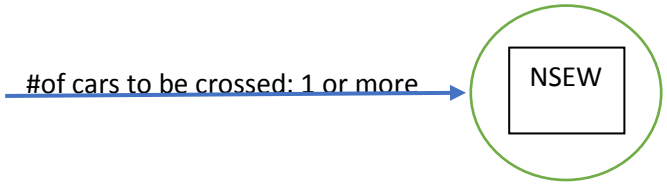
Example : Traffic lights at the East West and North are Green(EWN).



Note: The approach of this design is same for the states indexed from 12 to 16. Also, note that only print statements will be executed within these states.

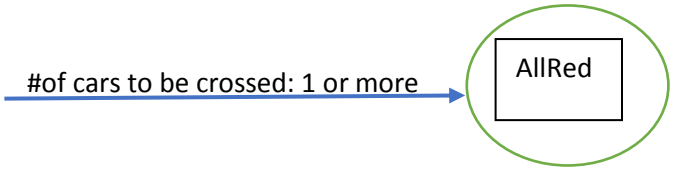
d.) State Diagram when all four traffic lights are green.

Example: Traffic Lights at the North, South, East and West are green.



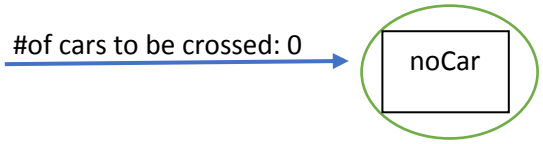
Note: Only one print statement is executed within this state

e.) State Diagram when none of the traffic Light is green



Note: Only one print statement is executed within this state

f.) State Diagram when no car is at the intersection irrespective of the state of traffic lights



Note: Only one print statement is executed within this state