1. **What are the states for the circuit controlling the steering?**

The states of the circuit represent the steering wheel position, which can be Left and Right. These two states indicate the current position of the steering wheel.

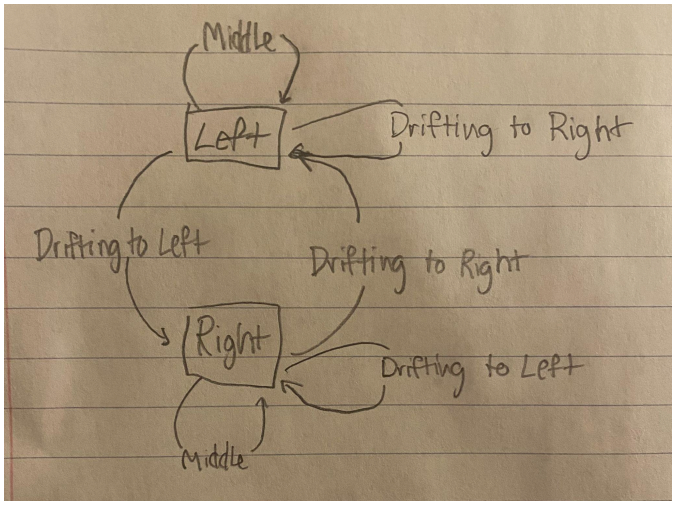
2. **What are the inputs to the circuit and what values can those inputs have?**

The inputs to the circuit are the car's position within the lane, which can have three values: Middle of a lane, Drifting to the right edge of the lane, and Drifting to the left edge of the lane.

3. **Draw the finite state table and finite state diagram for this circuit.**

Finite State Table:

Current State	Input = Middle	Input = Driving to Right	Input = Driving to Left
Left	Left	Left	Right
Right	Right	Left	Right



1. **What are the states for the circuit controlling the walkway?**

The states of the circuit represent the motion direction of the walkway, which can be: Off, Moving Northward, and Moving Southward. These three states indicate the current operational state of the walkway.

2. **What are the inputs to the circuit and what values can those inputs have?**

The inputs to the circuit are the readings from the two weight sensors: North sensor (N): Can be 0 (no weight) or 1 (weight detected) and South sensor (S): Can be 0 (no weight) or 1 (weight detected)

This gives us four possible input combinations: (N=0, S=0): No weight on either sensor, (N=0, S=1): Weight on South sensor only, (N=1, S=0): Weight on North sensor only, and (N=1, S=1): Weight on both sensors

3. **Draw the finite state table and finite state diagram for this circuit.**

Finite State Table:

Current State	Input (N,S) = (0,0)	Input (N,S) = (0,1)	Input (N,S) = (1,0)	Input (N,S) = (1,1)
Off	Off	Northward	Southward	Off
Northward	Off	Northward	Northward	Northward
Southward	Off	Southward	Southward	Southward