```
                        ┌──────────────┐
                        │   Obstacle   │
                        └──────────────┘
                               ↕
   Sends and recieves ultrasonic signals to detect an object and its distance
                          ╭──────────────╮
                          │  Ultrasonic  │
                          │    Sensor    │
                          ╰──────────────╯
                               ↑
        Turns the sensor to scan
        ┌──────────────────┐
        │  Sensor Swivel   │
        │      Servo       │
        └──────────────────┘
                 ↑
        Controls electrical impulse to turn
```

Sends and receives signals translated into usable code

```
┌──────────────┐                      ◇                      ┌───────────────┐
│ Left Servo   │ ←Controls electrical │ Leader │ Controls electrical impulse to spin→ │ Right Servo   │
│   Motor      │   impulse to spin    │ Robot  │                                      │   Motor       │
└──────────────┘                      ◇                      └───────────────┘
```

Sends and recieves ultrasonic signals to detect an object and its distance

```
                          ╭──────────────╮
                          │  Ultrasonic  │
                          │    Sensor    │
                          ╰──────────────╯
                               ↑
        Turns the sensor to scan
        ┌──────────────────┐
        │  Sensor Swivel   │
        │      Servo       │
        └──────────────────┘
                 ↑
        Controls electrical impulse to turn
```

Sends and receives signals translated into usable code

```
┌──────────────┐                      ◇                      ┌───────────────┐
│ Left Servo   │ ←Controls electrical │ Follower │ Controls electrical impulse to spin→ │ Right Servo   │
│   Motor      │   impulse to spin    │  Robot   │                                      │   Motor       │
└──────────────┘                      ◇                      └───────────────┘
```
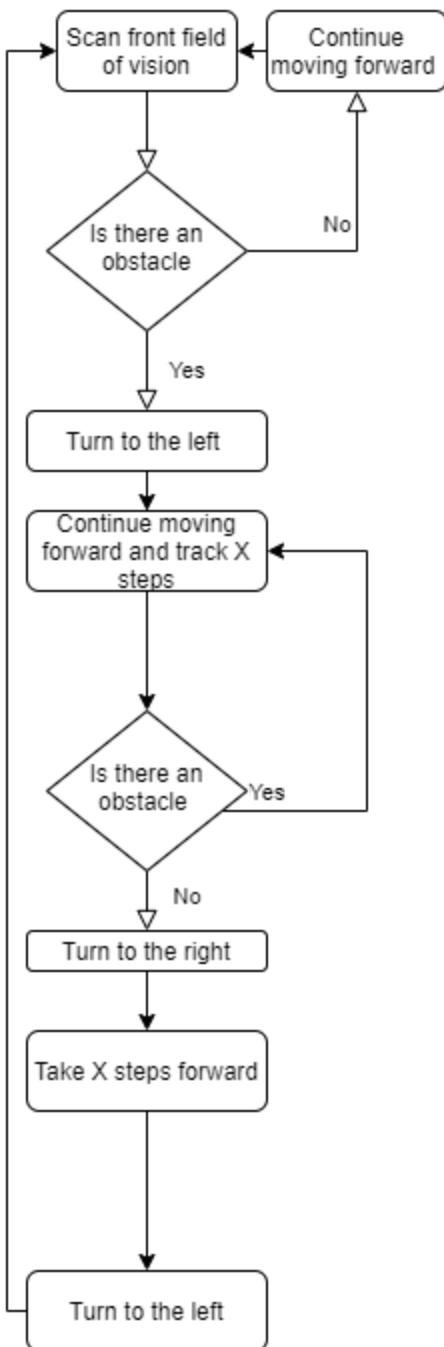
Name Of Piece	Definition/purpose	Input/Output

Core Robot PI	To send and receive signals in order to control the system.
	Controls all servos and sensors.
		INPUT & OUTPUT
		Sources
		   - Ultrasonic sensor - IN
		   - Servo Motor -OUT

Wheel Servo Motor	Receives a flow of electricity to spin causing the system to move.	INPUT Sources - Core Robot PI - IN
Sensor Swivel Servo	Receives a flow of electricity in order to turn allowing the sensor to be moved so it can scan.	INPUT Sources - Core Robot PI - IN

Ultrasonic Sensor	Sends out a high frequency signal and detects objects and distance by the signal being returned.	INPUT & OUTPUT
		Sources
		   - Core Robot PI - IN
		   - Ultrasonic sensor - IN
		   - Core Robot PI - OUT

LEADER

Scan front field of vision

Continue moving forward

Is there an obstacle — No

Yes

Turn to the left

Continue moving forward and track X steps

Is there an obstacle — Yes

No

Turn to the right

Take X steps forward

Turn to the left

FOLLOWER

Scan front field of vision

Is there an object — No

Yes

Is there more than one?

Is one closer?

No

Yes

Yes

Turn Towards the closest

Move forward

Is Object at minimum distance — No

Stop