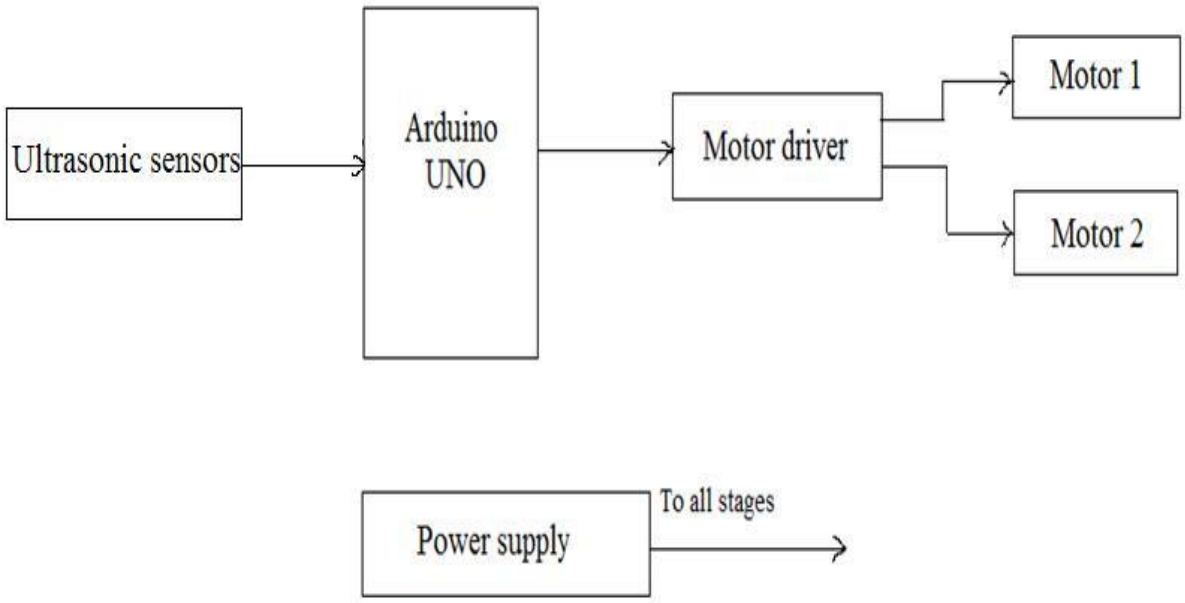
Lessons Learnt

MAKING OF CONSCIOUS CAR -OBSTACLE AVOIDING CIRCUIT WITH ULTRASONIC SENSOR & MOTOR DRIVE

The basic concept of obstacle avoidance robotics is primarily for detecting obstacles and avoiding the collision with the obstacle.

BASIC CIRCUIT DIAGRAM



HARDWARE REQUIEMENTS

- Arduino Uno
- Ultrasonic sensor (HC SR05)
- DC Motor Driver L293D
- DC Motor
- Power Supply

We know the circuit, but we need components to make the circuit. But to where to get them?

Most of the components are available in the LAB, however, these components are easily available on online shopping portals.

We have components, how to code them to do the required action?

Arduino itself is an open source, & most of the code required to control components reactions are available on arduino webpage. We need to have cable to connect Arduino to computer & Arduino IDE installed in computer to access the code for Arduino.

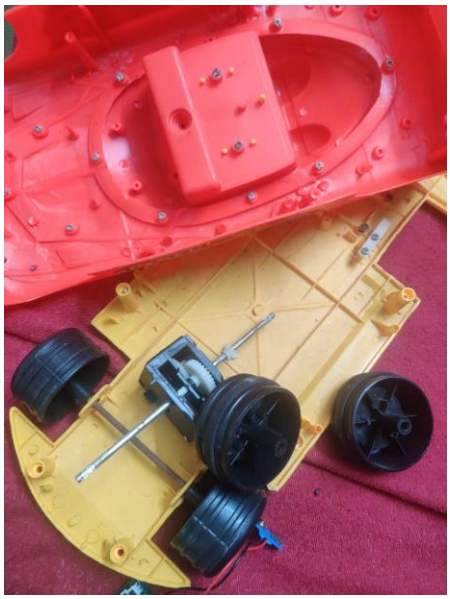
To identify the Port on which arduino is inserted, we can get that by checking device manager in the system.

We have all things ready, but how to see whether the components are functioning appropriately or not.

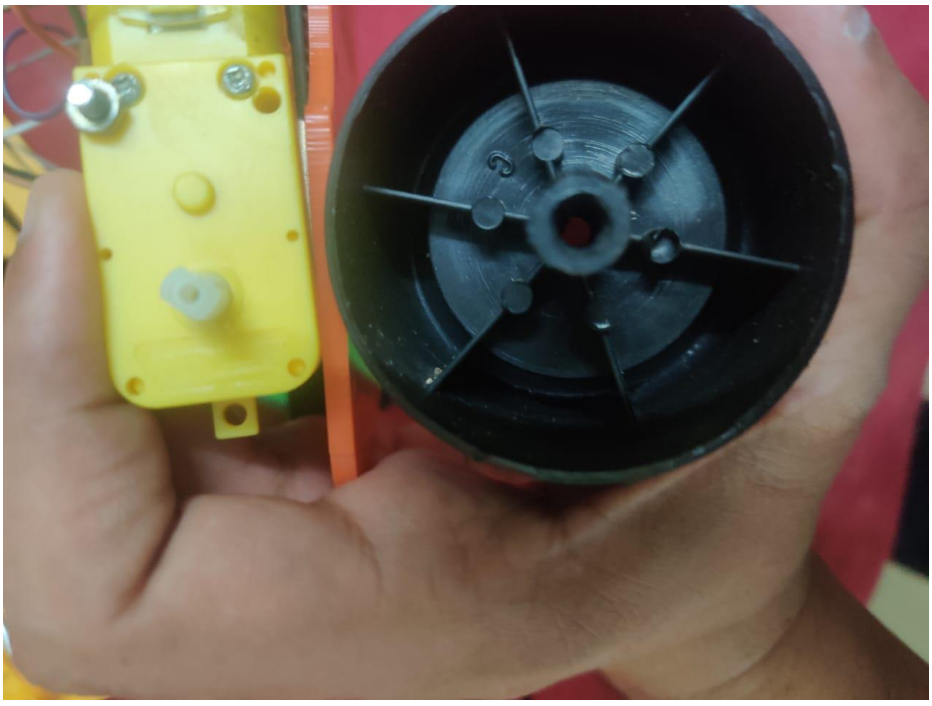
This can be tested by checking Screen Monitor for the uploaded codes.

Now, everything is available, just we have to assemble and design circuit based on our creativity & requirement.

TIPS: For my assignment, I needed tyres & chasis for holding my components and making it mobile friendly. So, I picked up a kids car and dismantled it and took tyres and chasis for my assembly.



But, it really did not help much, ended up breaking toy car & bruises on my hand caused by angry kid. Motor shaft & tyre shaft ID really didn't match & difficult to align.



Best thing is, online we can buy chasis & tyres & every component which are cheaper & customized based on our needs and its less harmful.

All the best for your project.