Arduino Based Obstacle Avoiding Robot

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Contents

1 ALGORITHM

1.1 *Components*

https://github.com/ka-raja-babu/Arduino-Based-Robot/blob/main/Obstacle%20Avoiding%20Robot/Component%20list.pdf

1.2 *Wiring Diagram*

https://github.com/ka-raja-babu/Arduino-Based-Robot/blob/main/Obstacle%20Avoiding%20Robot/Wiring%20Diagram.jpg

Motor Shield	Servo Plate
D8	Echo
D7	Trig
GND	GND
5V	VCC

TABLE 1.1: Connection for Servo Plate

1.3 *Servo Code*

- Connect the Arduino uno board to Laptop/PC using USB cable.
- Open the Servo_code.ino file in Arduino IDE.
- From Tools menu, select Board as ”Arduino Uno” and suitable ”Port” on which the Arduino board is connected.
- Compile the code by clicking on ”Verify” option.
- Upload the code to Arduino Uno using the ”Upload” option.
- This will set the servo motor at 90°.

1.4 *Arduino Code*

- Connect the Arduino uno board to Laptop/PC using USB cable.
- Open the Arduino_code.ino file in Arduino IDE.
- From Tools menu, select Board as ”Arduino Uno” and suitable ”Port” on which the Arduino board is connected.
- Compile the code by clicking on ”Verify” option.
- Upload the code to Arduino Uno using the ”Upload” option.

1.5 *Working*

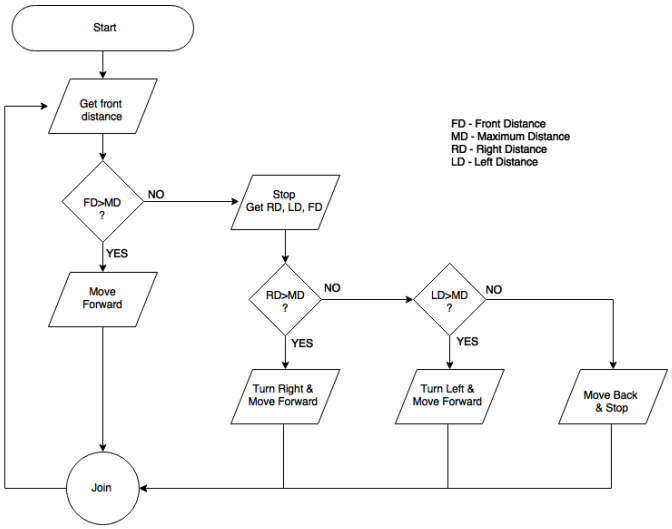

Fig. 1.1: Working

1) Ultrasonic sensors measure the front distance,right distance and left distance.
2) Servo motor is firstly aligned at 90°and then it moves according to the code.
3) A maximum distance is defined and robot moves foraward,backward,left and right according to above flowchart ,to avoid obstacle.

1.6 ***Images***

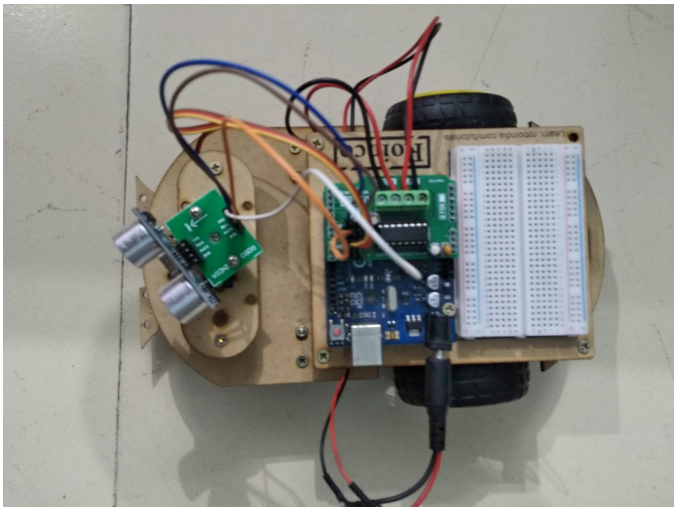

Fig. 1.2: Image 1

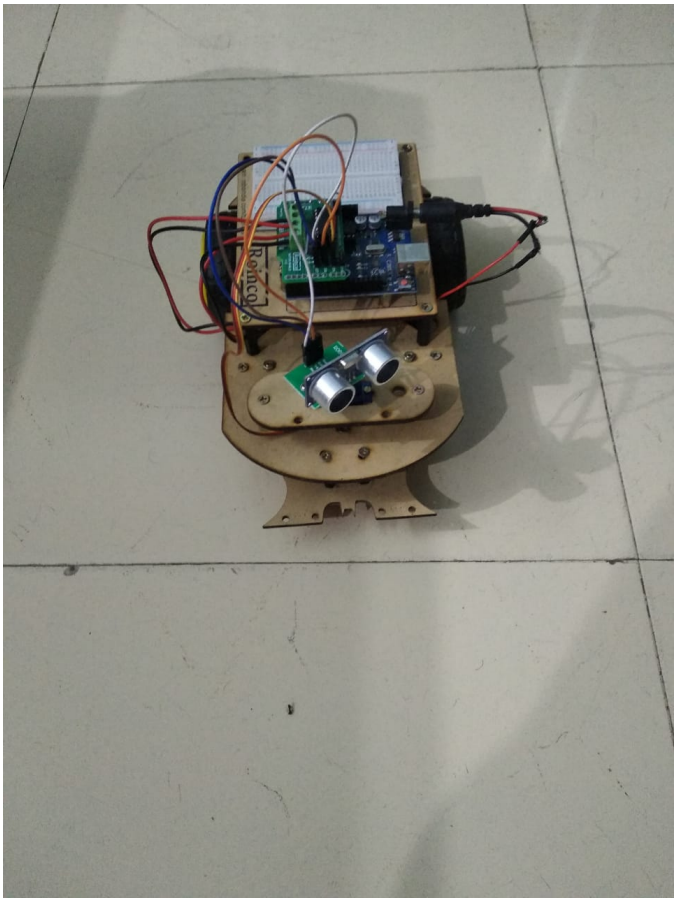

Fig. 1.3: Image2