Arduino Based Bluetooth Controlled Robot

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Contents

1 ALGORITHM

1.1 *Components*

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

1.2 *Wiring Diagram*

https://github.com/ka-raja-babu/Arduino-Based-Robot/blob/main/Bluetooth%20Controlled%20Robot/Wiring%20Diagram.pdf

Motor Shield	Bluetooth HC-05 Module
GND	GND
5V	VCC
D7	TXD
D8	RXD

TABLE 1.1: Connection for Bluetooth HC-05 Module

1.3 *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.

1.4 *Bluetooth APK File*

- Open the APK File and download the application in your mobile.
- Pair your mobile bluetooth with ”HC-05” bluetooth.
- Connect with ”HC-05” in app by scanning available bluetooth.
- Control your bot using forword,backward,right and left options.

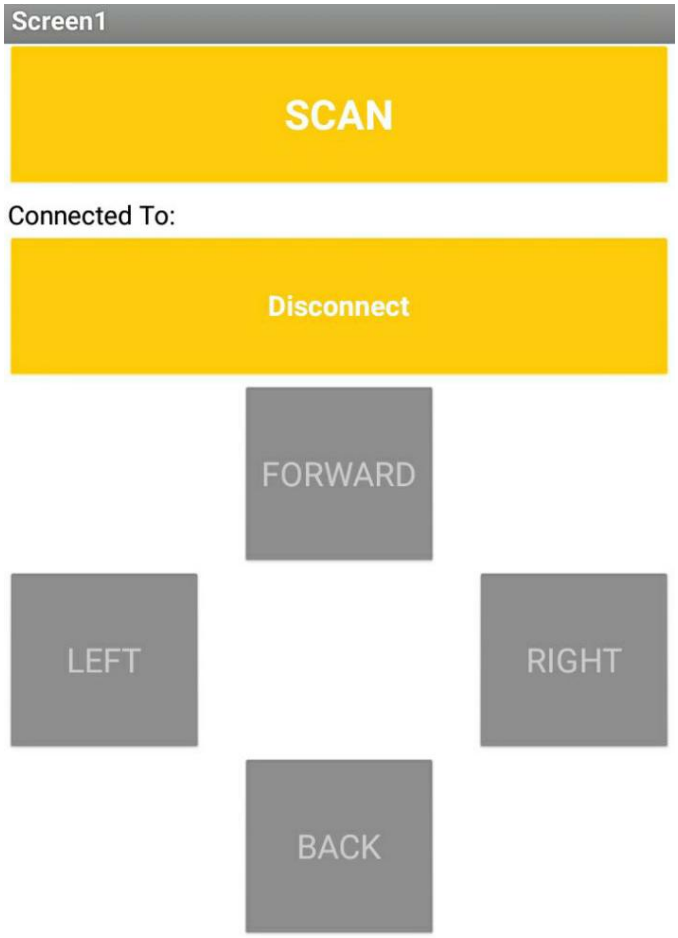

Fig. 1.1: APK Screenshot

1.5 *Working*

1) It consists of a transmitter and a receiver section. The transmitter end consists of Smart-

phone Bluetooth and the Android app installed on it. Similarly, the Receiver section has Arduino board as a processor, HC-05 Bluetooth Module as a wireless communication module, L293D for driving motors.

2) Command which we give in app ,are processed by phone. Command is then sent to the receiver side via Bluetooth.
3) Command received via Bluetooth is forwarded to Arduino Uno board using UART serial communication protocol. Arduino code checks the commands received.
4) Whenever the command is a matching string, Arduino controls the movements of the robot accordingly in forward, backward, Turning Right, Turning Left Stop.

1.6 ***Images***

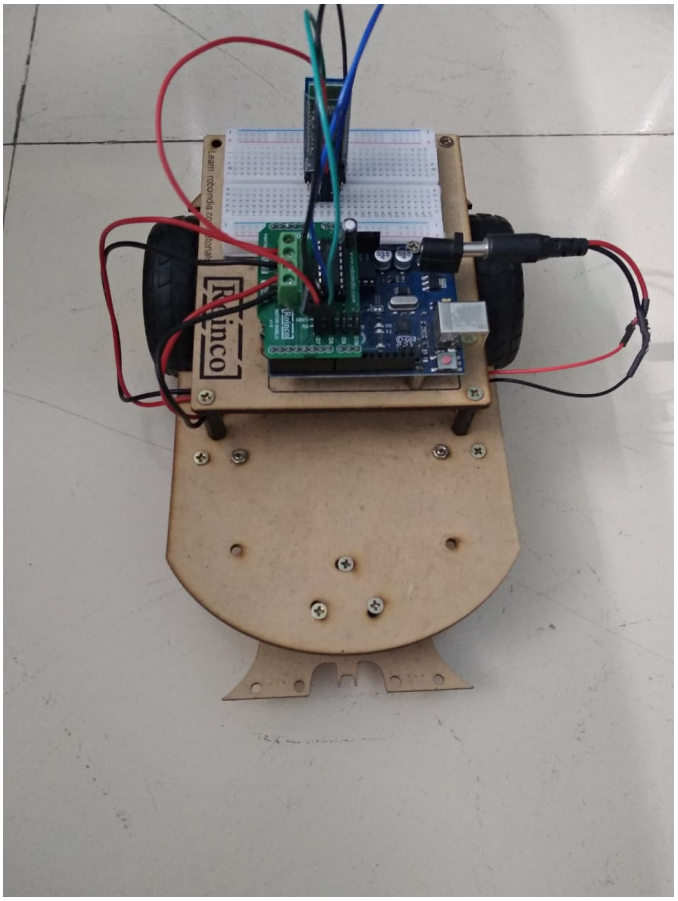

Fig. 1.2: Image 1

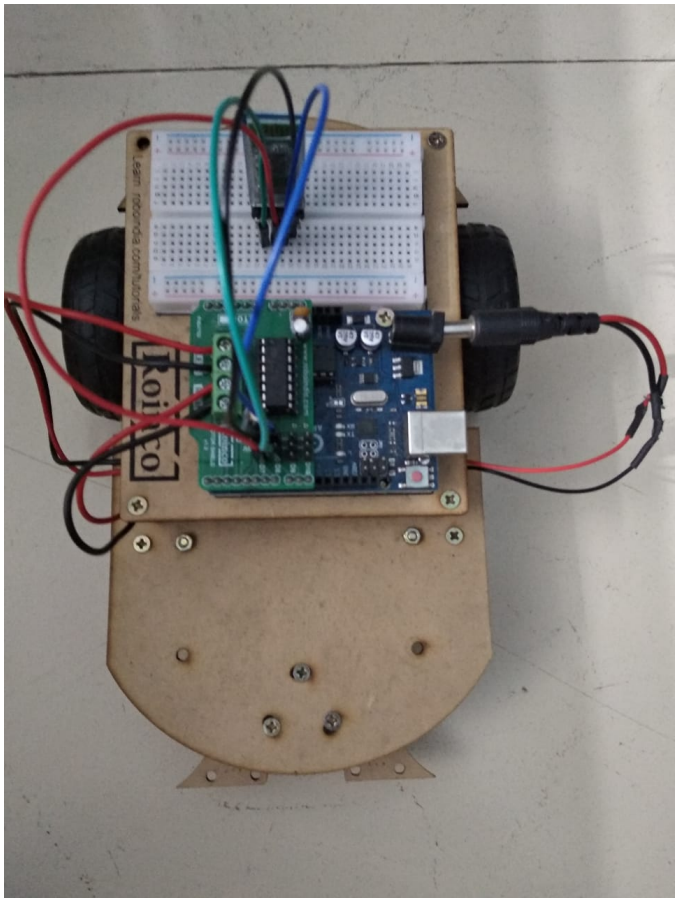

Fig. 1.3: Image2