

SERVING ROBOT

ABSTRACT: -

Service robots assist human beings, typically by performing a job that is dirty, dull, dangerous or repetitive. These robots are operated using Bluetooth. These robots carry out simple tasks such as delivering meals or other items to the table in hotel or to guest rooms.

COMPONENTS REQUIRED: -

1. Arduino UNO
2. Bluetooth module
3. Motor Driver
4. DC Motors
5. Wheels

COMPONENTS EXPLANATION: -

ARDUINO: -

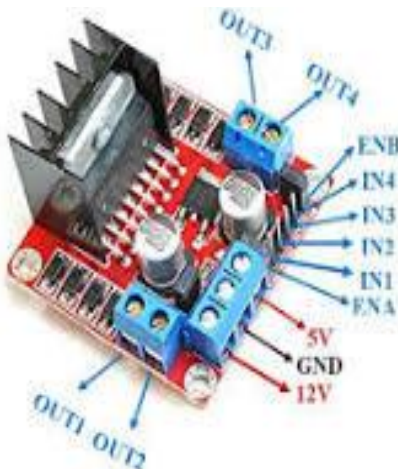
- Arduino is an open – source electronics platform which is easy to use hardware and software.
- Arduino board contains a microcontroller which is able to be programmed to sense and control objects in the physical world.
- By responding to sensors and inputs, the Arduino is able to interact with a large array of outputs such as LEDs, motors and displays.



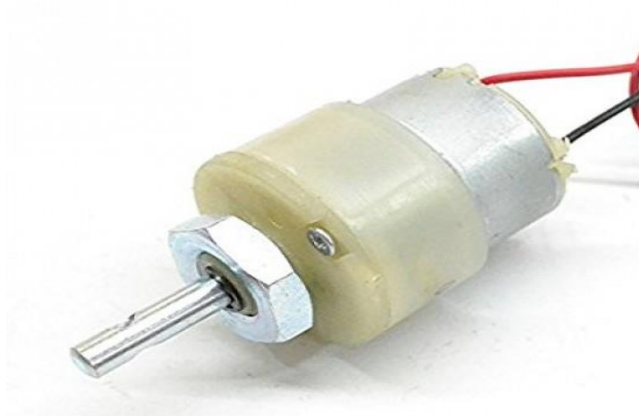
BLUETOOTH MODULE: - HC – 05 is a Bluetooth module which is designed for wireless communication.



MOTOR DRIVER: - The L298N motor driver is a dual H-Bridge motor driver which allows speed and direction control of two DC motors at the same time. The module can drive DC motors that have voltages between 5 and 35V



MOTOR: - An electric motor is a device used to convert electrical energy into mechanical energy.

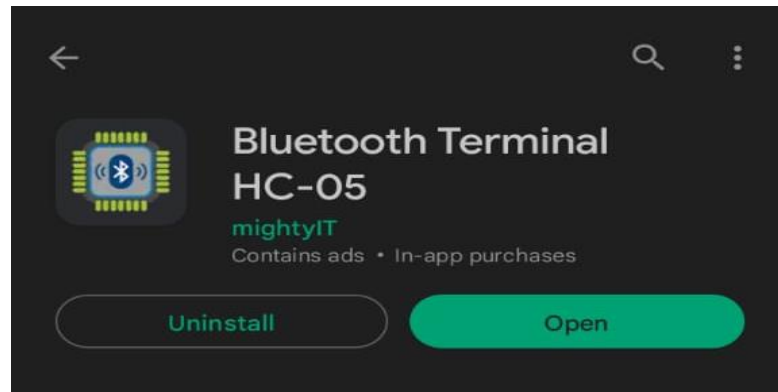


WHEEL: - A wheel is a circular object which turns round on a rod attached to its centre. Wheels are fixed underneath vehicles so that they can move along.

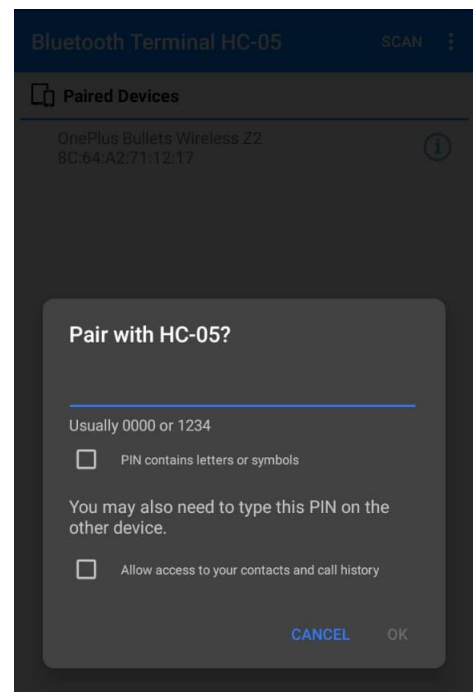
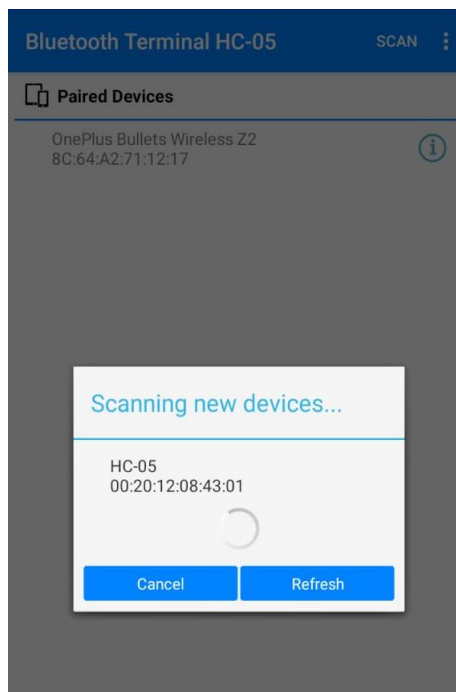


WORKING:-

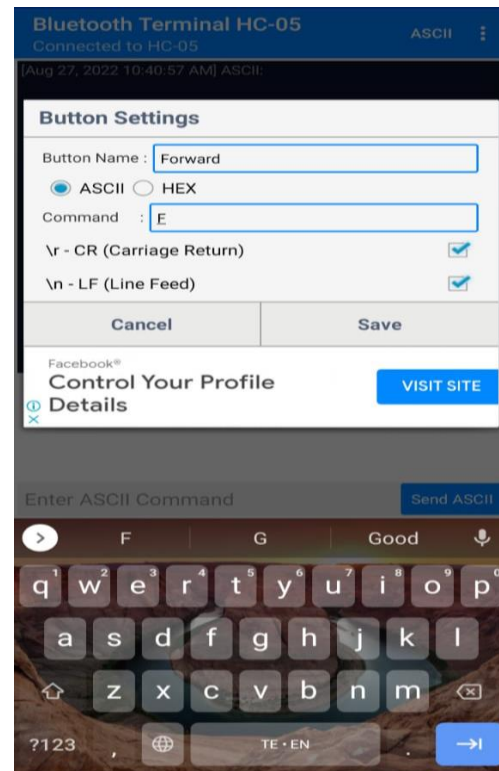
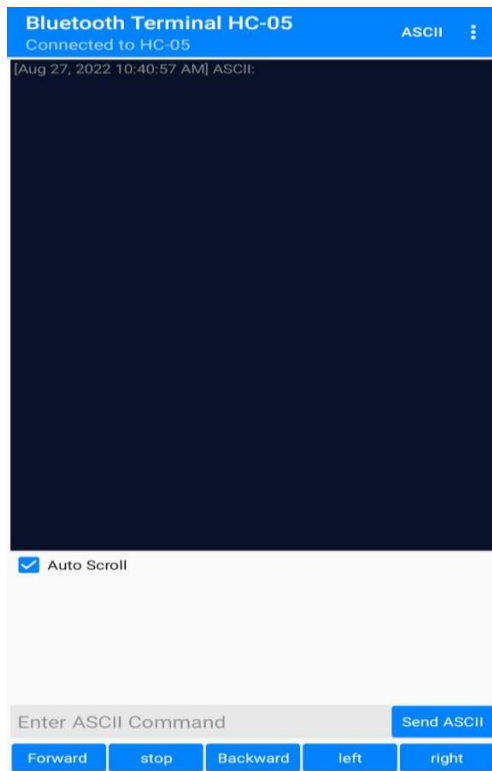
1. Serving robot is controlled by pairing up Bluetooth in your smart phone to Bluetooth module of the robot.
2. To communicate with robot through Bluetooth we have to install an application in your smart phone called **Bluetooth Terminal HC-05**.



3. Turn on the robot and pair up the robot with your smart phone. Open Bluetooth terminal HC-05 app and scan for the devices available and connect your device with name HC-05 and password is 1234 or 0000.

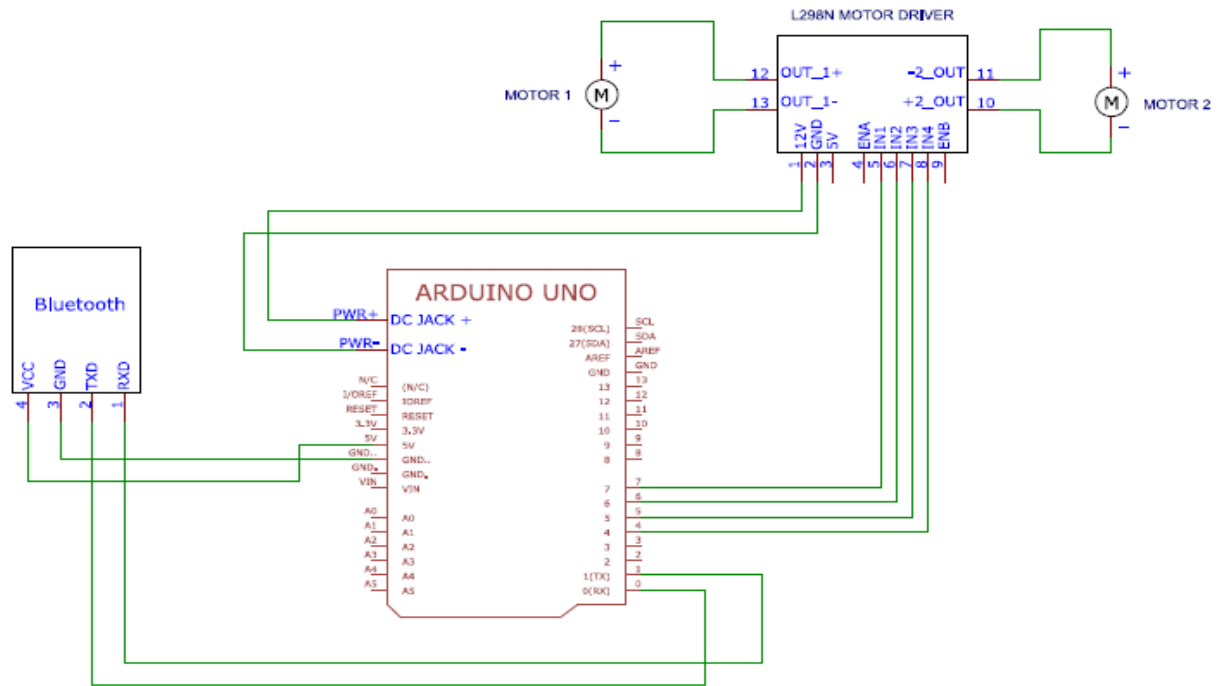


4. Now open the connected device and add buttons FORWARD, BACKWARD, LEFT, RIGHT, STOP to control the robot.



5. Now give the commands and control the robot to easily by seating in one place.

CIRCUIT DIAGRAM:-



ADVANTAGES:-

1. Serving robot is used to serve the food in restaurant, food or medicine to old people or patient in our house etc...
2. During Corona pandemic time we can't go to the person and serve the things physically in that type of cases these robots are every useful.