Weight Carrying Robot

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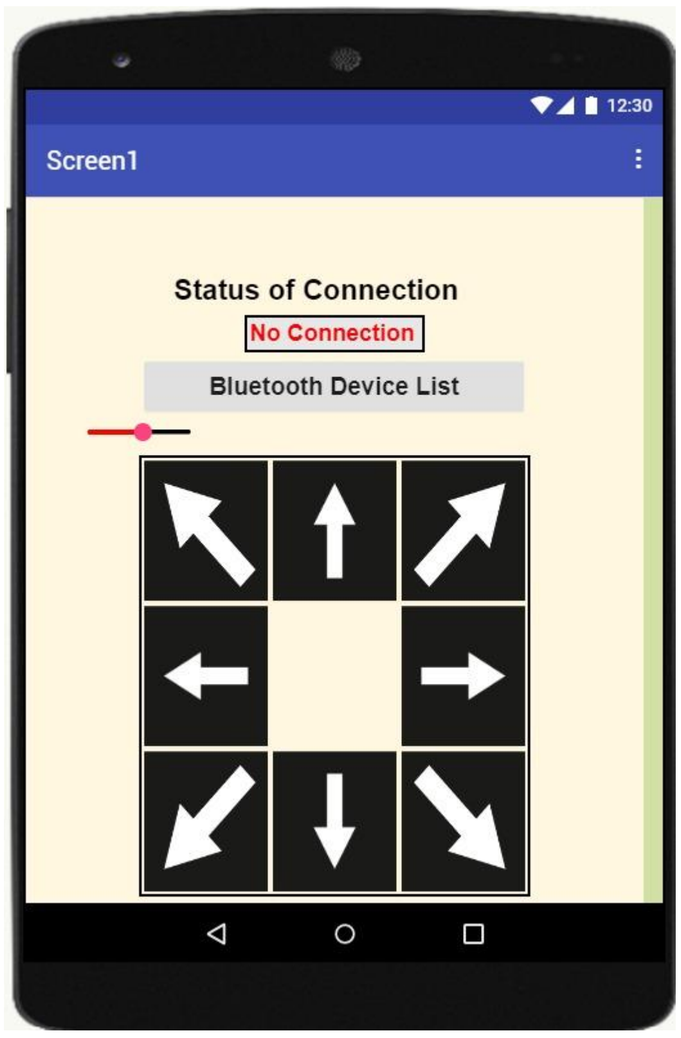
Abstract

We designed a robot capable of carrying a minimum of 15 kg, and we controlled the robot using Bluetooth connectivity with a mobile phone.The robot should be maximum 5 kg.Also robot should be controlled in 4 direction(forward, reverse,right and left).The robot designed in the form of a 4-wheeled truck.The rear wheels facilitate the robot's forward and reverse movement,while the front wheels enable the robot to turn either right or left.



Control signal on the mobile phone

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Bluetooth card receives the signal

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Signal processing with Arduino UNO

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Sending a signal to servo motor and the dc motor driver

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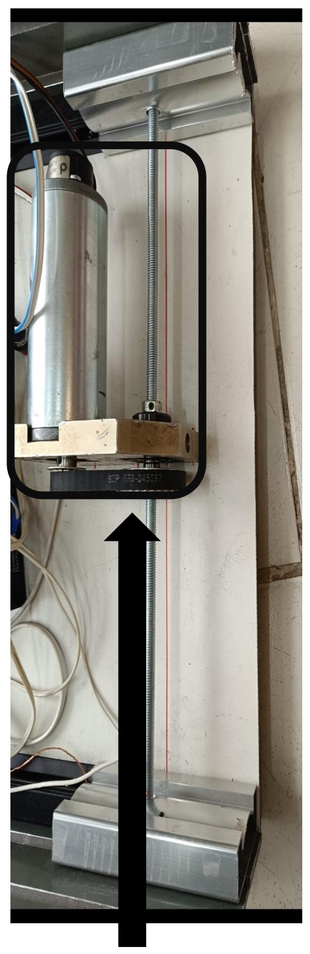
Motor driver gives action to the dc motor and servo motor gives redirect



Servo motor mechanism and DC motor triger mechanism

Main Components of Robot

Conclusion

Weight carrying robots are widely used in industry.The Robot we have designed moves in accordance with the general conditions.We can control the speed of the robot by phone via Bluetooth.The robot has a maximum speed of 30 km/h.The robot can work with the battery for a minimum of 45 minutes.However the weight of the robot exceed the minimum required weight because we used heavy metals in the design.These metals made the robot robust.That's why it has mor weight carrying capacity.For example 40-45 kilograms.

References

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2. **http://www.arduinoproje.com/arduino.aspx (The website include many information of Arduino and programming Arduino)**
3. **https://www.aranacorp.com/en/arduino-and-bluetooth-module-hc-06/ (The information about Arduino bluetooth card (HC-06))**
4. **https://mschoeffler.com/2021/07/17/arduino-tutorial-mg-996r-servo-motor/ (The information about servo motor control with Arduino)**