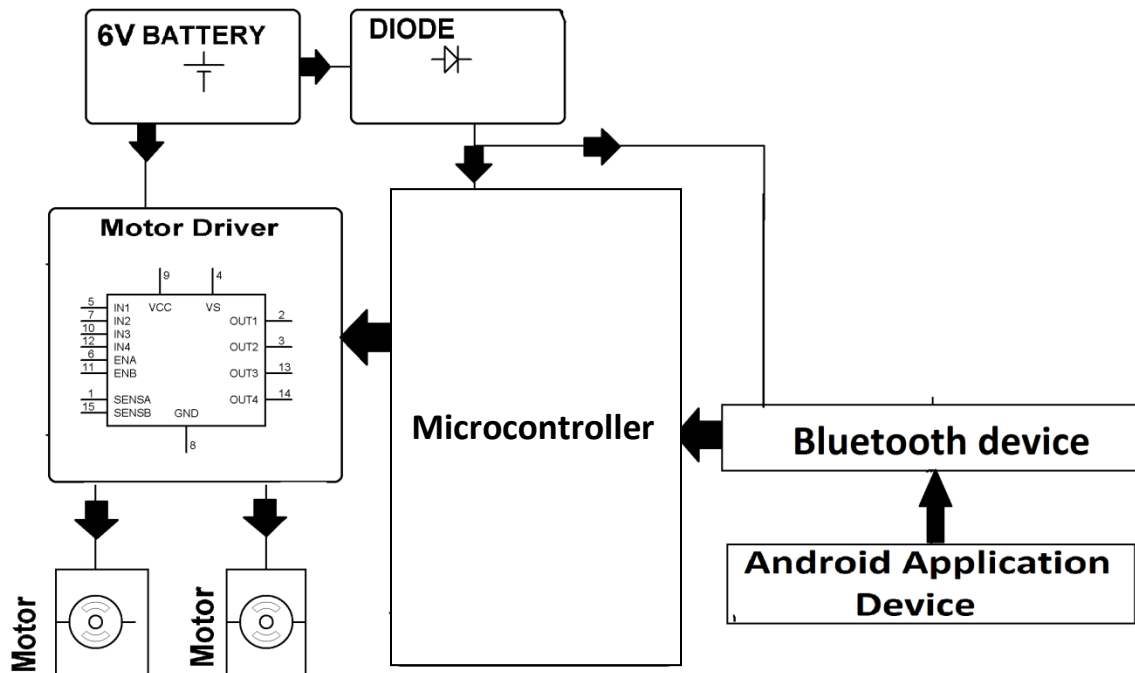


Robotics and Android

Abstract

Our project proposes a robotic vehicle that can be handled remotely through an android based device. The control device is integrated with a Bluetooth device that allows capturing and reading the commands. The robotic vehicle may then be operated as desired as commanded through the android application. The vehicle is integrated with a microcontroller that is used to operate the vehicle as per android commands. The controlling device may be any android based Smartphone/tab etc having an android OS. The android controlling system provides a good interactive GUI that makes it easy for the user to control the vehicle. The transmitter uses an android application required for transmitting the data. The receiver end reads these commands and interprets them into controlling the robotic vehicle. The android device sends commands to move the vehicle in forward, backward, right and left directions. After receiving the commands, the microcontroller then operates the motors in order to move the vehicle in four directions. The communication between android device and receiver is sent as serial communication data. The microcontroller program is designed to move the motors through a motor driver IC as per the commands sent by android device.

Block Diagram:



Hardware Specifications

- AVR 328 Microcontroller
- DC motors
- Motor Driver IC
- Crystal
- Resistors
- Capacitors
- Voltage Regulator
- Battery
- Robot Body
- Bluetooth Device