VOICE CONTROLLED ROBOT BY ANDROID APP

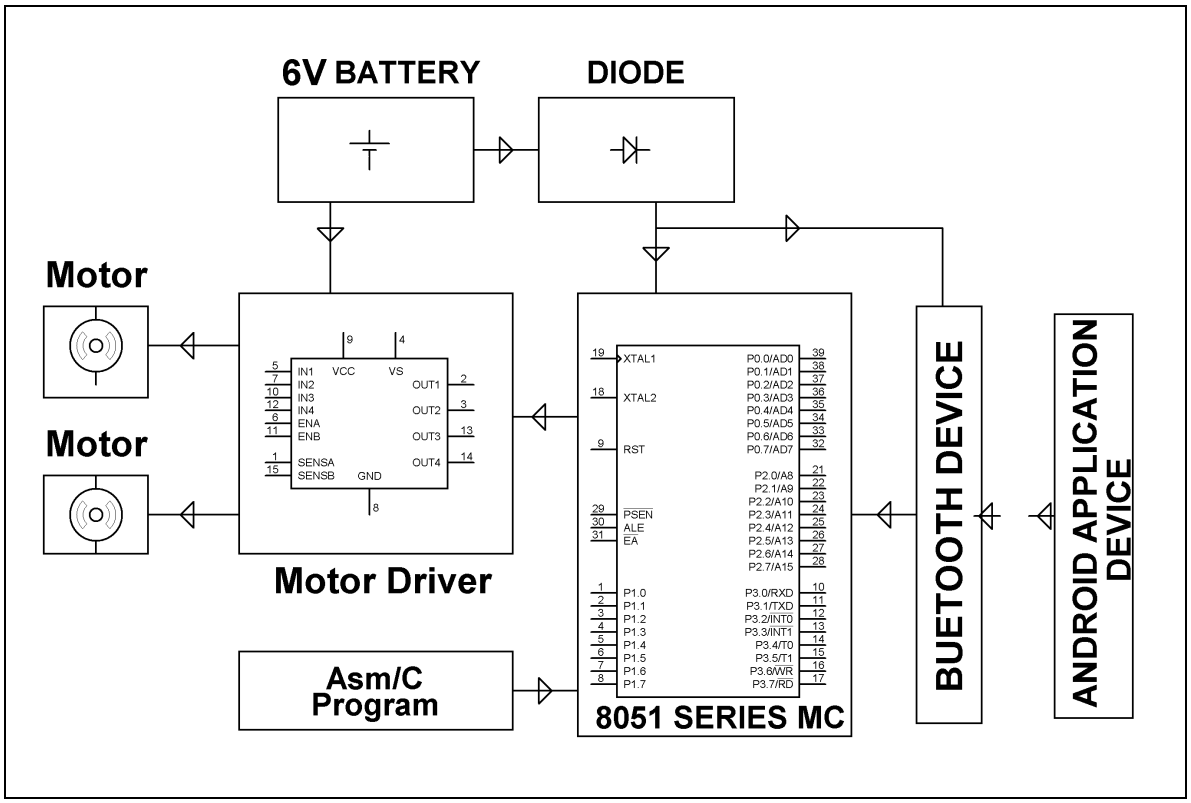
ABSTRACT

The project is designed to control a robotic vehicle by voice commands for remote operation. An 8051 series of microcontroller is used together with a a Bluetooth device interfaced to the control unit for sensing the signals transmitted by any Android application running cell phone.

Remote operation is achieved by any smart-phone/Tablet having Android OS upon a GUI (Graphical User Interface) based voice operation. The transmitting end uses an Android application through which the voice commands are transmitted to digital bits. At the receiver end, these commands are used for controlling the robot to make it move forward, backward, left or right. At the receiving end, two motors are interfaced to the microcontroller where they are used for the movement of the vehicle. Serial communication data sent from the Android application is received by the Bluetooth receiver interfaced to the microcontroller.

Furthermore, this project can be enhanced using DTMF technology. Using this technology we can control the robotic vehicle by using cell phone. This technology has advantages over long communication range as compared to RF technology.

BLOCK DI AGRAM



HARDWARE REQUIREMENTS:

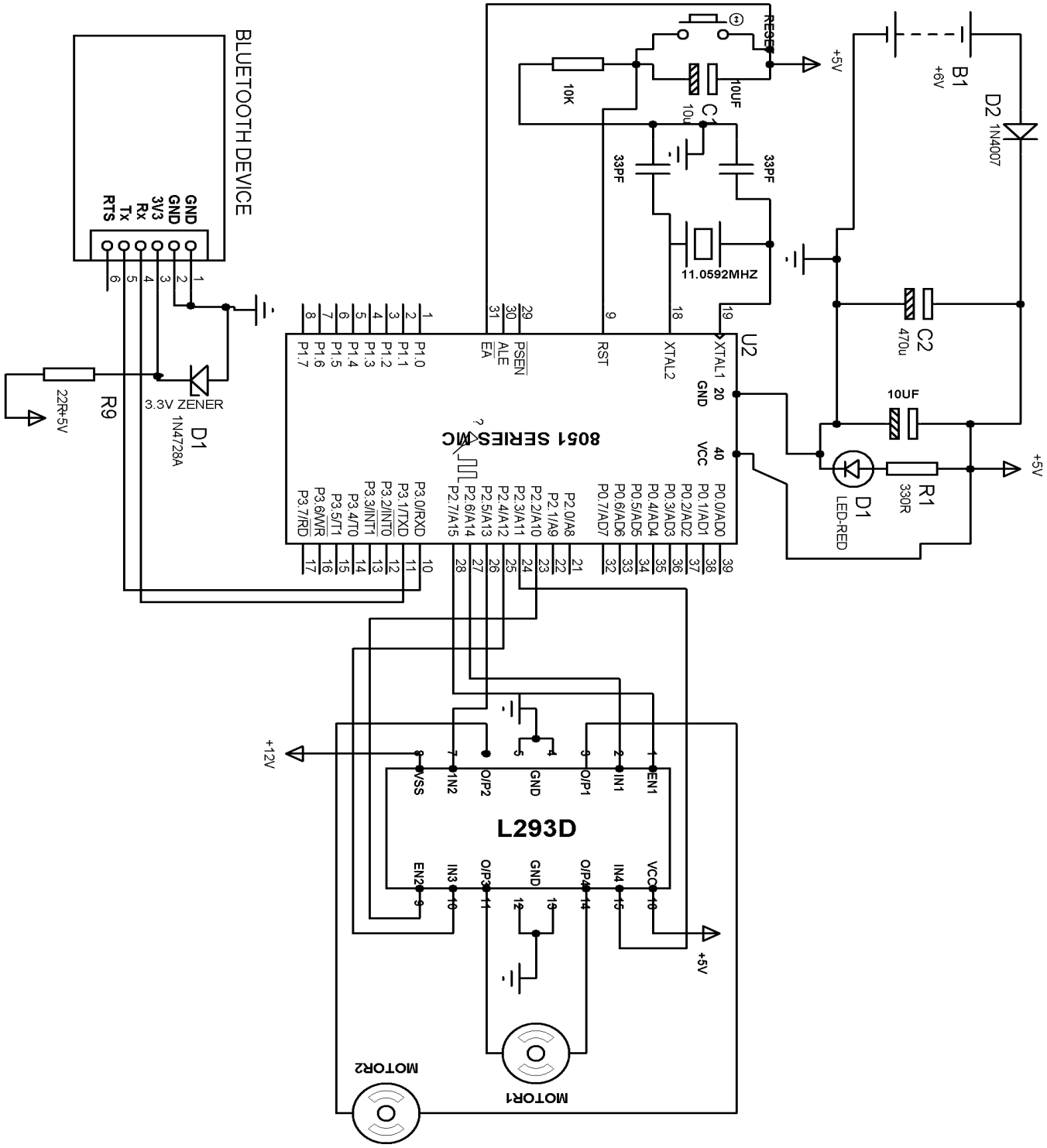
8051 series Microcontroller, Push Button, Bluetooth module, Motor driver IC, DC motors, Resistors, Capacitors, Diodes,
Batteries,

SOFTWARE REQUIREMENTS:

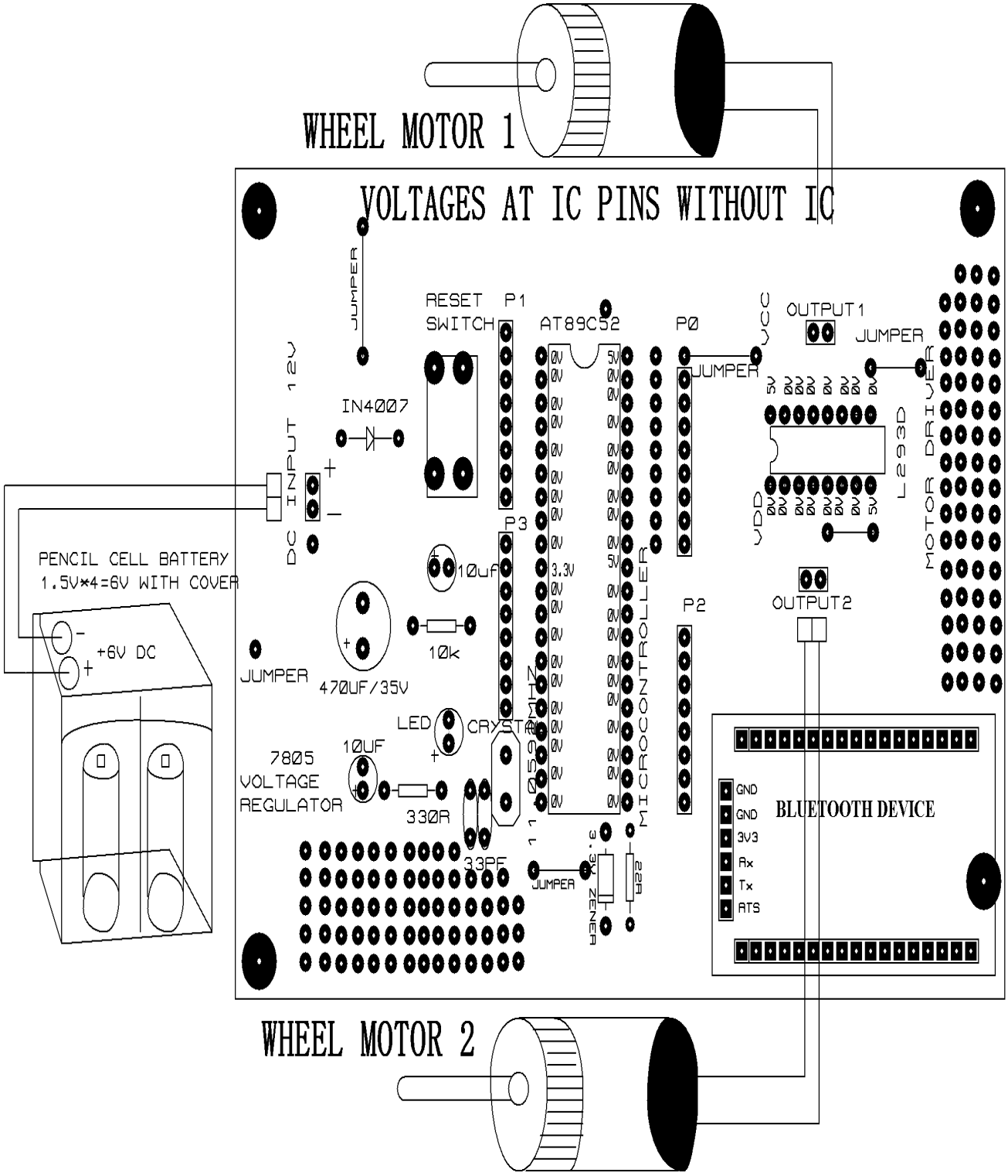
Keil compiler

Languages: Embedded C or Assembly

Circuit diagram



PCB artwork



COMPONENT NAME		QUANTITY
Resistors		
330R		1
10K		1
Capacitors		
10uF/63V		2
33pF Ceramic		2
Integrated Circuits		
AT89S52		1
L293D		1
IC Bases		
40-PIN BASE		1
16-PIN BASE		1
Diodes		
1N4007		1
Miscellaneous		
BLUETOOTH DEVICE		1
CELL CASE		1
PENCIL CELL BATTERY (4 X 1.5V)		4
2-PIN FEMALE RELEMENT ONE SIDE		3
CRYSTAL	11.0592MHz	1
LED-RED		1
4-PIN PUSH BUTTON		1
MALE BURGE	2-PIN	2
MALE RELEMENT	2-PIN	1
FEMALE RELIMENT	4-PIN 1SIDE	1
SAGE BODY (INCLUDING DC MOTORS)		1
ASSEMBLED PCB (WORKING)		1
PLAIN PCB		1
ZERO BOARD		1
SOLDERING IRON		1
CUTTER		1
MULTIMETER		1
SCREW DRIVER		1
SOLDERING LED (50 gm)		
CONNECTING WIRE		
RIBBON WIRE FOR ZEROBOARD		
ASSEMBLY PROCEDURE MANUAL		1
SCREW NUT SET		
SPST SWITCH (ON/OFF)		1
CASTOR BALL		1
104 pF		2
Z-Clamps		2

For complete synopsis, weekly reports, source code, black books
Please mail your complete details on support@makeitortakeit.in
We will mail you within 24hours from the time you mail us.

Name of the student & phone number
PROJECT NAME

Group member1 Group member 3

Group member 2 Group member 4

Group member 5

College name Branch

Note to make your kit /project

You need basic knowledge & logic of components /soldering /disordering /breadboard circuiting/PCB designing/etching.

1. You can download the projects from our website makeitortakeit.in and get started to build one, we help you with the basics of know & how.
2. You can purchase the complete do it yourself kit & assemble it.
3. At the last moment, If you are short on time /if your project is not giving output!!!!!! Readymade project kit is available.
4. **Training (optional)** available if you want us to help u in your projects, it includes.
    - 7 sessions, (timing mutually decided).
    - hands on training on breadboard circuiting ,soldering,desoldering,pcb making ,how to use instruments
    - Stepwise guidance you build your project right from the scratch **.
    - complete documentation/references(hard & soft copy)
    - Plotting and Implementing Scale Model.
    - Troubleshooting.
    - Programming of Controllers
    - PCB Software tool, Hardware Cutting, Drilling and Etching