**ANDROID BASED SENSOR PARAMETER MONITORING ROBOT**

Robot is a system that contains sensors, control systems, manipulators, power supplies and software all working together to perform a task. Designing, building, programming and testing a robot is a combination of physics, mechanical engineering, electrical engineering, structural engineering, mathematics and computing .

The Ultrasonic sensor is arranged on the Robot. It is used to measure distance of an obstacle in front of the sensor. The sensor is interfaced with ATMEGA328 microcontroller which processes data and controls robot movements through L293d motor driver circuit. The dc motors are interfaced with the L293d circuit. The temperature sensor LM35 is used which is connected to in built ADC channel of controller.

The robot is controlled by android phone remotely. The robot also sends status of

Its movements such as forward, backward, left, right, stop, temperature, distance of an obstacle from object to android phone using proper commands. The same status is also shown on 16X2 LCD Display.

**Software:**

* ARDUINO IDE
* EMBDDED CPP CODE
* PROTEUS SIMULATOR

**Hardware Tools:**

1. ATMEGA328 Microcontroller
2. Ultrasonic Sensor HC-05
3. LM35 Temp Sensor
4. Bluetooth Module
5. 16X2 LCD Display
6. DC motors and L293D Motor Driver.
7. 12V Rechargeable Battery

**Block Diagram:**

 Arduino UNO

 ( ATMEGA328 )

16X2 LCD DISPLAY

Ultrasonic Sensor HC-05

DC MOTORS

L293D MOTOR DRIVER

LM35

TEMP SENSOR

BLUETOOTH MODULE



REGULATED POWER SUPPLY