ALCOHOL SENSING ALERT WITH ENGINE LOCKING PROJECT

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PROBLEM STATEMENT

Drunk driving is a criminal offence and it is a leading cause of deaths in India. This project aims to solve this problem by constantly analysing the driver's breath and locking the engine if he is drunk.This will save many damages to life and property that happen because of car crashes in usual cases of drunk driving.

MATERIALS USED

- Alcohol sensor (MQ-3)
- Arduino
- Bluetooth (HC-05)
- DC Motor
- LCD Display
- Mobile phone used as GPS
- Buzzer
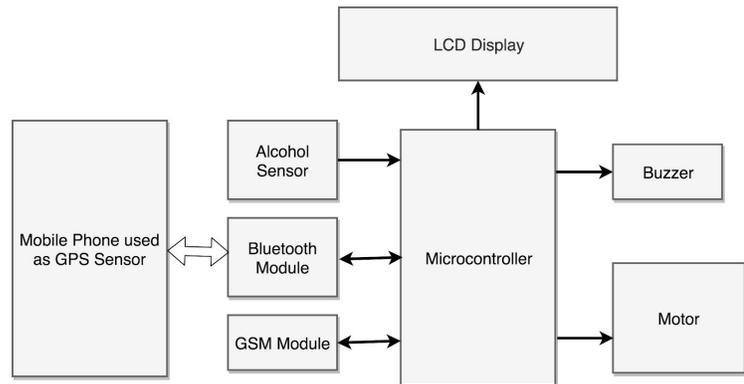
BLOCK DIAGRAM

ALCOHOL SENSING INFORMATION

We will use the inbuilt ADC to convert our analog output to digital to give a digitised reading upto 1000 . Then after suitable calibration using the resistor values we will calibrate the device for the threshold limit of 0.04% BAC.The BAC values will be mapped and after a certain value(to be calculated based on the power and resistors) is reached the output will become high (sensing alert level of BAC).

SYSTEM OVERVIEW

MQ3	Arduino
Vcc	5V
GND	GND
A(i/o)	A0(analog in pins)
D(i/o)	pin8

Motor	Arduino
GND	GND
Pin2	Pin2

(I/O Board) Buzzer	Arduino
Vcc	5V
GND	GND
D(i/o)	pin3

GSM Board	Arduino
Tx	Rx-2
Rx	Tx-2
GND	GND

IMPLEMENTATION

This is the design of our bot . All the connections and circuits for driving the bot have been done on the lower board. All the connections for sending data , sensing the presence of alcohol have been done on the upper board
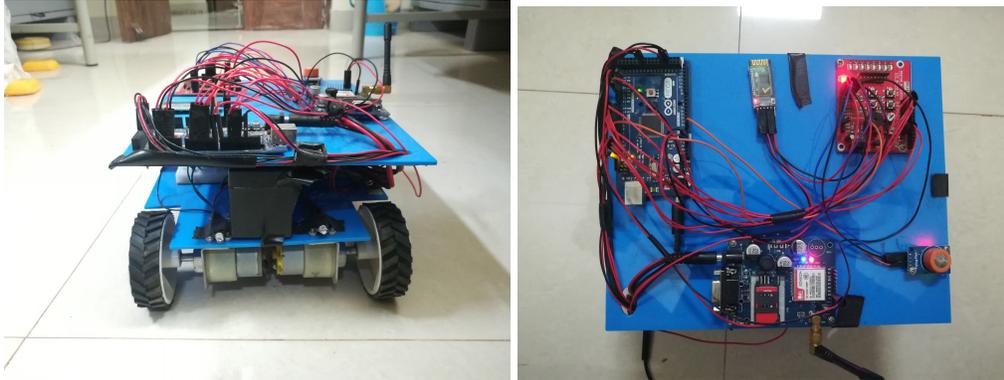
CODING

1.Use mobile phone as GPS sensor which sends location via Bluetooth to RMN.
2.Send message to Registered Mobile Number through GSM module.
3.LCD display will display message if person is drunk more than threshold limit.
4.If the driver is already drunk then the car will not start.
4.Buzzer will signal the driver that you have 30 seconds to steer the car on roadside.

TASK COMPLETED SO FAR

1. The complete code for the operation has been written and tested.
2. The model car for simulating the real situation has been made. It will be controlled by an app.
3. The app for sending GPS data to arduino using mobile phone has been made.
4. All the circuit connections have been made and tested.

CONCLUSION

We have implemented the sensing alert system on a small electric car and the results have been successful.This system can be implemented in the cars easily and will save a lot of damage to life and property due to drunk driving.