ALCOHOL SENSING WITH ENGINE LOCKING AND ALERT MESSAGE PROJECT

Instructions for use:

1. Power up the car. This will provide power to the circuit. The code has already been uploaded to the Arduino board.
2. Connect the GPS app designed to provide the location information using any android phone to the Bluetooth module connected to the Arduino board.
3. The system is now activated. Make sure that a sim card is inserted in the GSM module for sending message.
4. The car will start moving now. To check the operation of the car, now increase the level of alcohol around the MQ-3 sensor.
5. The level of alcohol can be seen on the LCD display in the range of 0-1023. The MQ-3 sensor's analog output is mapped in the range 0-1023.
6. The LCD is connected to the I/O board. When the alcohol level reaches above 725 units, the buzzer on the I/O board goes high displaying the alert message on the LCD display. The red LED's in front of the car turn red indicating high level of alcohol consumption which can also act as an indicator to other cars passing by that the driver is drunk.
7. 30 seconds after the buzzer sounds the car stops and comes to a rest. This feature has been implemented to give the driver some time to steer the car off the roadside.
8. At the same time, a message containing the location of the driver is sent to the registered mobile number indicating that the driver is drunk and needs immediate help.

GPS App:

The app has been made using MIT App Inventor. It uses the GPS sensor of the android phone to send the location information to the registered mobile number.

A GPS sensor can also be used as an alternative to the android phone and app.

Code:

The code disables the motor drivers of both left side and right side using the micro-controller. By default both the drivers are set as high.

The car is set in circular motion to demonstrate the effect of high alcohol level.