### *****Drink* *and* *Drive* *Preventer*****

*Instructor Students*

### ***Dr. Pravin G. Gawande Yash Dattu Patil Gaurav Yogesh Khole Sayali Raju Rathod***

*Department of E&Tc B. Tech in E &Tc B. Tech In E& Tc B. Tech In E& Tc*

*Vishwakarma institute of Vishwakarma Institute Of Vishwakarma Institute Of Vishwakarma Institute Of Information & Technology Information & Technology Information & Technology Information & Technology*

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[*Pravin.gawande@viit.ac.in*](mailto:Pravin.gawande@viit.ac.in%20%20%20m) [*yash.22220163@viit.ac.in*](mailto:yash.22220163@viit.ac.in) *gaurav.22220147@viit.ac.in sayali.22220168@viit.ac.in*

### ***ABSTRACT***

*The system provides a distinctive method to catch having drunk alcohol. The system has an Mq-3 sensor which detects alcohol. It is easy to detect alcohol. Alcohol detection system contingent on emit breath analysis has been created using microcontroller. The system consists of a MQ-3 sensor, a Microcontroller to manage the sensor unit and communicate data, and a data cloud system.*

*KEY-WORD: - Microcontroller 89s52, LCD, MQ-3 Gas Sensor, Buzzer.*

**INTRODUCTION**

An alcohol detector the usage of 89s52 is a tool this is designed to locate the presence of alcohol inside the breath of a person. it works by means of measuring the level of alcohol within the breath sample and supplying A demonstration of whether or not the character has drunk up alcohol or no longer.

### **The 89s52 microcontroller for developing alcohol detectors due to its low strength consumption, cost-effectiveness, and ease of use. The device typically includes a sensor that detects the presence of alcohol, the digital output of sensor fed to the microcontroller. The running principle of an alcohol detector using 89s52 includes using a sensor inclusive of a metallic-oxide-semiconductor (MOS) sensor or a semiconductor sensor. The sensor reacts with the alcohol in the breath sample and produces a virtual sign that is proportional to the awareness of alcohol. The digital output of the sensor is virtual sign. The microcontroller then compares the virtual signal with a predetermined threshold stage and affords an output indicating whether the character has ate up alcohol or not.**

### **The output of the alcohol detector can be provided in various forms such as a LCD display, or a buzzer. The device can be calibrated to suit different alcohol concentration levels depending on the requirement. Additionally, the device can be interfaced with other systems such as vehicle ignition systems to prevent drunk driving or access control systems to prevent entry into restricted areas. Overall, an alcohol detector using 89s52 is a simple yet effective device that can be used in a variety of applications to detect the presence of alcohol in the breath of a person.**

### ****LITERATURE SURVEY****

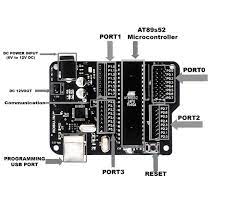
### ****Components Required: -****

### Microcontroller

1. Liquid Crystal Display (LCD)
2. MQ-3 Sensor
3. Connecting Cables

**Microcontroller 8051 : The ATmega89S52 is a low-power and high-performance, 8-bit Complementary Metal-Oxide Semiconductor technology microcontroller that uses high density and non-volatile memory technology and has pinout and training set compatibility with the widely used 80C51.**  selectable electricity saving modes.8kilobytes of In-gadget Programmable (ISP) Flash memory, 10k Write or Erase Cycles patience various electricity-saving options. In-gadget Programmable (ISP) 8 kilobytes Flash memory, 100% static operation, 10,000 Write/Erase Cycles Patience 0Hertz to 33MHertz

Memory Lock with 3 stages



32 programmable Input or Output lines, 3 16-bit Timer or Counters, 256 x 8-bit inner RAM; and 8 interrupt sources, Duplex UART Serial Channel in its entirety Power down modes include low energy idle and interruption-based power down modes. It has a power-off flag, a dual information pointer, a watch-dog timer, and speedy programming time.

**Liquid Crystal Display (LCD): -**

* Works on 4.7V to 5.3V
* Requirement of current 1mA
* It show on display numbers and characters
* Characters support
* It has 8-bit mode and 4-bit Mode

**MQ Sensor: - Sensing material: The MQ-3 sensor makes use of a tin dioxide (SnO2) semiconductor fuel sensing cloth.Detection variety: The MQ-three sensor is able to detecting alcohol vapour in the range of 25 to 500 ppm (elements in step with million). Sensitivity: The sensitivity of the MQ-3 sensor is usually round 1.5% for a 100ppm concentration of alcohol vapour.Response Time: The reaction time of the MQ-sensor is commonly round 10 seconds. running Temperature range: The MQ-three sensor can function in a temperature variety of -10°C to +50°C.Lifespan: The MQ-3 sensor has a standard lifespan of around five years.**

**WORKING PRINCIPLE: -**

**MQ-three Sensor The MQ-three sensor is a fuel sensor that is touchy to alcohol vapor. whilst a character exhales, alcohol vapor is detected through the sensor, which then produces a virtual voltage sign proportional to the attention of alcohol.**

### **.**

### **Actual Circuit**

**8051 Microcontroller The 8051 microcontroller is the brain of the device that controls and tactics the alerts from the sensor. The virtual voltage signal from the MQ-three sensor is fed to the enter of the 8051microcontroller. Buzzer The buzzer is used to provide an audible alert when the alcohol pay attention threshold level. The buzzer is controlled with the aid of the 8051 Microcontroller. And 9volt battery provides deliver to the microcontroller and microcontroller offer the electricity to the other gadgets that are connected to the microcontroller.**

APPLICATION

place of job safety: An alcohol detector can be used in offices wherein personnel function heavy equipment or carry out other risky responsibilities. The device can make sure that personnel are not intoxicated and decrease the danger of injuries.

Public safety: Alcohol detectors can be hooked up in public locations along with bars, clubs, and eating places to save you intoxicated individuals from causing disturbances or engaging in violent conduct.

private protection: people can use alcohol detectors to reveal their very own blood alcohol stage and make accountable decisions approximately whether or not or not to pressure, function equipment, or engage in different activities that require alertness and coordination.

clinical use: Alcohol detectors can be used in clinical settings to monitor patients with alcohol dependency or to make sure that patients taking sure medications do not devour alcohol.

**RESULTS**

The sensor detect the breath if anyone is drunk then it sends a signal to the microcontroller and microcontroller through send a signal to LCD and display shows ‘ALCOHOL DETECTED’ and this the result of our gadget.

### ****ADVANTAGE****

### **improved protection: Alcohol detectors can assist enhance protection in various settings by means of alerting people to the presence of alcohol. as an instance, alcohol detectors can be utilized in motors to prevent drunk driving or in places of work to prevent injuries because of impaired employees.Non-Invasive: Alcohol detectors are non-invasive and do not require a blood sample or other invasive checks. as a substitute, they use a breath sample to detect alcohol tiers.quick outcomes: Alcohol detectors provide quick consequences, allowing people to determine their alcohol degrees in a count of seconds.value-effective: Alcohol detectors are particularly less expensive and can be bought for personal or expert use at an low cost fee.Accuracy: contemporary alcohol detectors are relatively correct and can locate even low ranges of alcohol. This makes them a reliable tool for detecting alcohol use in numerous settings.Deterrent: The mere presence of an alcohol detector can function a deterrent, discouraging people from drinking alcohol in where it isn't allowed.**

### ****DISADVANTAGE****

### **Which device have benefit they also have disadvantage also**

### **Calibration: Alcohol detectors require calibration to keep accuracy over the years. Calibration may be important periodically or after exposure to excessive temperatures or different environmental elements.**

### **constrained range: Alcohol detectors may also have a confined detection range, that means they may now not be capable of stumble on low ranges of alcohol or high stages of alcohol beyond a certain factor.**

### **tool Malfunction: like all electronic tool, alcohol detectors can malfunction and produce faulty results. this will be because of different factors, inclusive of battery failure, sensor malfunction, or software errors.**

### **privateness issues: Alcohol detectors may also improve privateness worries if used in positive settings, such as offices or public areas, where people may sense that their non-public data is being gathered or monitored.**

### **Dependence: depending too heavily on an alcohol detector to make choices about whether or not to pressure or perform other sports can create a fake experience of protection and cause over-reliance at the tool rather than responsible selection-making.**

### ****CONCLUSION****

**Alcohol detectors can be a valuable tool in improving protection and stopping accidents caused by impaired people. They provide numerous advantages, together with non-invasive checking out, quick outcomes, accuracy, and affordability. But alcohol detectors also have some capacity disadvantages, which include false positives, calibration necessities, constrained detection range, device malfunctions, privateness issues, and over-reliance. therefore, when considering the use of alcohol detectors, it's far vital to cautiously weigh the advantages and drawbacks and use them as a part of a broader method to selling responsible selection-making and stopping alcohol-associated injuries.**

**FUTURE ENHANCEMENT**

We use GSM module in this project to send msg on mobile phone and we also fit in car to check alcohol level of driver at that time alcohol is found out , the system make a voice alert and a information alert on the mobile or any other system.

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