# Safe and Smart Driving System

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***Abstract: Street offices are real worry in the created territories. Late investigation demonstrates that about 60% of roadway mishaps are because of uninformed about the guide, obviousness of driver and so forth. A considerable lot of us face troubles in opening/bolting the vehicle as a result of effectively accessible copy keys. These issues have been tended to in this paper and could be kept away from by advising drivers about beating street work zone. Rising innovations seems to give quicker, more secure and increasingly solid correspondence methods. The point of this paper is to manufacture a dependable driving framework for street foundation to vehicle correspondence, which can transmit the data given by dynamic sign set making progress toward avoid impact. There are various types of techniques to help drivers, for example, GMS, GPS, ZigBee and so on., one of those strategies is Transceiver. Smashed driving is a noteworthy reason of mishaps in practically all nations and everywhere throughout the world. Liquor finder in vehicles is executed for the wellbeing of the individuals for sitting inside the vehicle. Just having a key, vehicle isn't verified due to duplication of keys. Thus, to have security, in this framework secret phrase is given along the key utilizing HC-05 Bluetooth innovation and advanced mobile phone.***

***Keywords: Driving System, Smart, GPS and ZigBee***

## INTRODUCTION

The advancement of the new advances in the field of car hardware has acquired enormous changes the everyday existence of each individual[1]. The driver help framework are intended to help driver with driving procedure so as to maintain a strategic distance from mishaps which empower different client to be better educated and makes more secure, increasingly planned and more brilliant utilization of vehicle systems. In this paper Vehicle to Roadside unit correspondence has been tended to. All the data is gathered and handled to offer valuable administrations, for example, wellbeing and security, with the assistance of Transceivers for the remote correspondence[2]–[5].

## OBJECTIVES

- The goal of our venture is to anticipate the danger of mishap or harsh treatment of vehicle which may happen because of ill-advised thought regarding the roadi.e. profound bends, intersections, restricted extensions and so on.
- It additionally anticipates the danger of mishaps because of utilization of high liquor by driver.
- It likewise alarms different vehicles by enacting the vehicle markers during killing the vehicle.
- Apart from street data the venture is additionally useful to keep up security for example it's simpler to bolt the vehicle through wireless [Android]. Client may likewise control the start unit of the vehicle through mobile phone [Android][6].

## METHODOLOGY

- Our undertaking depends on for the most part two innovations i.e Bluetooth and the handset. The primary segments are 16F877A PIC controller, the MCQ-3 liquor finder and Liquid gem show (LCD 16*2).The 16F877A PIC controller is 40 stick IC. It is utilized to control and process every one of the elements of circuit given by client directions. This controller is utilized in light of the fact that it is wealthy in peripherals, reprogrammable, low influence utilization. It is likewise simple to program[4].
- LCD (Liquid Crystal Display) screen is an electronic showcase module and locate a wide scope of utilizations. These modules are favored more than seven sections and other multi fragment LEDs. These are favored in light of the fact that LCDs are practical, effectively programmable, have no confinement of showing exceptional and even custom characters, activitys, etc.
- The principle point of the framework is to have a correspondence between Roadside Unit (RSU) and On-Board Unit (OBU).The OBU has a Bluetooth module (Bluetooth, a remote innovation standard, trade information over short removes UHF radio waves in the ISM band from 2.4 GHz to 2.485GHzfrom fixed and cell phones to fabricate Personal Area Networks) through which we can accomplish security by giving secret phrase utilizing cellphone (android) to control the vehicle. The vehicle will be turned on just when suitable secret key is given. This activity is demonstrated by the bell and furthermore utilizing LCD with proper messages[7].
- The MQ-3 sensor is a liquor locator which detects the abnormal state of liquor devoured by driver. On the off chance that the liquor level is high, it cautions the driver by utilizing bell. After some postpone vehicle will be consequently killed. During killing it will enacts the vehicle markers alongside ringer which alarms other vehicle drivers.
- The handset (HC-12) is utilized in RSU just as in OBU. HC-12 remote sequential port correspondence module is another age multichannel inserted remote information transmission module. It is utilized for long separation remote transmission which works in the range 800m to 1km. Its remote working recurrence band is 433.4-473.0MHz.It gives all the street related data, for example, profound bends [left/right], spans, intersections, touchy zones like school, medical clinic, protection region and so on to the handset module put on OBU which illuminates the driver utilizing signal and LCD[8].

The term PIC represents Peripheral Interfaces Controller. This gadget was initially plan for use in application with 16-piece chip, PC fringe, remote control transmitters, household items and car frameworks. [4] The PIC16F877A has highlights, for example, 256 bytes of EEPROM information memory, wealthy in peripherals, self-programming, an ICD (In Circuit Debug) through two pins, guard dog clock (WDT) with its own on chip RC oscillator for solid activity, low influence, fast streak/EEPROM innovation[9], wide working voltage run (2.0V to 5.5V), synchronous sequential port (SSP) with SPI (ace mode) and I2C (ace slave) and inbuilt ADC. A straightforward microcontroller comprise of following modules in a math and coherent unit (ALU), at least one registers adversary impermanent capacity during calculation, program memory, information memory, program counter, guidance enrols, the control unit and stack[10]–[14].

## CONCLUSION

The street related data issue can be overwhelmed by GSM, GPS, ZigBee, Bluetooth and so forth. In any case, GSM and GPS has a few restrictions in remote zones, though ZigBee and Bluetooth has range and hub issue so Transceivers is better alternative for execution of this framework along these lines the issue of ignorance of street related data is tended to. High Alcohol utilization issue is tended to by identifying liquor and cautioning the driver. Additionally security has been tended to by giving client characterized secret phrase. This framework is appropriate to all at present accessible vehicles.

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