VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELAGAVI - 590014

PROJECT WORK PHASE-I REPORT (17ECP78)

ON

"Accident Alert and Vehicle Tracking System using GPS and GSM"

Submitted in partial fulfillment of the requirements for the award of the degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS AND COMMUNICATION ENGINEERING

Submitted by

NAGA NIKHIL P	**(1MV17EC071)**
K C SAI SRUJAN REDDY	**(1MV17EC048)**
B HARSHA VARDHAN	**(1MV17EC027)**

Under the guidance of

Mrs. RAJESHWARI K N

Assistant Professor

Department of Electronics and Communication Engineering

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY

Krishnadevarayanagar, Hunasamaranahalli, Bangalore -562157

January 2022

SIR M.VISVESVARAYA INSTITUTE OF TECHNOLOGY

Department of Electronics and Communication

CERTIFICATE

This is to certify that the project entitled **"Accident Alert and Vehicle Tracking System using GPS and GSM"** is a bonafide work carried out by **NAGA NIKHIL P (1MV17EC071) , K C SAI SRUJAN REDDY (1MV17EC048) , B HARSHA VARDHAN (1MV17EC027)** of Sir M. Visvesvaraya Institute of Technology, Bangalore, in partial fulfillment for the award of degree of Bachelor of Engineering in Electronics and Communication of the Visvesvaraya Technological University, Belagavi during the academic year 2021-2022. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report. The project report has been approved as it satisfies the academic requirements in respect of Project work Phase – I (17ECP78) prescribed for Bachelor of Engineering degree.

Mrs.RAJESHWARI K N	**Dr.R SUNDARAGURU**	**Dr.V R MANJUNATH**
Dept. of ECE	Dept. of ECE	Principal
Sir MVIT, Bengaluru	Sir MVIT, Bengaluru	Sir MVIT,Bengaluru

Name of Examiners

1…….

2……. Signature with Date

ACKNOWLEDGEMENT

We would like to express our sincere gratitude to **Mrs.RAJESHWARI K N** Assistant professor Sir MVIT for his valuable guidance, support, inputs whilst guiding us through the project.

We would like to express our gratitude and thanks to **SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY** for providing an opportunity for fulfilling our most cherished desire of reaching our goals and thus helping to pave a bright career for us.

We would like to sincerely thank **Dr. R SUNDARAGURU** Department of Electronics And Communication Engineering, Sir MVIT, for his encouragement and support.

We would like to extend our sincere gratitude and thanks to the management and to **Dr. V R MANJUNATH**, Principal Sir MVIT for providing us with a congenial environment to work in.

We also thank all the faculty members and technical staff of the Department of Electronics And Communication Engineering for their continued support, guidance and in helping us successfully complete our project.

NAGA NIKHIL P

K C SAI SRUJAN REDDY

B HARSHA VARDHAN

ABSTRACT

After all the elements are connected properly, the framework is placed into a moving automotive. If an associate degree accident happens, the accident thanks to the acceleration that occurred is detected by the ADXL335 measuring instrument. The x, y and coordinate axis ADC output pins of the measuring instrument are directly associated with Arduino ADC pin A1, A2, and A3.After effective transcription and uploading the program to Arduino IDE, the system is instated with success, the measuring device is aligned and also the x , y and z samples of the vehicle area unit are shown on the serial monitor. After receiving the GPS signal, the latitude and longitude of the current position of the vehicle are displayed,The speed is displayed in knots . When the measuring system is agitated abnormally, i.e., within the event of AN accident once there's a sudden distinction in a pivot, SMS is shipped to the mobile range documented within the code and therefore the latitude and line of longitude is additionally sent as Google maps. The message is received within the preset mobile range beside the particular space. The Alcohol Sensor(MQ3 Sensor) which is placed inside the car detects the breath of the driver , if it detects any alcohol smell from the driver the sensor immediately alarms the sensor so that the driver can stop the vehicle to avoid the accident that might occur.

TABLE OF CONTENTS

CHAPTER-I

INTRODUCTION

Traffic is on the enlargement because the interest for vehicles is obtaining higher step by step. During this manner, transportation wants improvement. Since the strain are increasing with the progression within the vehicle business, there'll be a bigger probability of auto accidents. It'll be a considerable result if people cannot get assistance at the correct time. The Poor emergency incidents could be a serious reason for the death rate associated with vehicle accidents in our country. Our project can facilitate taking care of this issue by guaranteeing fast emergency service once an accident. The mechanism is put in on the vehicle. Once the vehicle is running unremarkably i.e., no accident has nonetheless occurred, then no data is shipped to emergency groups. However, within the prevalance of an accident, the vehicle changes its orientation and produces alternate vary of waves therefore, increasing the frequency. GSM is an open, advanced cellular innovation used for causation versatile voice and knowledge services. The GSM framework is the most generally used cellular innovation being employed in the world nowadays. It’s been a particularly effective wireless innovation for a spread of reasons together with the capability to vagabond worldwide with the sureness of getting the choice to figure on GSM networks. It’s in addition deeply economic and more cost effective. The framework utilizes a GPS module to pass the message onto your portable with the placement of the accident. The placement of the accident spot is shipped within the kind of Google Map link, derived from the latitude and longitudes from the GPS module. The message in addition contains the speed of auto in knots.

CHAPTER-II

PROBLEM IDENTIFICATION

An accident happens at night or in areas where no individuals are heard in that particular setting and victims are not saved at the right time. Many of them are losing their lives because of this. This device solves the above problem by submitting data directly after an accident to the emergency team.

CHAPTER-III

OBJECTIVE

 To locate vehicle 's location and transfer information to monitoring station.

 To integrate Global Positioning System (GPS) based tracking system for positioning information.

 To choose Global System for Mobile Communication (GSM)for information transmission and acquisition of
vehicle 's location information (latitude, longitude). To develop software to display all transmitted
information to the end user.

CHAPTER-IV

LITERATURE SURVEY

PAPER 1

TITLE : Accident Alert and Vehicle Tracking System using GPS and GSM

AUTHORS : J. Mounika, N. Charanjit, B. Saitharun & B. Vashista

LITERATURE SURVEY : Nowadays, road accidents area unit terribly high. On time medical care will facilitate in saving lives. Integrated engineering could be a latest trend to unravel issues. To be able to style a product exploitation an integrated technology are going to be useful to any engineering issues and an enormous contribution to the community.

An important indicator of survival rates when an accident is that the time between the accident and once emergency medical personnel area unit sent to the accident location. By eliminating the time between once an accident happens and once the primary responders area unit sent to the scene decree ses mortality rate and might save lives. One approach to eliminating the delay between accident prevalence and 1st communicator dispatch is to use in vehicle automatic accident detection and notification systems. Additionally trailing a vehicle just in case of any stealing has become a tricky job. This method aims to alert the close to and expensive ones of the person within the vehicle concerning the accident to supply immediate medical care. During this System once a vehicle meets with an accident directly Impact detector, electricity detector electrical device, small electro system can detects the signal and sends it to Arduino (Atmega328P). Directly microcontroller sends the signal to GPS module to convey the precise price of the geographical coordinates that contains the worth of meridian, latitude and altitude. At the moment the microcontroller sends the alert message through the GSM module to the close to and dear ones. additionally just in case of any stealing our project facilitates the owner to induce his vehicle's position in terms of Latitude and meridian and a link directing to the google maps once the owner sends a SMS to the SIM employed in the system.

PAPER 2

TITLE : VEHICLE ACCIDENT DETECTION SYSTEM BY USING GSM AND GPS

AUTHORS : GOWSHIKA.B , MADHU MITHA.G , JAYASHREE.S , S. MUTHARASU

LITERATURE SURVEY : At present criteria, we have a tendency to cannot discover wherever the accident has occurred and thus no info associated with it, resulting in the death of a private.

The analysis work goes on for following the position of the vehicle even in dark clumsy areas wherever there's no network for receiving the signals.

During this project GPS is employed for following the position of the vehicle, GSM is employed for causation the message and therefore the ARM controller is employed for saving the mobile range within the EEPROM associated sends the message to that once an accident has been detected.

From the past event and therefore the existing approach the below downside square measure been noted:

1. Manual system is adopted.
2. Following of accident could be a crucial method within the system.
3. Needed medical attention cannot be given to the required person.
4. Life loss and property loss weren't stopped in massive scale. Considering all the drawbacks under consideration we've developed a projected system that covers all the on top of mentioned drawbacks.
5. The machine-driven system is employed once the accident happens.
6. This technique GSM can send the message to the additional Human life is saved victimisation this machine-driven system. Considering all the drawbacks under consideration we've developed a projected system that covers all the on top of mentioned drawbacks.

PAPER 3

TITLE : GSM based Vehicle Accident Alert System

AUTHORS : G. Boopathi Raja, Keerthika A, Keerthika S G, Nandhini A, Pranitha K J

LITERATURE SURVEY : One of the fundamental reasons for road accid ents is speed. Road accidents are rising suddenly these days and ar one amongst the key causes of human deaths. Human life is additional vital than anything else, and timely help is additional vital than lending a help. If emergency service may get accident reports and reach it in time, additional lives may are saved.

In saving human lives, the time between the accident and once the car reaches the positioning of the accident plays Associate in Nursing important role. If we have a tendency to cut back the time between once Associate in Nursing accident happens and once a medical car is sent to the area, we will save human lives by reducing mortality rates. GPS has become Associate in Nursing integral a part of a vehicle system today. The accelerometer senses a sudden shift within the vehicle's axles. It will be tested by Arduino. **PROBLEM IDENTIFICATION**

An accident happens at nighttime or in areas wherever no people are detected therein specific setting and victims don't seem to be saved at the correct time. Many of them are losing their lives owing to this.

This device solves the on top of drawback by submitting knowledge directly once AN accident to the emergency team.

PROPOSED SYSTEM

To instantly rescue accident victims by causation a message to the rescue team with a MEMS measuring device, GSM and GPS location.

PAPER 4

TITLE : Vehicle Tracking System using GPS-GSM , Accident Detection and Theft Security

AUTHOR : Dr. Pradnya Mathurkar , Akansha B. Somkuwar , Ashwini R. Thakre , Pranali M. Wasnik

LITERATURE SURVEY : A vehicle pursuit system is incredibly helpful for pursuit the movement of a vehicle from any location at any time. AN economical vehicle pursuit system is meant and enforced for pursuit the movement of any equipped vehicle from any location at any time. The planned system created smart use of popular technology that mixes a smartphone with an Arduino UNO. This simple to create and inexpensive compared to others. The designed in vehicle device works exploitation world Positioning System (GPS) and world System for Mobile Communication(GSM) technology that's one amongst the foremost common ways for vehicle pursuit. The device is embedded within a vehicle those positions is to be determined and tracked in real time. A vehicle pursuit system is an device put in a very vehicle to alter the owner or a 3rd party to trace the vehicle's location. This paper planned to style a vehicle tracking system that works exploitation GPS and GSM technology, which might be the most affordable supply of vehicle pursuit and it might work as anti-theft system. It's AN embedded system that is employed for tracking and positioning of any vehicle by exploitation world Positioning System (GPS) and world system for mobile communication (GSM). Arduino UNO is employed to regulate the GPS receiver and GSM module.

The vehicle pursuit system uses the GPS module to urge geographic coordinates at regular amount. The GSM module is employed to transmit and update the vehicle location to a information. This paper offers minute by minute update concerning vehicle location by causing SMS through GSM electronic equipment. This SMS contain latitude and great circle of the situation of car. Arduino UNO gets the coordinates from GPS electronic equipment and then it sends this info to user in text SMS. GSM electronic equipment is employed to send this info via SMS sent to the owner of the vehicle. Location is displayed on

alphanumeric display. So Google map displays location and name of the place on mobile phone. Thus, user ready to ceaselessly monitor a moving vehicle on demand exploitation smartphone and verify the calculable distance and time for the vehicle to make a given destination.

PAPER 5

TITLE : Accident Prevention and Alert System using Arduino

AUTHOR : Aswin M , Sujitha E , Archunan P ,Sandhya Devi R S

LITERATURE SURVEY : PROBLEM STATEMENT

The carelessness of one individual could cause injury to several folks. In each state there's some road that deals with high traffic over the year. There are unit a particular regulation for vehicle for convenient vehicle running. These zones area unit college, universities, hospital, accident zones etc..

1. By statistics half-hour cases were fatal accidents, twenty seventh grievous injuries, three hundred and sixty five days minor injuries and seven non-injury accidents area unit disclosed.

2. ..The fatal crash incidence density was over double higher in rural than in urban areas obviously . This was primarily driven by the injury fatality .

3. There’s want for higher security system as a result of there's high level of stealing these days. There should be system to watch and communicate to several person to avoid wasting their life before the danger.

CHAPTER-V

PROPOSED SYSTEM

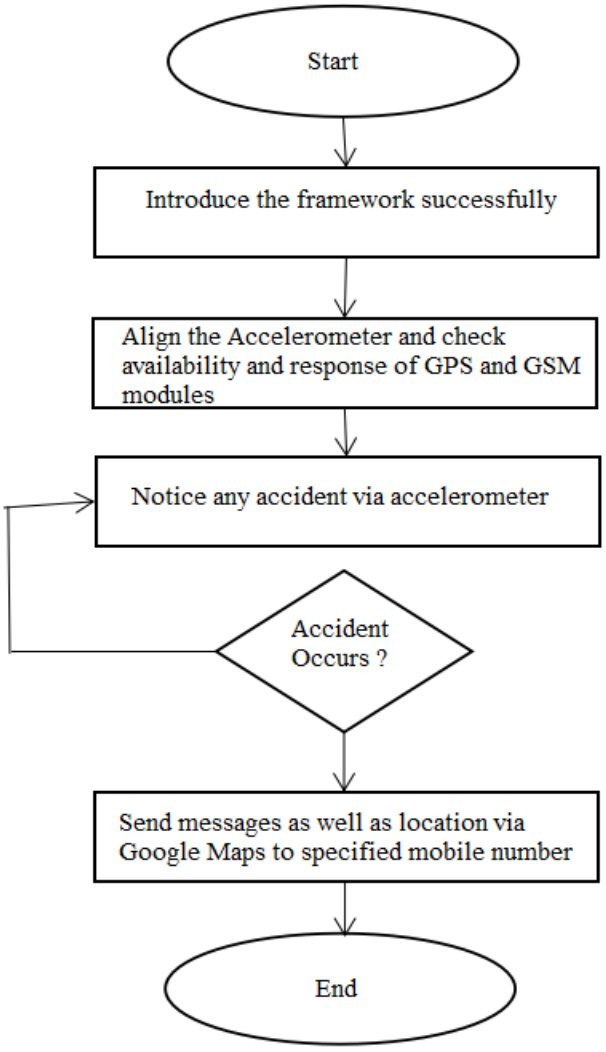
In this planned project we tend to area unit attending to management the speed of the vehicle in step with the revered zones. Our project explains that a numerous color strips area unit marked on the road wherever we'd like to regulate the speed among the limit and vehicle can have a color device hooked up in it which is able to acknowledge the colour marked on the road and consequently maintain the vehicles speed therein specific limit. Sadly if any accident happens the members of the family or emergency services don't seem to be aware in time. This ends up in late emergency service response, which might cause associate degree individual's death or cause severe injury. During this project we tend to area unit victimisation humanoid smartphone to sight accidents and report it to the closest offered emergency responding stations with the precise location of victims wherever accident happened through mobile application. Additionally we tend to area unit victimisation bit device to sight whether or not somebody is making an attempt to steal it whereas it's barred. During this manner crimes are often reduced as vehicles these days area unit being purloined in sizable amount.

Hence, vehicles these days need security which might be achieved with the assistance of this application. Through the mobile application we are able to perpetually monitor the speed of the vehicle, whether or not the vehicle is met with associate degree accident or somebody is making an attempt to steal the vehicle. We tend to propose a vehicle system for accident interference and accident tuned in to build the planet a far higher and safe place to measure.

CHAPTER-VI

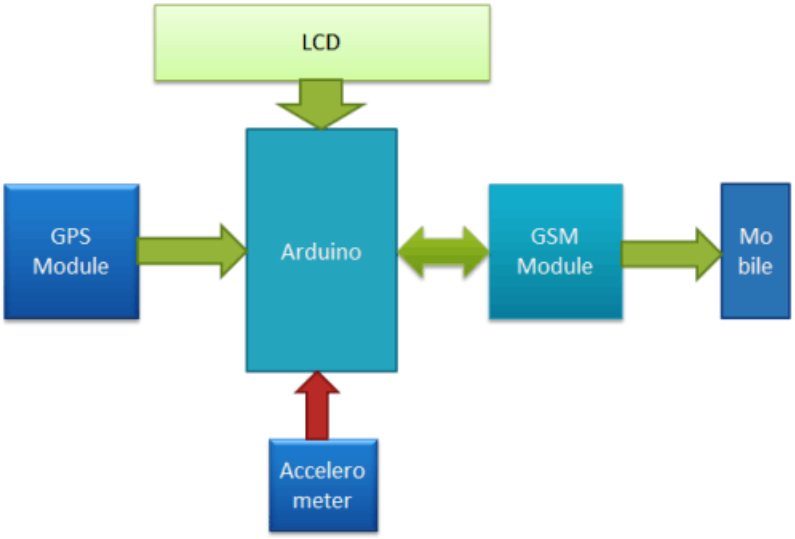
METHODOLOGY

In this era of big skilled development, most are busy with their lives. People, significantly in metropolitan zones ought to move beginning with one spot then onto consecutive any time with loads of speed. Because of this reason and typically because of in-efficient folks within the driving seats, road accidents area unit quite a common factor that may occur. Road accidents will snuff out life if the victim isn't given correct clinical thought at the legitimate time. So, during this project, we've got meant to arrange a framework that may discover road accidents and establish the realm through GPS. From that time onward, through the GSM interface this may be told to the closest emergency care unit so that the victim can get immediate medical attention.



Step By Step Activity

Once the associate accident happens, vehicle space data a non-inheritable from the satellite by the GPS module, this information is in form of latitude and meridian scale. That the information gathered is then fed as input to ArduinoUno. The secret writing is completed and therefore the information is passed to the electronic equipment and GSM. For ArduinoUno, the GSM electronic equipment accumulates the info and later on passes it to the telephone through the text format SMS. A way for perceptive vehicles to take data from GPS and send it to the acceptable laptop through transportable contact via the GSM module. These 2 radiators upgrade one another to make one diverging part. This strategy for vehicle watching happens taking data from GPS and to cause it to the proper cell phone/PC utilizing transportable contact by means of the GSM module. A Motor vehicle monitor is kind of probably the foremost basic specialised advancements in managing the movements of the vehicle. the peace of mind system finds the vehicle being monitored or half-track utilizing the world Positioning System GPS and later on sends the directions and space data to the mobile user through satellite or radio frameworks.



CHAPTER-VII

COMPONENTS REQUIRED:

- Arduino Uno
- GSM Module (SIM900A)
- GPS Module (SIM28ML)
- Accelerometer (ADXL335)
- 16x2 LCD
- MQ3 Sensor
- Connecting Wires
- 10 K-POT
- Breadboard or PCB
- Power supply 12v 1amp

ARDUINO UNO: The ArduinoUno is AN ASCII text file microcontroller board that's enthusiastic about the semiconductor unit ATmega328P microcontroller and created by Arduino.cc. The board is outfitted with sets of digital and analog input/output (I/O) pins that may be interfaced to completely different development boards (safeguards) and different circuits. The board has fourteen Digital pins, six Analog pins, and is programmable with the Arduino IDE (Integrated Development Environment) through a sort B USB cable. It is by a USB link or by an outdoor 9volt battery, although it acknowledges voltages within the vary of seven and twenty volts.

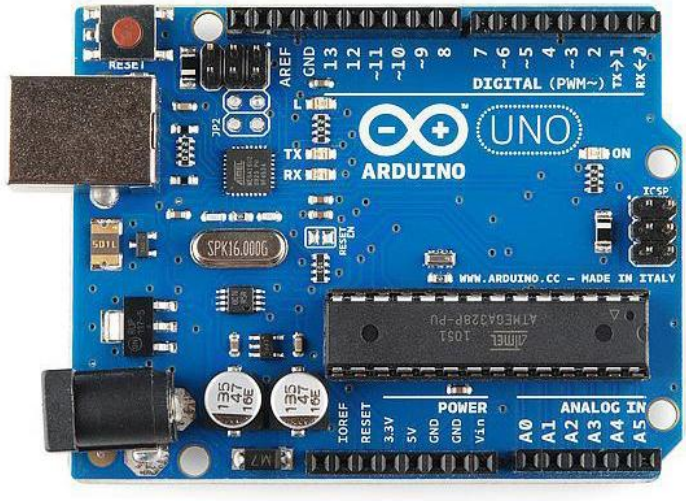


Fig :Arduino Uno R3 Development Board

GPS MODULE: GPS - GLOBAL POSITIONING SYSTEM

Used to detect the Latitude and Longitude of any location on the Earth, with exact UTC time (Universal Time Coordinated). GPS module is used to track the location of accident in our project. This device receives the coordinates from the satellite for each and every second, with time and date.

Fig :GPS Module

GSM MODULE: GSM – GLOBAL SYSTEM FOR MOBILE COMMUNICATION

GSM/GPRS module is employed to determine communication between a laptop and a GSM-GPRS system. International System for Mobile communication (GSM) may be a style used for transportable communication in the majority of the countries. it is a whole Quad-band GSM / GPRS module that can be merely embedded for a shopper or amateur use. SIM900 provides a daily sector interface. And delivers GSM / GPRS 850/900/1800 / 1900MHz voice usefulness, SMS , Low power data. It is easily available in the market.

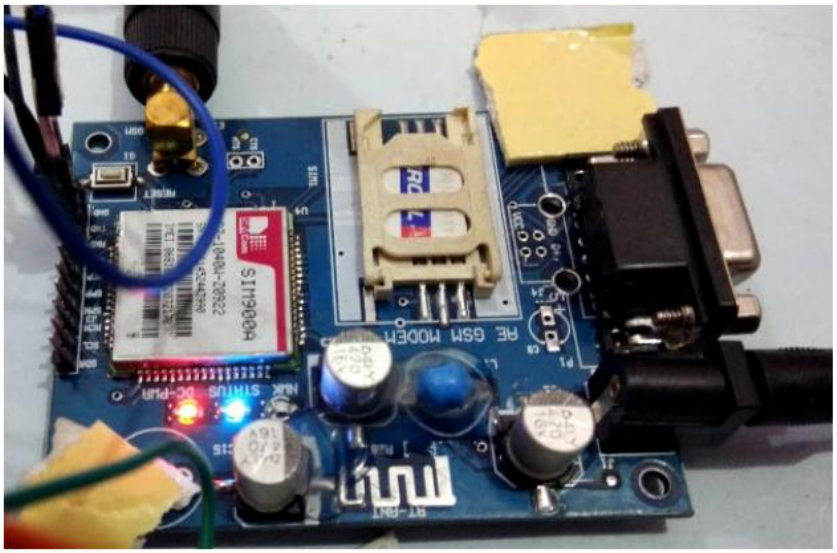


Fig :GSM Module

LCD MODULE:

To display the numbers, alphabets and special characters an LCD module with 16x2 alphanumeric types is used. Using the higher bit data lines of LCD pins such as pin 11,12,13 and 14 are interfaced to digital pins of Arduino such as pin 8,9,10 in 4 bit mode as shown in the below figure. RS and E pins of LCD are connected to pin 12 and 13. To perform the write operation on lcd to write and read the pin.

Fig : LCD Module

ACCELEROMETER

Pin Description of accelerometer:

1. Vcc 5 volt supply should connect at this pin.
2. X-OUT This pin gives an Analog output in x direction
3. Y-OUT This pin give an Analog Output in y direction
4. Z-OUT This pin gives an Analog Output in z direction
5. GND Ground
6. ST This pin used for set sensitivity of sensor

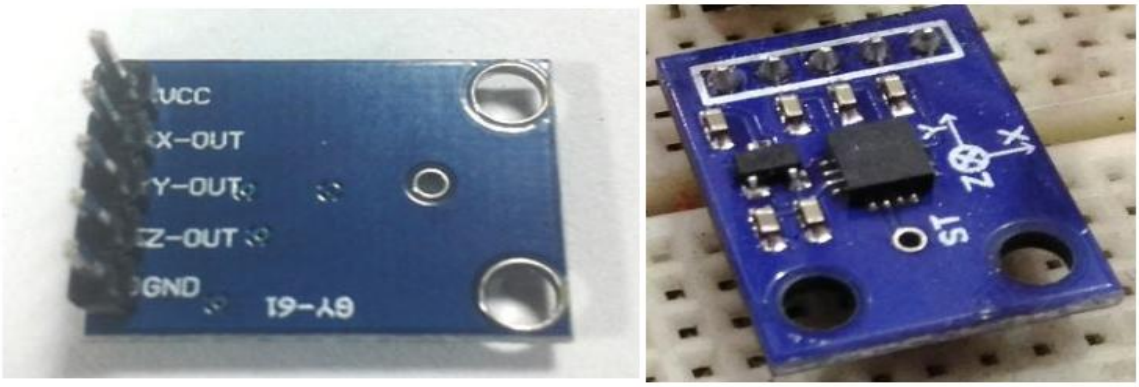


Fig : Accelerometer

MQ3 SENSOR

Sensor activation on alcohol

When the alcohol mixture is brought close to the air sensor, it reacts with the tin dioxide, reducing the surface absorption of oxygen. Then the potential barrier decreases. The electrons are then released into the tin dioxide. Then the current flows freely. So, the output voltage increases. We can get this output voltage in the form of analog input and digital input. That task is performed by the module to which this sensor is connected. The Potentiometer in this module can also change the sensitivity of the digital input.

Fig:MQ3 Sensor

CHAPTER - VIII

WORKING EXPLANATION :

In this project, Arduino is employed to manage the whole method with GPS Receiver and GSM module. The GPS receiver is employed to seek out vehicle links, the GSM module is employed to send SMS alerts with location and a link to Google Map. The ADXL335 measuring system is employed to sight associate degree accidents or unforeseen amendments in any axis. We tend area unit mistreatment GPS Module SIM28ML and GSM Module SIM900A.

Once we tend to area unit prepared with our hardware once the program, we will install it in our automobile and power it up. Currently whenever there's an associate accident, the automobile slides down and therefore the measuring instrument changes its axis values. These numbers area unit browse by Arduino and assess whether or not there's an amendment in any axis. Within the event of associate amendment Arduino reads the coordinates by extracting the $ GPGGA string from the GPS module knowledge and causing an SMS to the predefined range to the police or automobile or loved one via the placement of the accident website. The message conjointly contains a Google Map link to the place of the accident, so the placement is simply half-track.

CHAPTER - IX

CIRCUIT CONNECTIONS :

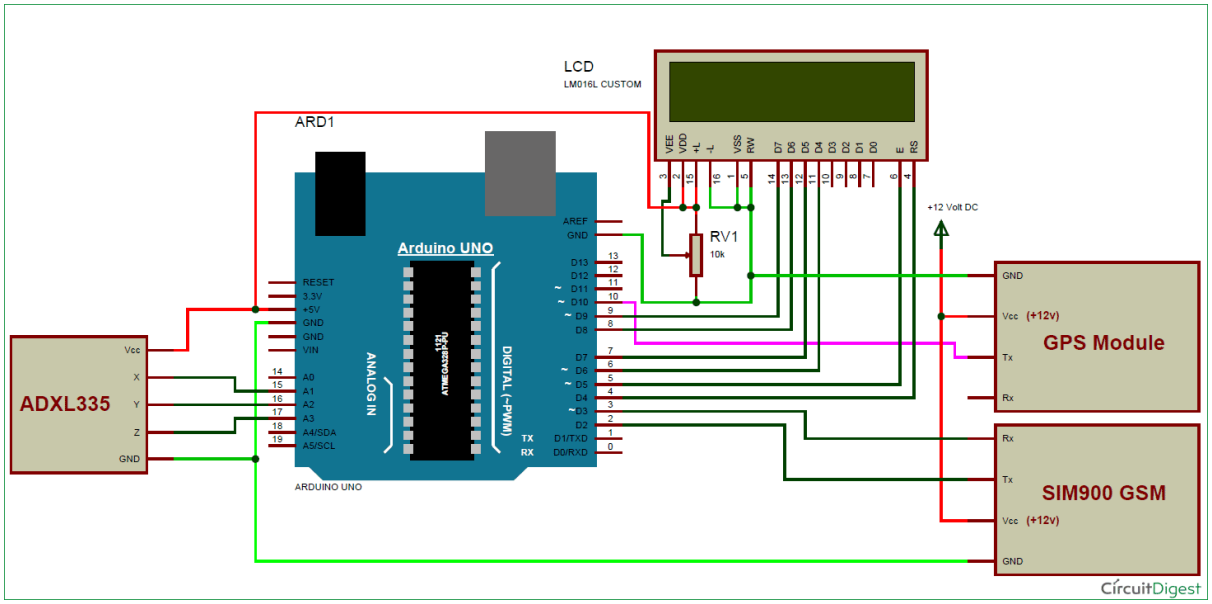


Fig:Circuit Diagram of GSM based Accident Alert System using Arduino

CHAPTER – X

RESULTS AND DISCUSSION

After all the elements are connected properly, the framework is placed into a moving automotive. If an associate degree accident happens, the accident thanks to the acceleration that occurred is detected by the ADXL335 measuring instrument. The x, y and coordinate axis ADC output pins of the measuring instrument are directly associated with Arduino ADC pin A1, A2, and A3.

After effective transcription and uploading the program to Arduino IDE, the system is instated with success, the measuring device is aligned and also the x , y and z samples of the vehicle area unit are shown on the serial monitor.

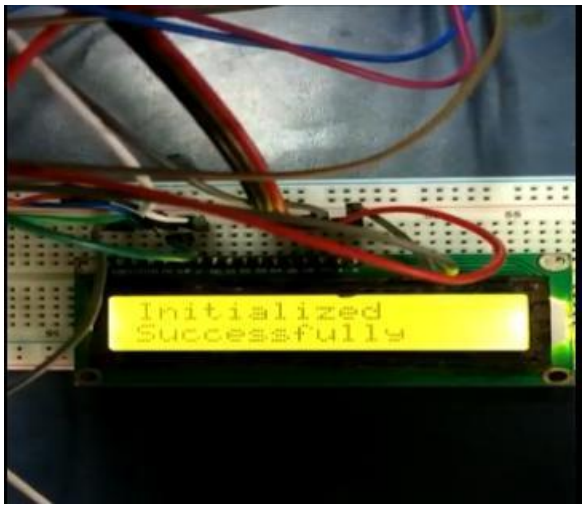


Fig:The successful initialization of the system is displayed in the LCD

After receiving the GPS signal, the latitude and longitude of the current position of the vehicle are displayed, The speed is displayed in knots.

Fig:After receiving the GPS signal, the latitude and
longitude of the current position of the vehicle is displayed

When the measuring system is agitated abnormally, i.e., within the event of AN accident once there's a sudden distinction in a pivot, SMS is shipped to the mobile range documented within the code and therefore the latitude and line of longitude is additionally sent as Google maps. The message is received within the preset mobile range beside the particular space.

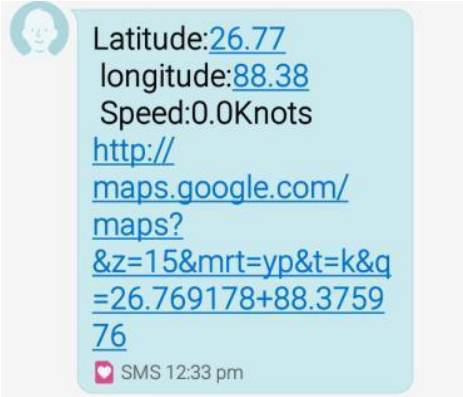


Fig:Message received by the specified phone number

Figure : Location of the accident sent via Google Map.

CHAPTER - XI

CONCLUSION

As per the study, it tends to be seen that a range of works is done until currently during this field. Several performed the tasks to sight the accident, establish the

accident spot, give alert messages to the driving force, and then forth. During this project, the system "Vehicle trailing System and Accident Detection" is intended by exploitation GSM and GPS. For the purpose once associate degree accident happens, the co-ordinates of the situation of accident obtained by the GPS, square measure sent via the GSM network to the registered mobile numbers. This paper provides the work to sight associate degree accident also on forestall that. The execution of the system to the vehicle would prompt to enhanced vehicle price on one hand, nevertheless would likewise build the chances of being protected on-road and keeping one from any accident. The projected framework is discovered to be deeply helpful relating to deciding the accident location to produce the short rescue to the injured individual.

CHAPTER - XII

FUTURE SCOPE

Vehicle accidents are hugely increasing day by day. Therefore, it becomes very necessary to work out a way to decrease it. From this paper, it tends to be seen that such a framework will save numerous lives. As of now, the framework is utilizing the realm-supported GPS and using an alarm message by the GSM module. This framework is often extended in a while by incorporating it with Google Maps. Another upgrade is often within the message-causing module. Other than causing the message to the listed numbers solely, an alarm message would what is more be sent to the obtainable accessible emergency vehicle or the medical clinics.

CHAPTER-XIII

REFERENCES

1 . GOWSHIKA. B1, MADHU MITHA. G2, JAYASHREE. S3, S. MUTHARASU4

1,2,3Student, Dept of Electrical and Electronics Engineering, Vivekanandha college of Engineering for Women[Autonomous], Namakkal, India 4Assistant Professor, Dept of Electrical and Electronics Engineering, Vivekanandha college of Engineering for Women[Autonomous], Namakkal, India

2 . J. Mounika1, N. Charanjit2, B. Saitharun3 & B. Vashista4

1Assistant Professor, Dept. of ECE, Chaitanya Bharathi Institute of Technology, Osmania University, Hyderabad, Telangana, India. 2,3,4BE Scholar, Dept. of ECE, Chaitanya Bharathi Institute of Technology, Osmania University, Hyderabad, Telangana, India.

3 . 1G. Boopathi Raja, 2Keerthika A, 2Keerthika S G, 2Nandhini A,2Pranitha K J

1Assistant Professor, 2Final year ECE students
Department of ECE,
Velalar College of Engineering and Technology, Erode – 638012

4 . Zainab Mohammed Khamis Al-Balushia, Safaa Saeed Khalfan Al-Taaleia, A.Jamaludeena

5 . **Dr. Pradnya Mathurkar1, Akansha B. Somkuwar2, Ashwini R. Thakre3, Pranali M. Wasnik4**

Faculty, Department of Electronics and Telecommunication Engineering1

Students, Department of Electronics and Telecommunication Engineering2,3,4

Rajiv Gandhi College of Engineering and Research, Nagpur, Maharashtra, India

6 . **Aswin M1, Sujitha E2, Archunan P3 ,Sandhya Devi R S4**

123Department of Electrical and Electronics Engineering, Kumaraguru College of Technology [autonomous], Coimbatore, India

4Assistant Professor, Department of Electrical and Electronics Engineering, Kumaraguru College of Technology

[autonomous], Coimbatore, India

7 . B. Rani 1 *, R. Praveen Sam 2, Govardhan Reddy Kamatam 3

1 A PG Scholar, Dept. of Computer Science & Engineering, G. Pulla Reddy Engineering College, Kurnool, India

2 Professor, Dept. of Computer Science & Engineering, G. Pulla Reddy Engineering College, Kurnool, India

3 Associate Professor, Dept. of Computer Science & Engineering, G. Pulla Reddy Engineering College, Kurnool, India