

A PROJECT REPORT

ON

“GPS & GSM BASED VEHICLE TRACKING SYSTEM”.

SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR

THE AWARD OF THE DIPLOMA IN

ELECTRONICS & COMMUNICATION ENGINEERING.

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CERTIFICATE

This is certified that this project report entitled “**VEHICLE TRACKING SYSTEM USING GPS AND GSM**” was successfully completed by student of sixth semester Diploma in ELECTRONICS & COMMUNICATION ENGINEERING. Submitted by **RUPESH TIWARI, AADITYA SINGH, JASMEET SINGH, SHUBHAM PRASAD** is accepted in partial fulfilment of the requirement for the award of Diploma in **ELECTRONICS & COMMUNICATION ENGINEERING.**

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ABSTRACT

Initially the GPS continuously takes input data from the satellite and stores the latitude and longitude values in AT89s52 microcontroller's buffer. If we have to track the vehicle, we need to send a message to GSM device, by which it gets activated. It also gets activated by detecting accident on the IR sensor, by detecting fire on the temperature sensor, by detecting theft connected to vehicle. Parallely deactivates GPS with the help of relay. Once GSM gets activated it takes the last received latitude and longitude positions values from the buffer and sends a message to the particular number or laptop which is predefined in the program. Once message has been sent to the predefined device the GSM gets deactivated and GPS gets activated.

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INTRODUCTION

1.1 INTRODUCTION

Vehicle tracking system main aim is to give Security to all vehicles. Accident alert system main aim is to rescuing people in accidents. This is improved security systems for vehicles. The latest like GPS are highly useful now a days, this system enables the owner to observe and track his vehicle and find out vehicle movement and its past activities of vehicle.

This new technology, popularly called vehicle Tracking Systems which created many wonders in the security of the vehicle. This hardware is fitted on to the vehicle in such a manner that it is not visible to anyone who is inside or outside of the vehicle. Thus, it is used as a covert unit which continuously or by any interrupt to the system, sends the location data to the monitoring unit.

When the vehicle is stolen, the location data from tracking system can be used to find the location and can be informed to police for further action. Some Vehicle tracking System can even detect unauthorized movements of the vehicle and then alert the owner. This gives an edge over other pieces of technology for the same purpose.

This accident alert system in it detects the accident and the location of the accident occurred and sends GPS coordinates to the specified mobile, computer etc. The fire detector circuit in it is used to detect fire in the vehicle, if the temperature inside the vehicle goes above a certain limit, then a warning will be automatically sent to the intended receiver.

The infrared sensor which is additionally interfaced to the microcontroller is used to detect the obstacles and accidents, in any case if any mishap occurs then its warning will be directly send to the intended receiver. When a request by user is sent to the number at the modem, the system automatically sends a return reply to that particular mobile indicating the position of the vehicle in terms of latitude and longitude. A Program has been developed which is used to locate the exact position of the vehicle and also to navigated track of the moving vehicle on Google Map.

1.2 PROPOSED SYSTEM

The proposed system is used for positioning and navigating the vehicle with an accuracy of 10 m. The Exact location is indicated in the form of latitude and longitude along with the exact Navigated track on Google map.

The system tracks the location of particular vehicle and sends to user's mobile in form of data and also to microcontroller. The arrived data, in the form of latitude and longitude is used to locate the Vehicle on the Google maps and also, we can see the output on the LCD.

1.3 VEHICLE TRACKING FEATURES

It is mainly benefit for the companies which are based on transport system. Since it can show the position of all vehicles in real time, so that they can create the expected data accordingly. This tracking system can store the whole data where the vehicle had gone, where did it stop, how much time it takes at every stop and can create whole data analysis. It is also used in buses and trains, to estimate how far are they, how much time it takes for them to come to a particular stop. These systems are used to data capture, data storage, data analysis and finally data transfer. By adding additional sensors such as temperature sensor and infrared sensors the system can be enabled to detect fire, theft and obstacles.

1.4 USAGE OF TRACKING IN INDIA

Tracking in India is mainly used by transport systems, taxi companies, traffic operators. Taxi operators use this to estimate how far the vehicle is from a particular area and send this information to call centres' and they can inform general public about the distance of the taxi location and time it takes tom come to them.

Another use is for traffic police if this system is located in every vehicle, they can estimate the traffic by looking on the map and if any accident is detected then they can route the traffic in to another way. This is how tracking is useful because India is one of busy traffic countries and this system can control many of the traffic problems.

1.5 APPLICATION

The project that has been introduced here can be used for variety of applications

1. Car navigation
2. Fleet management/tracking
3. Palmtop, Laptop, PDA, and Handheld
4. Location Based Services enabled devices

CHAPTER:2
METHODOLOGY

2.1 WORKING

The project consists of GPS receiver and GSM modem with a micro controller. The whole system is attached to the vehicle. In the other end (main vehicle station) one GSM mobile phone is attached to the computer with VB application. So, the GPS system will send the longitudinal and altitude values corresponding to the position of vehicle to GSM Modem.

Imagine the bus has left Bangalore at 6 o'clock in the morning. If the officer in charge for that vehicle wants to know where the vehicle is, he will come to the computer and click on the vehicle number on the VB program. The VB program will send an SMS to the vehicle number.

The SMS sent would come through the GSM service provider and then reach the vehicle, which is traveling, because the vehicle has a GSM device with sim card. This GSM modem will receive the SMS and send to the microcontroller in the vehicle. The microcontroller will receive this SMS and compare the password and the command. If everything matches then it will perform the request required by the office.

A place name is assigned for each longitude & latitude. The GSM receiver in the vehicle office receives these data & gives to the PC through serial port. The VB program in the PC checks this data with its database & displays the details of the vehicle on the screen. The device is password controlled i.e.; person who knows the device password only able to operate. In case of any mishaps such as fire, theft or obstacle, the device will automatically will send an alert to the registered number, i.e., the number that is feeded into the memory of microcontroller.

2.2 BLOCK DIAGRAM

The block diagram of the vehicle tracking system is shown below. The block diagram shows the overall view of the system. The blocks that are connected here are Microcontroller, LCD display, GPS, GSM, Power supply, Infrared sensor, Fire detector.

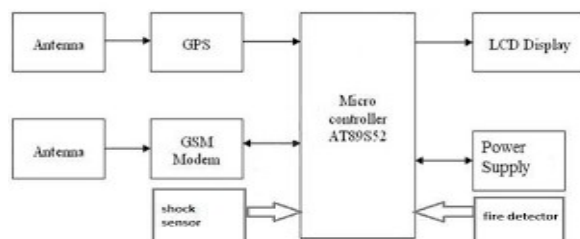


FIG. BLOCK DIAGRAM OF VEHICLE TRACKING SYSTEM.

2.3 BLOCK DIAGRAM DESCRIPTION

In this Project it is proposed to design an embedded system which is used for tracking and positioning of any vehicle by using Global Positioning System (GPS) and Global system for mobile communication (GSM).

In this project 8052 microcontroller is used for interfacing to various hardware peripherals. The current design is an embedded application, which will continuously monitor a moving Vehicle and report the status of the Vehicle on demand.

For doing so an 8052 microcontroller is interfaced serially to a GSM Modem and GPS Receiver. A GSM modem is used to send the position (Latitude and Longitude) of the vehicle from a remote place. The GPS modem will continuously give the data i.e., the latitude and longitude indicating the position of the vehicle.

The GPS modem gives many parameters as the output, but only the NMEA data coming out is read and displayed on to the LCD. The same data is sent to the mobile at the other end from where the position of the vehicle is demanded. An EEPROM is used to store the data received by GPS receiver.

The hardware interfaces to microcontroller are LCD display, GSM modem and GPS Receiver. In order to interface GSM modem and GPS Receiver to the controller, a MUX is used.

The design uses RS-232 protocol for serial communication between the modems and the microcontroller. A serial driver IC is used for converting TTL voltage levels to RS-232 voltage levels.

Different types or sensors such as infrared sensors and fire detector are used for detecting different types of problem encountered in the vehicle such as theft, accident, fire warning etc. In any of these cases messages will be automatically send to the intended receiver. When a request by user is sent to the number at the modem, the system automatically sends a return reply to that particular mobile indicating the position of the vehicle in P a g e | 17 terms of latitude and longitude. A Program has been developed which is used to locate the exact position of the vehicle and also to navigated track of the moving vehicle on Google Map.

2.4 CONCEPT AND OVERVIEW

This vehicle tracking system takes input from GPS and send it through the GSM module to desired mobile/laptop using mobile communication. Vehicle Tracking System is one of the biggest technological advancements to track the activities of the vehicle. The security system uses Global Positioning System GPS, to find the location of the monitored or tracked vehicle and then uses satellite or radio systems to send to send the coordinates and the location data to the monitoring canter. At monitoring censer various software's are used to plot the Vehicle on a map. In this way the Vehicle owners are able to track their vehicle on a real-time basis. Due to real-time tracking facility, vehicle tracking systems are becoming increasingly popular among owners of expensive vehicles.

2.5 CIRCUIT DIAGRAM

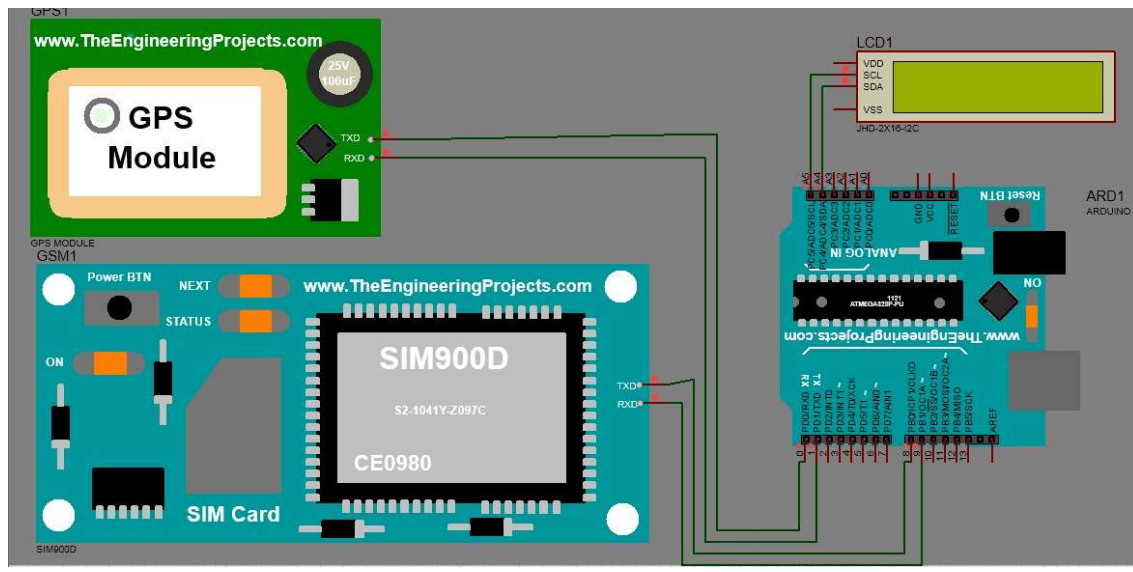


FIG. CIRCUIT DIAGRAM OF VEHICLE TRACKING SYSTEM.

CHAPTER: 3
PROCESS AND REQUIREMENTS

3.1 SOFTWARE REQUIREMENTS:

3.1.1 ARDUINO COMPILER:

The Arduino IDE is a cross-platform application written in Java, and is derived from the IDE for the Processing programming language and the Wiring project. It is designed to introduce programming to artists and other newcomers unfamiliar with software development. It includes a code editor with features such as syntax highlighting, brace matching, and automatic indentation, and is also capable of compiling and uploading programs to the board with a single click. There is typically no need to edit make files or run programs on a commandline interface. Although building on command-line is possible if required with some third-party tools such as Imo.

The Arduino IDE comes with a C/C++ library called "Wiring" (from the project of the same name), which makes many common input/output operations much easier. Arduino programs are written in C/C++.



3.1.2 GOOGLE MAPS:

Google Maps is a desktop and mobile web mapping service application and technology provided by google, offering satellite imagery, street maps, and Street View perspectives, as well as functions such as a route planner for traveling by foot, car, bicycle (beta test), or with public transportation. Also supported are maps embedded on third-party websites via the Google Maps API, [1] and a locator for urban businesses and other organizations in numerous countries around the world. Google Maps satellite images are not updated in real time; however, Google adds data to their Primary Database on a regular basis. Google Earth support states that most of the images are no more than 3 years old.



SYMBOL OF GOOGLE MAP

3.2 COMPONENT DESCRIPTION:

For designing this hardware many types of devices are used to make it perfectly working. All the devices are purchased from different manufacturers. These components are soldered on a soldering board. The following list of hardware are required for this system.

- Power supply
- Microcontroller ATMEGA328
- GPS module
- GSM module
- Max232
- RS232
- LCD display
- LED
- Infrared sensor
- Fire detector

3.2.1 POWER SUPPLY:

It consists of step-down transformer, bridge rectifier, capacitors and voltage regulator ICs. 230V AC is converted to 12V DC using transformer and bridge rectifier. This 12VDC is further reduced to 5V DC using voltage regulator IC.

3.2.2 RESISTORS:

A resistor is a passive two-terminal electrical component that implements electrical resistance as a circuit element. Resistors act to reduce current flow, and, at the same time, act to lower voltage levels within circuits.

In electronic circuits resistors are used to limit current flow, to adjust signal levels, bias active elements, terminate transmission lines among other uses. High-power resistors that can dissipate many watts of electrical power as heat may be used as part of motor controls, in power distribution systems, or as test loads for generators.

Fixed resistors have resistances that only change slightly with temperature, time or operating voltage. Variable resistors can be used to adjust circuit elements (such as a volume control or a lamp dimmer), or as sensing devices for heat, light, humidity, force, or chemical activity.

Resistors are common elements of electrical networks and electronic circuits and are ubiquitous in electronic equipment. Practical resistors as discrete components can be composed of various compounds and forms. Resistors are also implemented within integrated circuits.

The electrical function of a resistor is specified by its resistance: common commercial resistors are manufactured over a range of more than nine orders of magnitude. The nominal value of the resistance will fall within a manufacturing tolerance.



FIG. AXIAL LEAD RESISTOR

3.2.3 CAPACITORS:

A capacitor (originally known as a condenser) is a passive two-terminal electrical component used to store energy electrostatically in an electric field.

The forms of practical capacitors vary widely, but all contain at least two electrical conductors (plates) separated by a dielectric (i.e., insulator). The conductors can be thin films, foils or sintered beads of metal or conductive electrolyte, etc. The nonconducting dielectric acts to increase the capacitor's charge capacity. A dielectric can be glass, ceramic, plastic film, air, vacuum, paper, mica, oxide layer etc. Capacitors are widely used as parts of electrical circuits in many common electrical devices. Unlike resistors, an ideal capacitor does not dissipate energy. Instead, a capacitor stores energy in the form of an electrostatic field between its plates.



FIG. CAPACITORS

3.2.4 IC LM7805:

7805 is a voltage regulator integrated circuit. It is a member of 78xx series of fixed linear voltage regulator ICs. The voltage source in a circuit may have fluctuations and would not give the fixed voltage output. The voltage regulator IC maintains the output voltage at a constant value. The xx in 78xx indicates the fixed output voltage it is designed to provide. 7805 provides +5V regulated power supply. Capacitors of suitable values can be connected at input and output pins depending upon the respective voltage levels.

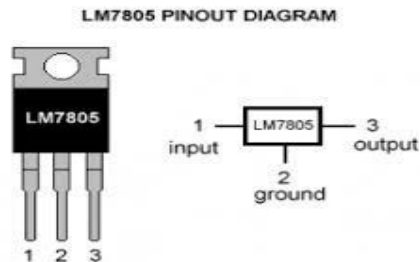


FIG. 7805 PIN DIAGRAM

3.2.5 MICROCONTROLLER ATMEGA328:

The Atmel AVR core combines a rich instruction set with 32 general purpose working registers. All the 32 registers are directly connected to the Arithmetic Logic Unit (ALU), allowing two independent registers to be accessed in one single instruction executed in one clock cycle. The resulting architecture is more code efficient while achieving throughputs up to ten times faster than conventional CISC microcontrollers. The Atmega168 provides the following features: 16 Kbytes of In-System Programmable Flash with Read-While-Write capabilities, 512 bytes of EEPROM, 1 Kbyte of SRAM, 23 general purpose I/O lines, 32 general purpose working registers, three flexible Timer/Counters with compare modes, internal and external interrupts, a serial programmable USART, a byte oriented Two wire Serial Interface, a byte oriented Two wire Serial Interface, a 6-channel ADC (eight channels in TQFP and QFN/MLF packages) with 10-bit accuracy, a programmable Watchdog Timer with Internal Oscillator, an SPI serial port, and five software selectable power saving modes. The Idle mode stops the CPU Page | 32 while allowing the SRAM; Timer/Counters, SPI port, and interrupt system to continue function.

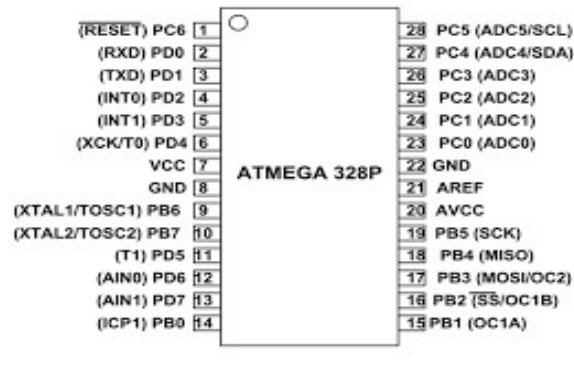


FIG. PIN DIAGRAM OF ATMEGA328 MICROCONTROLLER IC

The Power down mode saves the register contents but freezes the Oscillator, disabling all other chip functions until the next Interrupt or Hardware Reset. In Power-save mode, the asynchronous timer continues to run, allowing the user to maintain a timer base while the rest of the device is sleeping. The ADC Noise Reduction mode stops the CPU and all I/O modules except asynchronous timer and ADC, to minimize switching noise during ADC conversions. In Standby mode, the crystal/resonator Oscillator is running while the rest of the device is sleeping. This allows very fast start-up combined with low-power consumption.



FIG. ATMEGA328

3.2.6 GSM MODULE:

A GSM modem is a specialized type of modem which accepts a SIM card, and operates over a subscription to a mobile operator, just like a mobile phone. From the mobile operator perspective, a GSM modem looks just like a mobile phone. P a g e | 33 When a GSM modem is connected to a computer, this allows the computer to use the GSM modem to communicate over the mobile network. While these GSM modems are most frequently used to provide mobile internet connectivity, many of them can also be used for sending and receiving SMS and MMS messages.



FIG. GSM MODULE

GSM modem can be a dedicated modem device with a serial, USB or Bluetooth connection, or it can be a mobile phone that provides GSM modem capabilities. For the purpose of this document, the term GSM modem is used as a generic term to refer to any modem that supports one or more of the protocols in the GSM evolutionary family, including the 2.5G technologies GPRS and EDGE, as well as the 3G technologies WCDMA, UMTS, HSDPA and HSUPA.

3.2.7 GPS MODULE:

A GPS navigation device is a device that accurately calculates geographical location by receiving information from GPS satellites. Initially it was used P a g e | 34 by the United States military, but now most receivers are in automobiles and smartphones.

The Global Positioning System (GPS) is a satellite-based navigation system made up of a network of a minimum of 24, but currently 30, satellites placed into orbit by the U.S. Department of Défense. Military action was the original intent for GPS, but in the 1980s, the U.S. government decided to allow the GPS program to be used by civilians. The satellite data is free and works anywhere in the world.

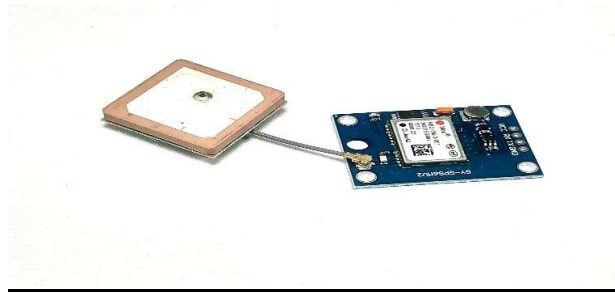


FIG. GPS6MU2 MODULE

GPS devices may have capabilities such as:

- maps, including streets maps, displayed in human readable format via text or in a graphical format,
- turn-by-turn navigation directions to a human in charge of a vehicle or vessel via text or speech,
- directions fed directly to an autonomous vehicle such as a robotic probe,
- traffic congestion maps (depicting either historical or real time data) and suggested alternative directions,
- information on nearby amenities such as restaurants, fuelling stations, and tourist attractions.

3.2.8 MAX232:

The MAX232 is an IC, first created in 1987 by Maxim Integrated Products, that converts signals from an RS-232 serial port to signals suitable for use in TTL compatible digital logic circuits. The MAX232 is a dual driver/receiver and typically converts the RX, TX, CTS and RTS signals.

The drivers provide RS-232 voltage level outputs (approx. ± 7.5 V) from a single + 5 V supply via on-chip charge pumps and external capacitors. This makes it useful for implementing RS-232 in devices that otherwise do not need any voltages outside the 0 V to + 5 V range, as power supply design does not need to be made more complicated just for driving the RS-232 in this case.

The receivers reduce RS-232 inputs (which may be as high as ± 25 V), to standard 5 V TTL levels. These receivers have a typical threshold of 1.3 V, and a typical hysteresis of 0.5 V.



FIG. MAX232 IC

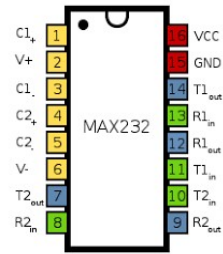


FIG. PIN DIAGRAM OF MAX232 IC

3.2.9 RS232:

In telecommunications systems used today RS-232 is a standard for serial communication transmission of data. It formally defines the signals connecting between a DTE (data terminal equipment) such as a computer terminal, and a DCE (data circuit-terminating equipment, originally defined as data communication equipment), such as a modem.

The RS-232 standard is commonly used in computer serial ports. The standard defines the electrical characteristics and timing of signals, the meaning of signals, and the physical size and pinout of connectors. The current version of the standard is TIA-232-F Interface Between Data Terminal Equipment and Data Circuit Terminating Equipment Employing Serial Binary Data Interchange, issued in 1997.

An RS-232 serial port was once a standard feature of a personal computer, used for connections to modems, printers, mice, data storage, uninterruptible power supplies, and other peripheral devices. However, RS-232 is hampered by low transmission speed, large voltage swing, and large standard connectors.

In modern personal computers, USB has displaced RS-232 from most of its peripheral interface roles. Many computers do not come equipped with RS-232 ports and must use either an external USB-to-RS-232 converter or an internal expansion card with one or more serial ports to connect to RS-232 peripherals. Nevertheless, RS-232 devices are still used, especially in industrial machines, networking equipment and scientific instruments.

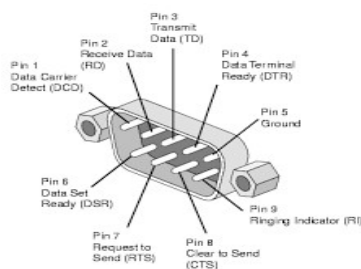


FIG. PIN DIAGRAM OF RS232 CONNECTORS

3.2.10 LCD:

A liquid-crystal display (LCD) is a flat panel display, electronic visual display, or video display that uses the light modulating properties of liquid crystals. Liquid crystals do not emit light directly.

LCDs are available to display arbitrary images (as in a general-purpose computer display) or fixed images which can be displayed or hidden, such as priest words, digits, and 7-segment displays as in a digital clock. They use the same basic technology, except those arbitrary images are made up of a large number of small pixels, while other displays have larger elements.

LCDs are used in a wide range of applications including computer monitors, televisions, instrument panels, aircraft cockpit displays, and signage. They are common in consumer devices such as DVD players, gaming devices, clocks, watches, calculators, and telephones, and have replaced cathode ray tube (CRT) displays in most applications. The LCD screen is more energy efficient and can be disposed of more safely than a CRT. Its low electrical power consumption enables it to be used in battery-powered electronic equipment.

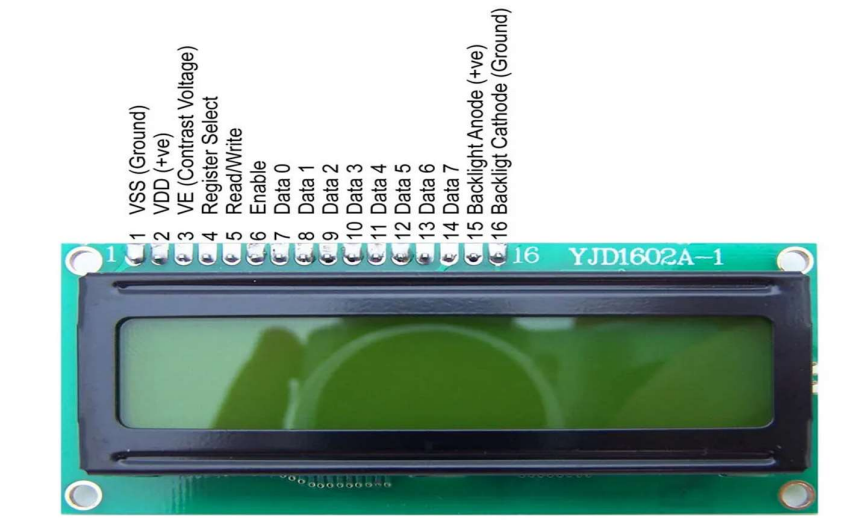


FIG. 16 BY 2 LCD & ITS PIN DESCRIPTION

3.2.11 LED:

A light-emitting diode (LED) is a two-lead semiconductor light source. It is a pn-junction diode, which emits light when activated.] When a suitable voltage is applied to the leads, electrons are able to recombine with electron holes within the device, releasing energy in the form of photons. This effect is called electroluminescence, and the colour of the light (corresponding to the energy of the photon) is determined by the energy band gap of the semiconductor.

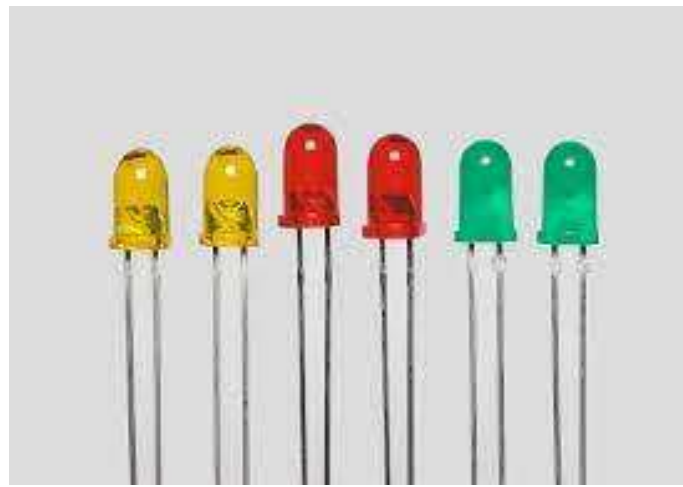


FIG. LED

CHAPTER-4
CODING

4.1 CODING:

```
#include <TinyGPS.h>
#include <SoftwareSerial.h>
SoftwareSerial Gsm (8, 9);
char phone_no [] = "07979080897"; //replace with phone no. to get sms
TinyGPS gps; //Creates a new instance of the TinyGPS object
#include <Wire.h>
#include <LiquidCrystal_I2C.h>
LiquidCrystal_I2C lcd (0x27, 16, 2);
void setup()

{

  Serial.begin(9600);
  Gsm.begin(9600);
  Gsm.print("Welcome");
  lcd.init();
  lcd.backlight();
  lcd.clear();
  lcd.setCursor(0,0);
  lcd.print("GPS & GSM BASED");
  lcd.setCursor(0,1);
  lcd.print("VEHICLE TRACKING");
  delay(5000);

}

void loop()
```



```

{

bool newData = false;
unsigned long chars;
unsigned short sentences, failed;

// For one second we parse GPS data and report some key values

for (unsigned long start = millis(); millis() - start < 1000;)

{

while (Serial.available())

{
char c = Serial.read();
Serial.print(c);
if (gps.encode(c))
newData = true;
}

}

if (newData) //If newData is true
{
float flat, flon;
unsigned long age;
gps.f_get_position(&flat, &flon, &age);
Gsm.print("AT+CMGF=1\r");
}
}

```

```

delay(400);
Gsm.print("AT+CMGS=\");
Gsm.print(phone_no);
Gsm.println("\");
lcd.clear();
lcd.setCursor(0,0);
lcd.print("LAT : ");
lcd.print(flat);
lcd.setCursor(0,1);
lcd.print("LON : ");
lcd.print(flon);
delay(300);

Gsm.print("http://maps.google.com/maps?q=lock:");
//Gsm.print("Latitude = ");
//Gsm.print("VINOD No-UP16 AQ4517 ");
Gsm.print(flat == TinyGPS::GPS_INVALID_F_ANGLE ? 0.0 : flat, 6);
// Gsm.print(" Longitude = ");
Gsm.print(",");
Gsm.print(flon == TinyGPS::GPS_INVALID_F_ANGLE ? 0.0 : flon, 6);
delay(200);
Gsm.println((char)26); // End AT command with a ^Z, ASCII code 26
delay(200);
Gsm.println();
delay(20000);
}

else
{
Gsm.print("AT+CMGF=1\r");

```

```
delay(400);
Gsm.print("AT+CMGS=\");
Gsm.print(phone_no);
Gsm.println("");
delay(300);
Gsm.print("http://maps.google.com/maps?q=loc:28.479011,77.499893");
delay(500);
Gsm.println((char)26); // End AT command with a ^Z, ASCII code 26
delay(200);
Gsm.println();
//Serial.println("SENDING OKKKKK");
delay(20000);
}
}
```

CHAPTER-5
ADVANTAGES & FUTURE SCOPE

5.1 ADVANTAGES:

Commercial fleet operators are by far the largest users of vehicle tracking systems. These systems are used for operational functions such as routing, security, dispatch and collecting on-board information. These are also used for fire detector in large vehicles like train, bus etc. because the vehicle like train contains large number of people and the sending alert of fire accident can save many lives.

The applications for this project are in military, navigation, automobiles, aircrafts, fleet management, remote monitoring, remote control, security systems, tele services, etc.

- Fleet monitoring
- Vehicle scheduling
- Route monitoring
- Driver monitoring
- Accident analysis
- Geo-fencing geo-coding

These are just a few advantages of the project that has been introduced in this report. We can interface a greater number of sensors in order to serve multiple purposes. The microcontroller that has been used in this project have in-built ADCs and hence the controller is capable of accepting analog inputs, which is the biggest advantage. Since all real-world signals are analog in nature, by incorporating different sensors required purpose can be served.

5.2 FUTURE SCOPE:

- We can use the EEPROM to store the previous Navigating positions up to 256 locations and we can navigate up to N number of locations by increasing its memory.
- We can reduce the size of the kit by using GPS+GSM on the same module.
- We can increase the accuracy up to 3m by increasing the cost of the GPS receivers.
- We can use our kit for detection of bomb by connecting to the bomb detector.
- With the help of high sensitivity vibration sensors, we can detect the accident. whenever vehicle unexpectedly had an accident on the road with help of vibration sensor, we can detect the accident and we can send the location to the owner, hospital and police.
- We can use our kit to assist the traffic. By keeping the kits in the entire vehicles and by knowing the locations of all the vehicles.
- If anybody steals our car, we can easily find our car around the globe. By keeping vehicle positioning vehicle on the vehicle.

CHAPTER-6
RESULT AND CONCLUSION

6.1 RESULT:

Whenever accident or theft of the vehicle is occurred then the device sends message to given mobile device.

Message for theft:

“Theft alert

latitude: 2400.0090,

N longitude: 12100.0000,

E time: 12:00”

Message for accident:

“Accident alert

latitude: 2400.0090, N

longitude: 12100.0000, E

time: 12:00”

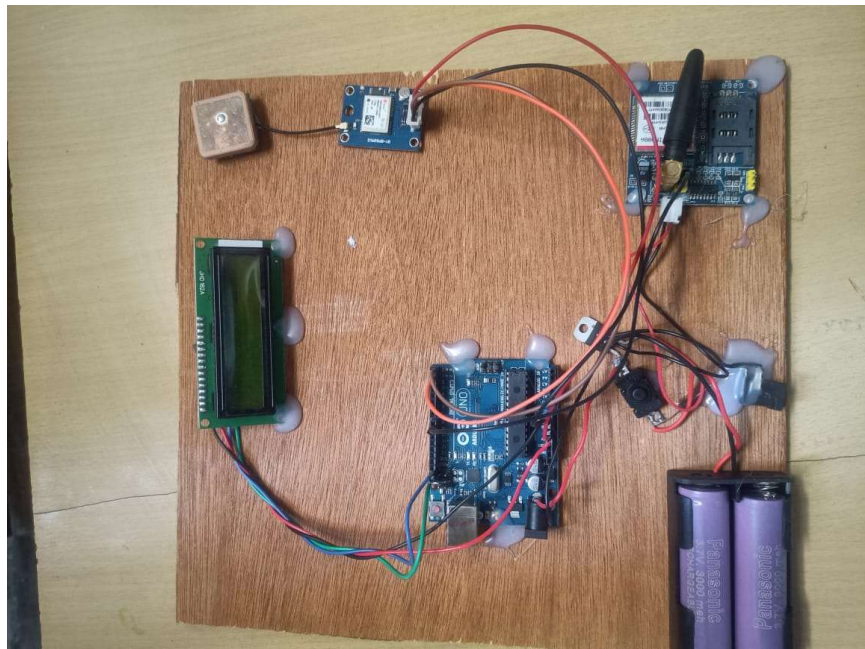
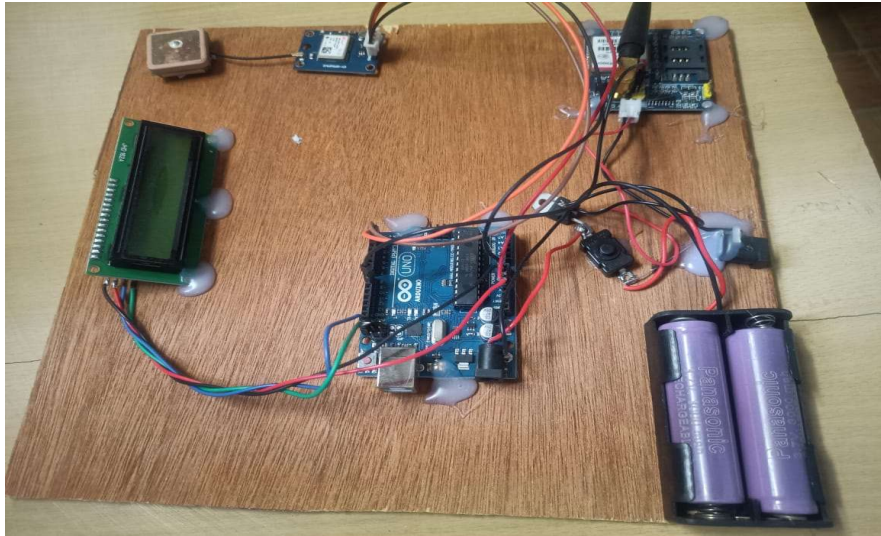
This system shows the location of vehicle on the lcd connected to it also just to make sure the working condition of the microcontroller.

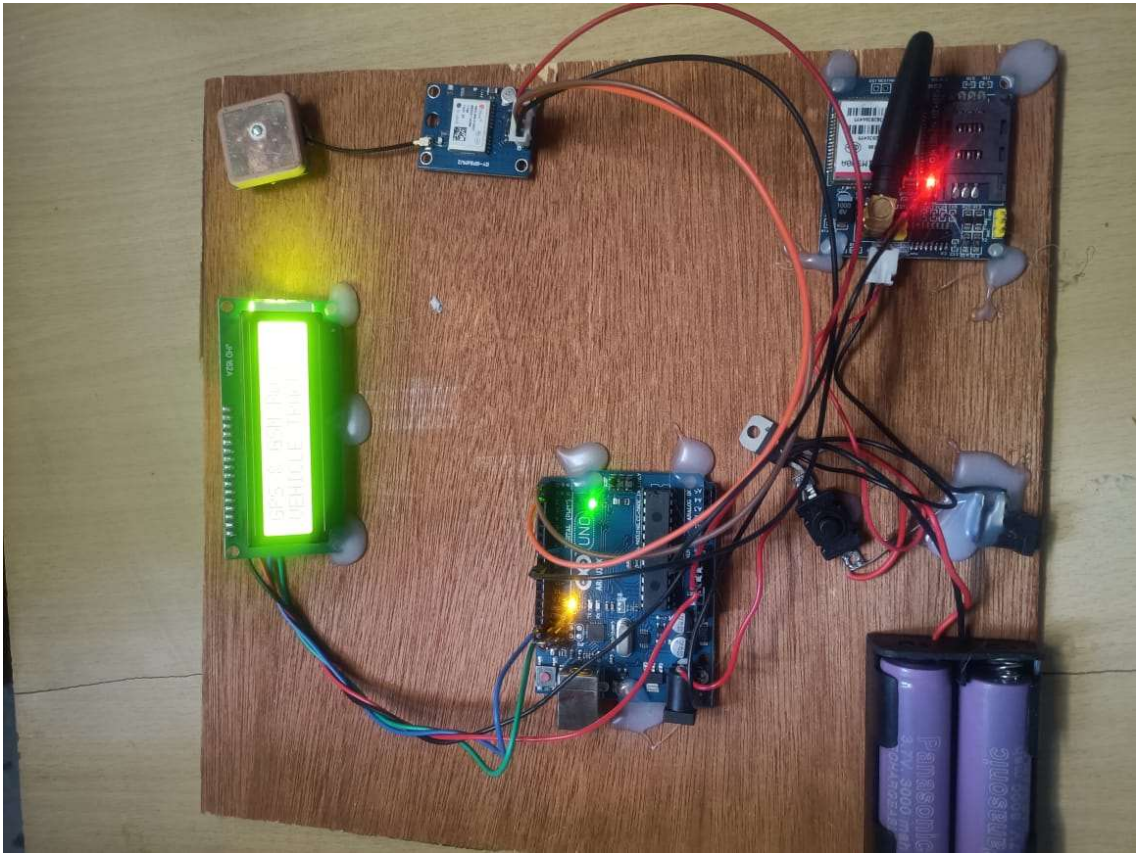
6.2 CONCLUSION:

Vehicle tracking system makes better fleet management and which in turn brings large profits. Better scheduling or route planning can enable you handle larger jobs loads within a particular time. Vehicle tracking both in case of personal as well as business purpose improves safety and security, communication medium, performance monitoring and increases productivity. So, in the coming year, it is going to play a major role in our day-to-day living.

Main motto of the project is to incorporate different types of sensors so that they help in decrease the chances of losing life in such accident which we can't stop from occurring. Whenever accident is alerted, the paramedics are reached to the particular location to increase the chances of life. This device invention is much more useful for the accidents occurred in deserted places and midnights. This vehicle tracking and accident alert feature plays much more important role in day-to-day life in future.

CHAPTER-7
PHOTO GALLERY





CHAPTER-8
REFERENCE

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