PUBLISHED BY

SANAPALA VENKATA RAMANA

BTECH

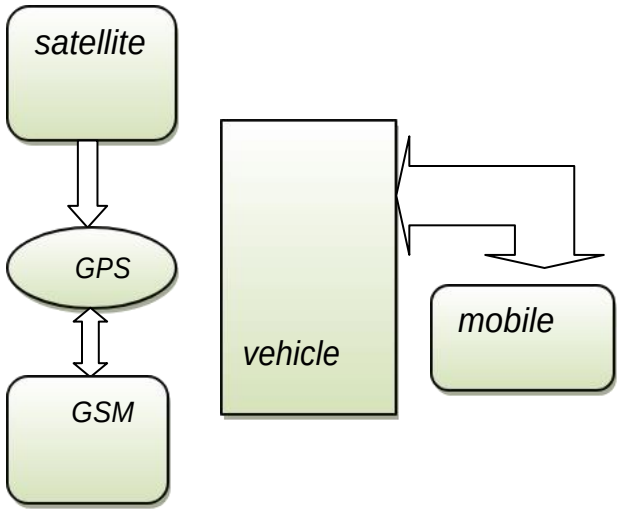
VEHICLE TRACKING SYSTEM- using gps.gsm module-anti theft detection

_ABSTRACT _

A vehicle tracking system is an electronic device which is used to track a vehicle at any real time vehicle or theft we find out easily it will uses the using of GPS and GSM this design of cost is effective and reliable in this project by using arduino uno to control the system vehicle tracked easily,fast,accurate location. To avoid the theft and knowing exact location and speed of the vehicle by all real time process.

INTRODUCTION

this project we uses the both GPS(global position system) to find the position of the vehicle by using antenna and GSM (global system mobile communication) which is used to to send the sms of location to caretakers or owner both the gps and gsm are inter connected with each other to arduino uno. This arduino is to control entire system by coding a c programming it is a real time project to track the vehicle at any time at any location. By using the switch mode if the switch mode is off then we will used as usual lie owner otherwise, if switch mode is on then the system is activated then vehicle is on then it send and shows the location at where the system is located. it continuosly updated the location by through sms if we want to stop the vehicle then send the sms as STOP it will stop



in realtime ignition key and motor is connected to arduino to control the vehicle.

MOTIVATION

by this project we develop the system vehicle tracing in real time uses. In this we lost the is business purpose and to manage the lie vehicle business. so the main intensive of this project to now the exact location at any movement in a realtime.

OBJECTIVE

Objective is nothing but goals. The main objective of this project where to find the exact location of the vehicle is knows as vehicle tracking system which monitors the location at all the time to sends the information or location to caretakers via through gsm with respect to users by the help. of gps receiver duing vehicle is in motion the location is sends by sms in certain time.

BACKGROUND INFORMATION

the 5vpower supply is given to the arudino and gsm they have two switch cases

(1) switch case 1

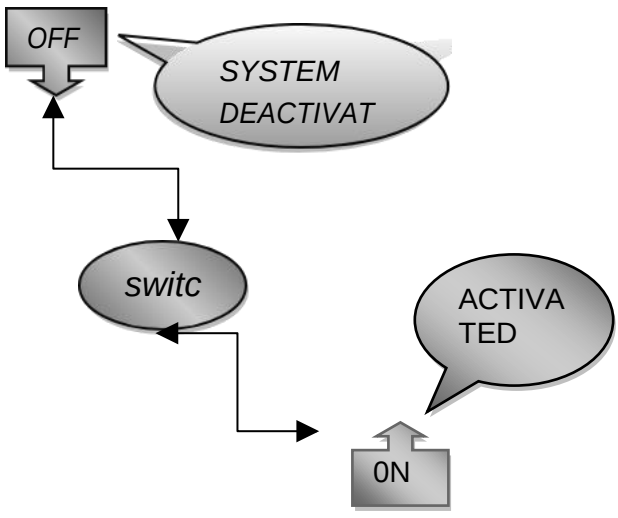
(2) switch case 2

switch case (1)-OFF

the system is deactivated and as usual

Switch case (2)-ON

the system is activated if the vehicle is moved they have tilt mercury sensor to now if the theft does not start engine and if tilt a vehicle then the system as send the sms because of mercury tilt whether the system is in activated or ON then if any one can start the engine message will send to caretakers

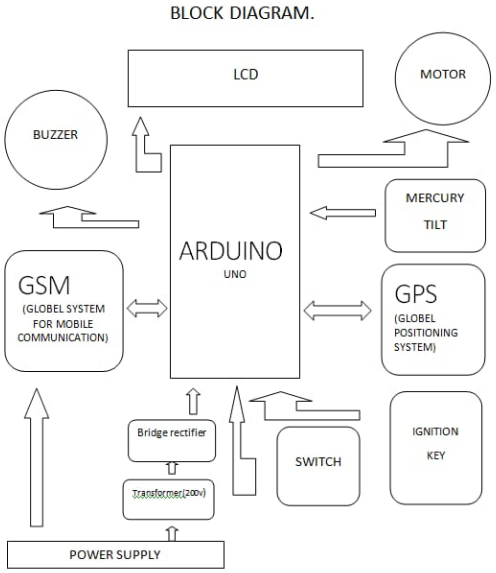


__TECHNIQUES__

This project implement 5v supply to transformer by using the regulator input volts change to system required 5v has to been given by using the capacitors and resisters all the terminals as like key,buzzer,motor,ignition key.

LOGICAL STRUCTURE

For this project there are connected terminals in additional having lcd,motor and switch as in the above block diagram.



By connecting all the components as shown if the owner wants to know the exact location of the system where system is activated to finding the location of the vehicle.system has given sms to coordinators until request to stop.by connection the buzzer where if thieft found or unknown person would started the vehicle it make a sound. Arduino, gps and gsm plays a major role in this project led shows the whether system is activated or deactivated and it also shows the location

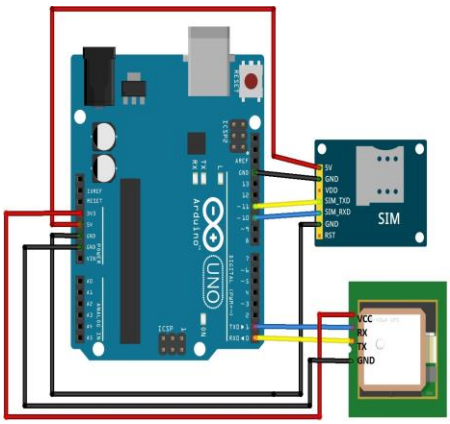
which as share in sms. motor is acts as like vehicle engine.

HARDWARE DESIGN

The major components arduino having (0-13)pins ,TX(transmitter),RX(receiver),vcc and gnd as ground in the below figure shows(fig 1) that the arduino of tx and rx are connected to gsm RXD and TXD and other pins are connected to lcd,motor,buzzer,switch,key.

FIGURE 1

Arduino is used for build the electronic projects and to control the whole system by arduino it is board as referred as lie micro controller and it has a software called IDE (integrated development environment)that handle with our computer.used to write and uploaded computer code to that board as shown in the above figure arduino is more popular in electronic student having to create a new thing which are used in future IDE is used to give a code to arduino. by using the gps and gsm are connect arduino to find the vehicle.

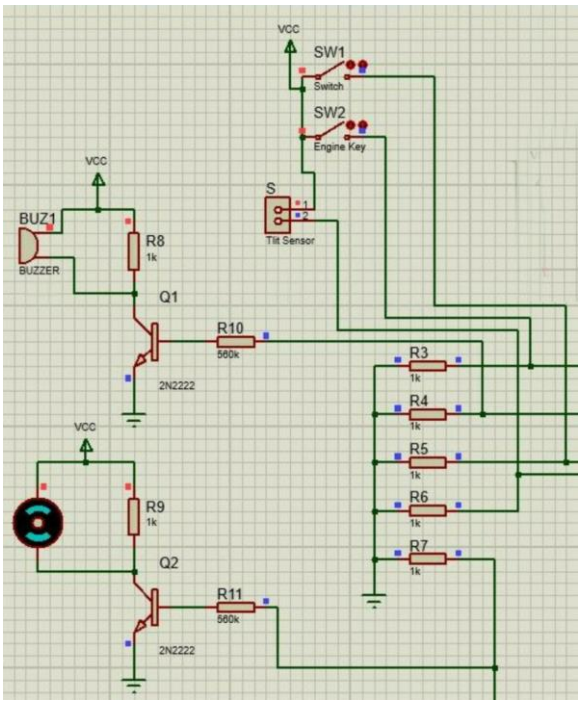


In this shown connecting to gps with arduino gps which is called as global position system it is receiver device simple and capable of receiving the exact position by using an antenna it shows the geographical position on the map .it receives the the location and transfer to owner by gsm using arduino

By using the switch mode having two cases as discuss.

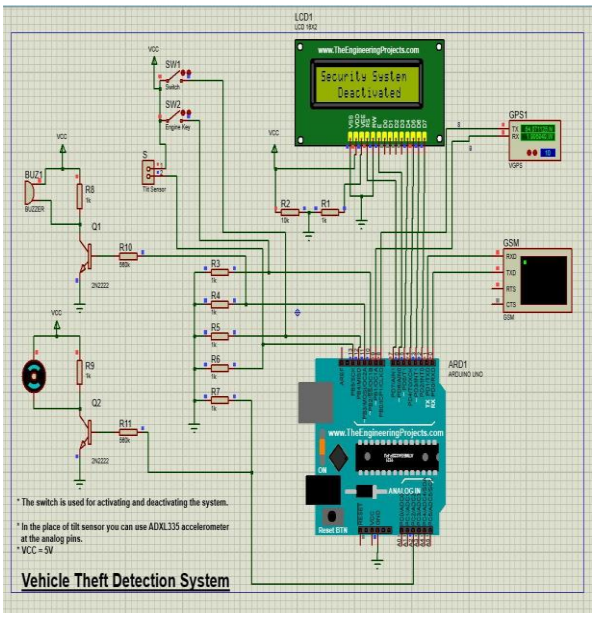
:::Switch mode OFF

It connect all as main role part switch, ignition key(engine key),tilt sensor to motor as shown in the below (fig 3)



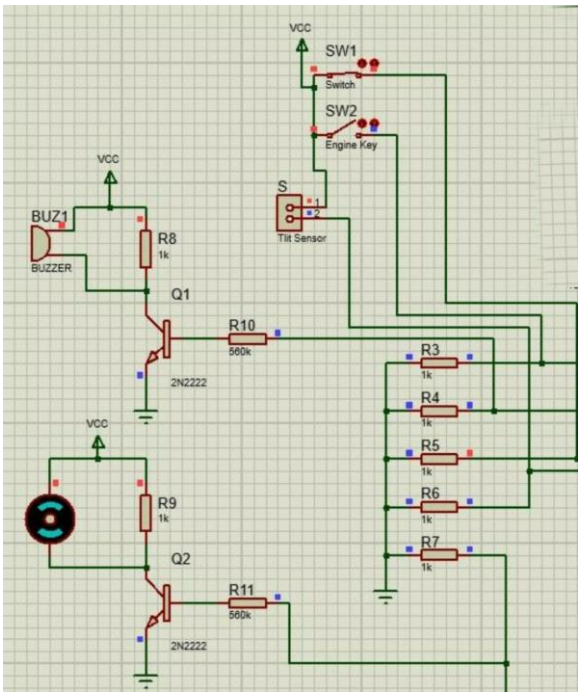
In this switch mode and ignition key off so the system is deactivated tilt mercury is also used whether if system is in off motor and buzzer is connected to transistor as as shown(fig 4).

Connecting all the components in over if the system is deactivated they not in work . user observed the switch if he wants too



:::switch mode is ON

In this case like as in switch mode off if the switch node is on then system is activated as shown in below figure.if the switch mode on in this case whether the owner want leave his vehicle he should keep a switch in secreat and ma sure it on when he wants to leave his vehicle alone.(fig 5)



In the above figure switch mode is on. Any one want to trying without owner permission they sent sms and system has stop the vehicle by using buzzer they make sound few minutes and continue massage information sends to user.

The over all design when the system is activated as shown in the below diagram if when switch is on then the system is activated if ignition key is also on as shown.(fig 6)

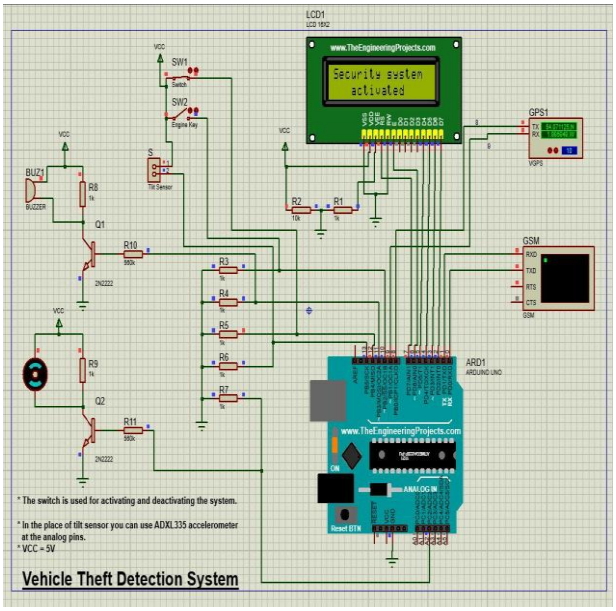


FIGURE 6 {SUBSYSTEM}

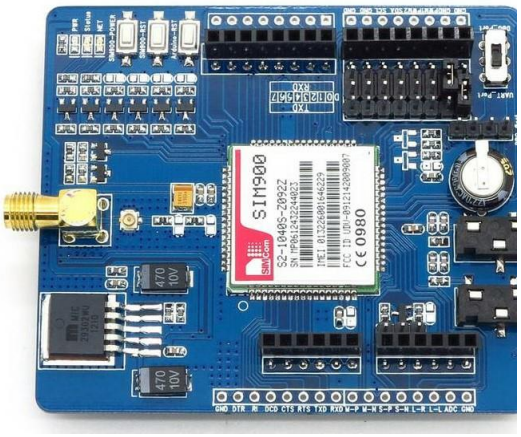
*_SOFTWARE DESIGN_*

In software design arduino has IDE (integrated development environment) it is written in programming language in this software we upload the program by editing any conditions without errors. in now days its is also uses to written as java the main part to control and work in th system it is used for so many ways

Arduino is uses for such as projects and development it has having physical board contains the software uploaded by using the arduino ide software. arduino makes the real time projects by uploading code in to board.

_COMPONENTS _

1. *GSM-global system mobile communication in this project SIM 900A used . it used to send the data information of location and updates to register programmable mobile number*



--::it operates 900 megahertz or 1800 MHz frequency band

--::it is low cost and secured wireless system.

--::it lunch first time in finland 1991 same frequency is continued as till 2010 900-1800 frequency band.

2. GPS-global position system

Gps receiver is to find the exact location at any time. by using antenna they find geographical location through satellite.it fins th latitude and longitude in global

--::it is accurate and very high speed.

--::its first lunch in february 1978

--::it also used in navigations ships and military and other purpose.

3. switch (mode ON -OFF)

Switch is used as on and off for entire system is wants to be decide the activated and deactivated.

4. LCD –liquid crystal display

*Lcd is used to display the system working and locations which as sent to the user.16*2 display*

5. *Motor*

It acts as engine. It as connected to key

6. *Ignition key*

Ignition is a key which is start the engine it Is connected to engine to start and stop.

*_CONCLUSION_*

The result of this project is to track the vehicle when the user or owner want to now his vehicle location as did. In our project we are added ignition and it using to control the motor as engine. It shows that the vehicle as stop when the owner as request to stop has to be adopt.

*__FUTURE SCOPE_*

As for future upgrades they are many things that have to be done in addition business uses and also go any objects where traced by this and making the system much smaller is very important. in the future purpose most of these are usable and for transport purpose and any other navigations.

*_REFERENCE_*

1. *SOWJANYA KOTT and HIMA BINDHU YANAMADALA department of science and technology and the topic of advance vehicle tracing system. It is issues at December 2013 in INTENATIONAL JOURNAL OF COMPUTER TRENDS AND TECHNOLOGY(IJCTT*

   It main objective are gps based tracking navigation system.

2. *PANAJ VERMA and JS BHATHA department of science and technology and topic is design and development of gps and gsm of tacking system and it issues at june 2013 (IJCTT) it main objective is to received co-ordinates of latitude and longitude from satellite.*

3. *BABURAO ONDUATI , V RAMA KRISHNA RAJU and D NARAYANA topic of gps and gsm location tracking(IJCTT) the main objective receiving the information by the sms.*