Vehicle Speed Tracking Using Gps in Android Smart Phone

Mrs.S.Kayathri[1]*, Mrs.S.Girija[2], Ms.S.Meena[3]

[1,2,3]Assistant Professor/MCA, M.Kumarasamy College of Engineering,Karur,Tamilnadu.
Corresponding author E-mail: kayathris.mca@mkce.ac.in,

Abstract

In the day today life, people are busy with stress work. The user can ride the bike in a very high speed without knowledge due to late wakeup in the morning and other depressions. Obviously, the high speeds of driving leads to lots of accidents. To reduce such accidents, In the android application has to plan to develop a mobile app which gives an alert to the user who is driving the bike and to send SMS to the traffic police officer and parents, when the person crosses the given input speed limit with the help of GPS, traffic police officer and parents can track the vehicle running location and time, where the vehicle violates the traffic rules. May be in future, the application will be a part of vehicle with the option enable and disable.

In the recent year, tracking technique is mostly applied in android application. Smart phones are using the same global positioning system like google maps and GPS tools. This application security measure can be applied in a single finger touch. Beyond this application easily implement route tracking technique, geo fencing, vehicle locking, accident location finding can be applied in the android applications.

*Keywords***:** *Android, SMS, Vehicle, GPS*

1. Introduction

The main goal of this article is the user can ride vehicle in a limited speed without playful. If the person exceeds the limited speed it gives the alert message to the number which was given at the time of registration. Using mobile phone just sends SMS to the parents with the user name and the city name with pin code and their speed limit. It is very useful to control the speed of the vehicle for the particular user without any risk

2. Existing System

While driving vehicle there is no alert message sent for the driver to control the speed of driving. There is no intimation also available for the user to control it. Finally it may leads to accidents because of unconscious.

2.1. Disadvantages

- There is no alert message
- No safety measure is present
- Intimation are not available for the user
- There is the possibility for accidents

3. Proposed System

In proposed system the user needs to register with the mobile number and have to set maximum speed limit. With this system there is a facility for the driver who crossed speed limit to travel in the limit of speed. This might be act as a better awareness for the person who drives.

3.1.1 Advantages

- User and their parents can received the message alert
- Sender only needs internet connection
- Safety measures are present and intimations are available for the user

4. Problem Definition

Now a day's peoples are driving their vehicle at high speed without their knowledge, it leads to accidents and also there is no alert message for the user. So without the user intention they won't cross their speed limit. This application used to avoid high speed and it is useful for the users. When the user can drive their vehicle before that if they can set their speed limit on the application and click speed limit, after that speed limit will be set and then the user starts driving at the time when the user crossing their given speed limit it gives the alert message to the number which was given by the user.

5. Overview

This article deals with sending alert message through SMS to the user address without time delay. This service is mainly useful for all kind of people. In regular day, people are driving their vehicle with high speed. So using this android application if the user can set the speed limit in the application and also on the location in mobile it can track the persons speed and also their location. If the users crossing the given speed limit means it gives the alert message to the user. In that message it initiates the user speed limit and their location where the user crossed the given limit along with pin code and speed limit.

6. Module Description

6.1. Entry page

In the entry page the user can set their speed limit. If the user crosses the given speed limit it gives the alert message.

6.2. Setting Speed Limit

Setting the speed includes the process that the user can give the speed limit and submit it by pressing set speed limit button and finally the limit is set.

Fig.1: Setting Speed Limit

6.3. Speed Range

Speed range was set in this application which denoted as km/hr in range. If the user crosses the given range it intimates that the user was crossing the limit range in km/hr.

Fig.2: Speed Range

6.4. Sending Message

If the user crosses the speed limit then the application sends the alert message to the mobile number which was given at the time of entering the application that the driver crossing the limit with km/hr along with the place and pin code.
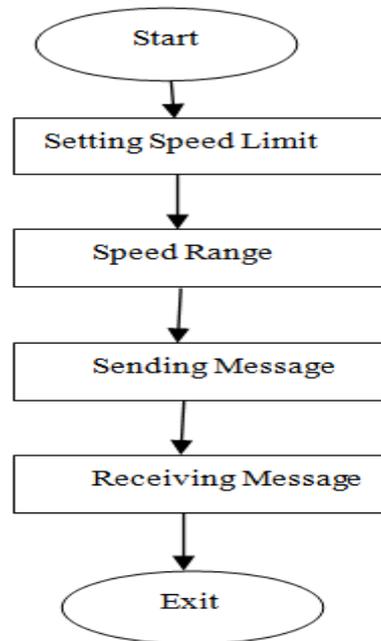

Fig.3: Sending Message

6.5. Receiving Message

The user can receive the alert message when the person crosses the given speed limit. It is useful for the user to reduce their speed limit and can avoid accidents and also it provides more security for the user.

Fig.4: Receiving Message

7. Flow Chart

8. Unit Testing

Unit testing is used to check the test cases and program logic. It is used to check all the individual modules functioning properly and check the input and output values. Each and every module code flows validated. Before the integration check all the individual modules. This is the basic structural testing used in business processing and system configuration. It is used in accurately check the entire individual unit and expecting results. Unit testing is the small part of the application, it is applied in manually.

9. Integration Testing

It is mainly used to integrate the all the software components combined together. It is done by after unit testing and before validation. Integrate the speed setting, speed ranging module. Based on that generate the SMS alert.

10. Functional Testing

Functional tests are mainly used to check the functionality of the sending message and receiving message. These two modules are integrated with android phone. Validate these two modules provide the systematic demonstration and customer requirement. Additionally this testing checks the data flow, business process, previous input and final output.

11. Black Testing

Black Box Testing is testing the software, its check the external working of the each and every module. In this article external structure, workings, software problems are identified by the black box testing. In the black box testing check the software and hardware requirements of the document. It is mainly used to check the input and output behavior.

12. White Testing

This testing method is used to check the internal working of the coding .This testing method is mainly used to check the inner loop, structure, logic of the program. It is check all the major areas of the program.

13. Conclusion

The main objective of the article is to send the message alert to the user. Each and every process handled by this article is explained by the list of modules. The new user can register the user details with the speed limit. This project provides the safety for the user. The user can receive acknowledgement message. After receiving the message the user can control their speed limit. In future this application helps the user, if the person crossing the limit above 60 it automatically off and also if the person didn't follow the road rules it send the alert message to the control room

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