Life: Live In Fearless Environment

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Abstract: **Now-a-days, one of the most serious issue in the world is regarding the security of the women. Particularly in India the numbers of rape cases are increasing day by day. LIFE is an application that is basically developed to provide security to women to some extent. It keeps the track of location and vehicle in which the women are travelling and its main objective is that it will provide a trusted vehicle facility. Other facilities provided by LIFE are emergency alert buttons which will allow the user to communicate with the respective authorities in case of emergency. It also provides user with emergency medical facilities in case of accidents.**

 Keywords: **GPS, LIFE, RTO, Mobile.**

I. INTRODUCTION

LIFE is an application that is basically developed to provide security to women to some extent. It keeps the track of location and vehicle in which the women are travelling and its main objective is that it will provide a trusted vehicle facility. Other facilities provided by LIFE are emergency alert buttons which will allow the user to communicate with the respective authorities in case of emergency. It also provides user with emergency medical facilities in case of accidents. LIFE provides a platform for the user to communicate with the transport facility and use the services without any risk of life. Life will provide user with prior information about the crime prone areas [1].

This paper shows an application that will be used by both the user and the Auto rickshaw/taxi driver. LIFE has two modules firstly for end user and taxi /Auto rickshaw driver. Initially both have to register in this application. The user have to fill up the details like Name, contact no, address, two contact numbers which can be approached in case of emergency and the user has to assign a username and password which will be used to login in the application. Similarly the taxi/Auto rickshaw driver has to fill his Name, vehicle no, ID proof, photo, contact no. and locality to register in the application which it will use in case of any misbehavior to trace the vehicle. Once the user has successfully logged in he/she will be able to input the destination where user wants to go. The location where the user is currently present is traced by the GPS and it is assigned as the source for the application. Depending upon the destination chosen by the user fare will be automatically generated by the application as per standard RTO rates. In case of emergency such as taxi driver misbehaves with the user then the user can use the alert buttons to communicate with the nearest police department and he/she will be rescued. When the user presses the alert button then at the back end the application searches the contact details of the nearest police department in its database and communicates with them via call. In case of emergency such as accidents the user uses the emergency medical assistance button which alert's the nearest hospital. LIFE also provides user with a safe anonymous travelling scheme, the user just need to provide the vehicle no in which he is going to travel .The server will already have a link up with the RTO database by using which the server can trace the vehicle owner only in case of emergencies.

II. LITERATURE SURVEY

In many scenarios we need help from the authorities instantly and hence there is a need of a strong communication medium to establish connection. Here rises the clear need of platform, where help can be made available. Recently there have been many applications which provide user to inform police department in case of emergency. One of these applications is "VithU" application launched by channel V. Its traces the location using a GPS and sends the message to the relatives whose details are saved in the database. The disadvantage of using this app is that in order to send a message user had to tap continuously on the side button. Sometimes a person unknowingly may tap the button and the false message may be send to the relatives. The second system that was build recently was "Towards safe cities" which used to divide locations on the basis of its past crime history, and it informed user to be alert while passing through that particular

location. The disadvantage of this system was that it only provided the information about the past crimes and to be alert rather than providing a system that can be used to fight against such crimes and problems. The system also failed in providing a real time communication system that can be used to communicate with the law authorities in case of emergencies.

III. PROPOSED SYSTEM

Technologies have evolved and replaced the previous ones with the new ones. In this system we use java technology for programming as it has the wider scope and used in most of the devices. We provide a 3 tier architecture mechanism. This submission works on 3 parts, the client-server-database.

A. System workflow:

Fig. 1 flashes the flow of the system. The architecture has mainly three parts the client (user/vehicle driver), the server and the database.
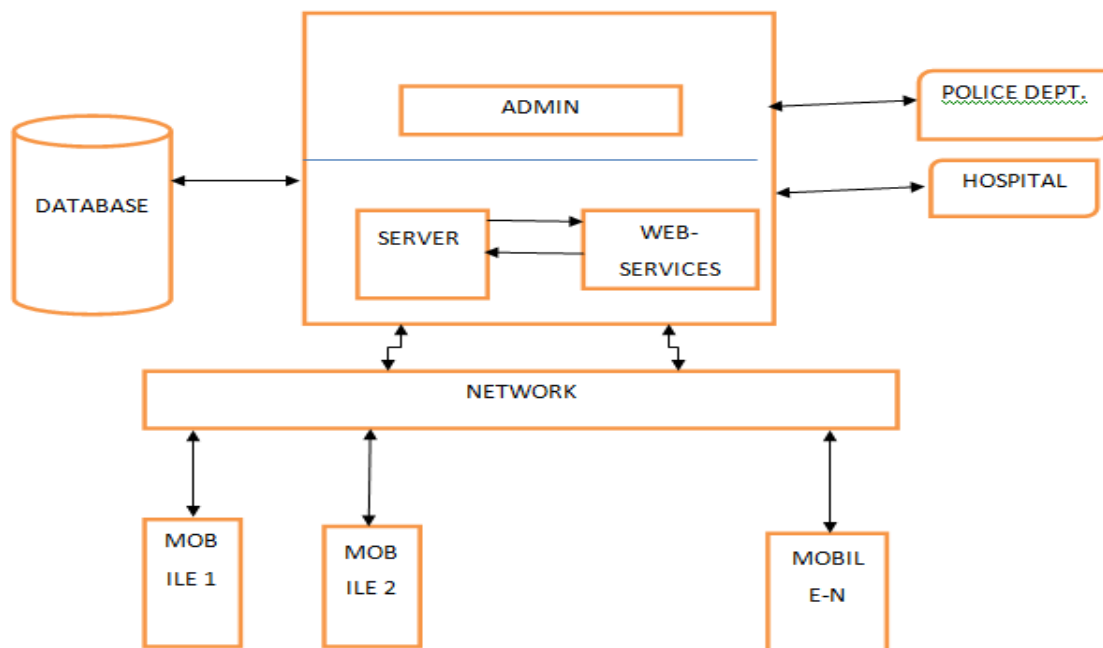

Figure.1. System Architecture

The server plays a crucial role in the system architecture it acts as a middleware between the user and the vehicle driver. The user and the vehicle driver firstly have to register themselves. After getting registered the user can use the system to select the vehicle and depending on his/her location the server will search for the nearest vehicle from its database and will give the user with list of vehicles, from which the user selects one and sends a request. On the other hand at the same time the server will send the request that it received from user to the vehicle driver. The driver is then requested to either confirm or reject the request. If diver accepts the request the vehicle owner goes to the source where user is currently present and drops him/her at the destination. And while travelling any problem happens then vehicle owner can contact other vehicle owners to drop the user. If user reaches safely then he/she simply presses confirmation button and if not then emergency buttons are used by the user and the server will connect the user to the police dept and hospital depending upon the scenario.

B. Server and database as a backbone:

The server works mutually with the database. The server will frequently access the database for its process, so it is necessary to have a strong and reliable database along with a Data ware house. The sever will use the database to obtain data about the vacant vehicle, hospitals, police stations etc. All data about the active user along with the vehicle information is stored frequently in the database, so in future data can be retrieved in case of emergency. The server will use the GPS to navigate the user and will provide client with a Google map to ensure the user that he is travelling in the truthful direction.
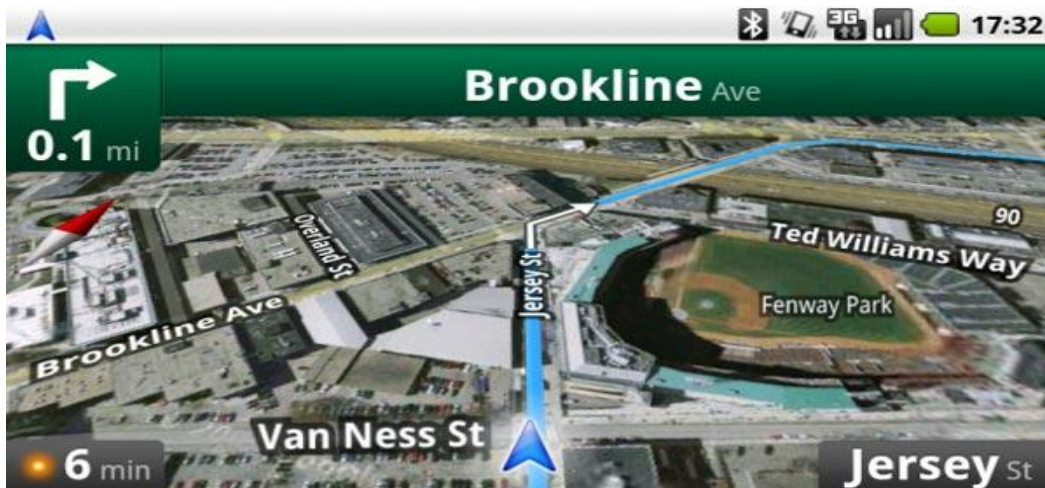
Figure 2: GPS navigation

The server will use GPS to track the current location of the user in case of emergency.

Figure 3: tracking of cell phone via GPS

The server will search for the nearest vehicle and the shortest path to the destination on the basic of shortest path algorithm. By acquiring the shortest path it will generate the fair by the following calculation. Let x be the source and y be the destination then by using shortest path algorithm the distance between x and y say (x-y) is the maximum kilometres to be travelled by the user termed as max_d. Suppose R is the prior rate of a location per kilometre then the maximum fare the user should pay is given as,

$$Cost=R*(x-y)........ (1)$$

Or

$$Cost =R*max_d...... (2)$$

This generated Cost is provided to the user by the server on focusing which the user can either agree or disagree to use the service.

C. Server role in case of emergencies:

As said before the server also acts as a middleware between the user and hospital or police department during emergencies. There may be two different scenarios where the server will play an important role given as,

1] The GPS receives the information in a proprietary message format. This message is then read a microcontroller which in this case is a mobile system which will read the data and will provide server with a readable data
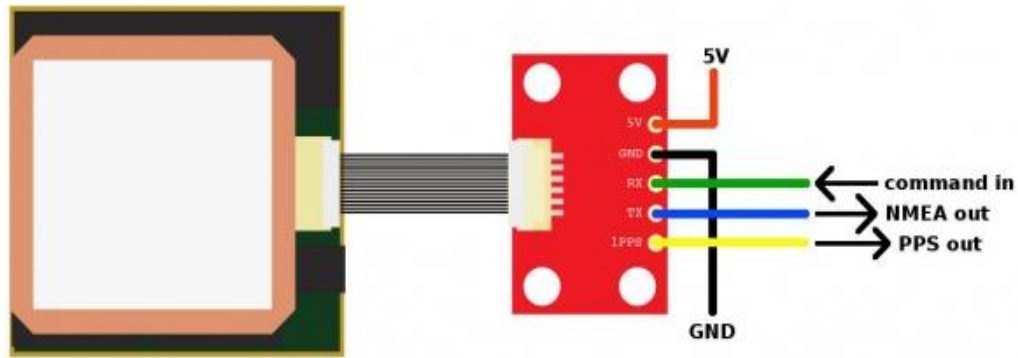
Figure 3: GPS connected to a Mobile system

The server will receive information from the GPS as given below,

Time: 235387.000 is 23:53 and 17.000 seconds according Greenwich meantime

Longitude: 5013.7640N is latitude in degrees decimal minutes, north.

Latitude: 10512.5792W is longitude in degrees decimal minutes, west.

Number of satellites seen: 08

Altitude: 1577 meters.

On the basis of above information the server tracks the location and the tracked location will be then sent to the police department and hospital to trace the user's location.

2] If the authorities fails to trace the user due to some technical issue then at the later stage this application can be used by the authorities to identify the previous status of the user .The server will provide information such as users hired vehicle no, source from where the user is hired, time of hiring, status whether user reached and route from where the user navigated. At the later stages this data can be used trace the driver. The user can also travel with an unknown person by having no fear of her life, by inflowing the vehicle no by which the user is travelling.

IV. CONCLUSION

Thus we have proposed several methods for the safety of the user by providing secure vehicle facility and emergency alert facility. Our android and browser plug-in implementation show that our approach is efficient both in terms of computation and communication overhead. It also provides user with proper fare on the basis of standard RTO rates. In future work we will develop modules for different modes of transport such as train, bus along with prior booking facilities. We will also provide online payment facility to the user.

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