

Trip Tracking System

Sakshi Nagavkar¹, Malay Mestry², Heenal Mendon³, Prof. Yogita Shelar⁴

^{1,2,3}B.E. Student, Information Technology, Atharva College of Engineering, Mumbai

⁴Assistant Professor, Information Technology, Atharva College of Engineering, Mumbai

Abstract - In Today's world, Android is one among the foremost widely used technology. It is being implemented in various fields like gaming, communication, social media, shopping and daily organization, etc. There's yet another field where android technology is implemented such as public services like Police, Hospital/Ambulance, Fire Department, Transportation, Grocery/Restaurants, etc. Live Tracing system means a GPS tracking device that send its location to the end user at a consistently high frequency. It updates user's real-time location every few seconds. GPS Tracking devices communicate their positions by taking signals. This system can even be used for safety of your loved ones. This tracking system is an app that enabled to trace and monitor your Family's location. The aim of the project is to create a system that allows the parents and loved one's to keep track of their kids when their child is out of their view or during a family trip. However, with the tracking system the parent can trace and monitor their child's location with the help of a simple app and during a trip they can keep a track of their relatives and friends. The Live Tracking System is basically a multipurpose safety system since it can be used for any safety purpose tracking which will work in android platform. This also helps parent to track school buses of their children and at what time they'll reach to their respected stop.

Key Words: Location, Directions, GPS.

1. INTRODUCTION

Now a days with the rapid increase of Smartphone's devices, there users also are increasing because it becomes a significant source of data. It's apparently showing the interest of users in mobile applications that provide storage, analysis and visualization of the data. Most of android smart phones equipped with computer processing ability are used to access networks and use different applications developed to satisfy the user requirement via mobile communication network. In previous seven years, different android Mobile applications are developed including top paid and free apps, also some target GPS Global Positioning System are developed. Based on android mobile applications named as GPS phone tracker pro, Mobile Location Tracer and Location Tracker provides location address of the user and popular applications on Android Google Play but these applications don't have any advance features but still over millions of people downloaded these applications. Furthermore, applications like Locate My Friends, Family Locator and

Family Locator & Messaging have also over 0.6 million user downloaded history and are used for locating friends and family location but it's lot of functionality complaints from users, which includes glitches and application crashing. There are some famous mobile applications available in market which tracks vehicle or user's location and these apps has quite downloaded history but user complaints about the features of the applications. Other applications also are designed with limited functionality to trace lost devices e.g. Where My Droid , GPS Phone Tracker Pro and Mobile Location Tracker. Online location tracking using GPS could be a location- based system which is implemented for multiple purpose of the user. Nowadays, an android mobile is a most popular and day to day life routine for each next person. An android application is used for both personal and for business as it allows you to trace your real time location. So, these android applications may be used for helping and providing people a service which is secured and safe in any situations.

As these Smartphone's are providing numerous unique facilities, more and more people are becoming drawn to them. Thus here, including best possible features and resources has become the requirement of the day. Moreover, GPS there by device which offers an excellent service of getting respective location. This facility is useful in developing application which can track locations of each activity of kids, relatives while they are outside the house. In this live tracking system family and friends are able to trace the activities in real time location with the assistance of geolocation API.

With ever-increasing usage of mobile apps, geolocation and tracking functionality are often found in an exceedingly majority of apps. Real-time geolocation tracking plays a vital role in many on-demand services, such as:

- Family location tracking
- Tracking each other on journey
- Tracking your children's school bus

Real-time tracking technology is beneficial for several purposes, including finding directions to specific locations.

1.1 Aim

GPS vehicle tracking technology has become popular in a very short span of time. It traces the location and position of vehicles. Commonly, a GPS vehicle tracking system will have

a tracking device inside the vehicle along with software and a server which allows the user to trace the vehicle from the headquarters. It's usually implemented by fleet operators for routing, on-board information, dispatching and security. This system allows you to effectively manage your business, improvise the services and also to cut back the value. Our basic aim was to make an app which might help users to share his/her travelling route to their friends, family or loved one's.

1.2 Objective

Our main objectives of Trip Tracking System were:

- To keep a track on their loved one's by sharing their travelling route.
- Crime rate could even be reduced.
- Road trips can often done more systematically.
- To reduce anxiety and stress.
- Help parents keep track of their children's autobus.

1.3 Scope

- In future we are going to extend this project to a much bigger extent.
- Deployment of GPS tracker helps to trace and monitor commercial vehicles like trucks, buses, heavy commercial vehicles, Logistics and construction vehicles.
- The increasing sales of business and commercial vehicles would increase the adoption of GPS Tracking Devices.
- By tracing and managing these vehicles in real-time, enterprises can efficiently utilize their resources.
- It also ensures the protection of vehicles.

2. FEASIBILITY

2.1 Technical Feasibility

Software and tools required to make and use this method are easily available online free from cost. Downloading and installing these tools is fairly easy with stable internet connection. On the software side, we used Android Studio code for all the coding purposes using java as coding language. For the Backend purpose, we've used Firebase and for location we've integrated Google Geolocation API.

2.2 Economic Feasibility

This system is quite feasible economically because it doesn't require any paid software and all the tools, software, languages are free and available on the net. It requires

elementary things like a smartphone, laptop or a private computer with a location enabled and a stable internet connection which is nowadays during this online world available with everyone.

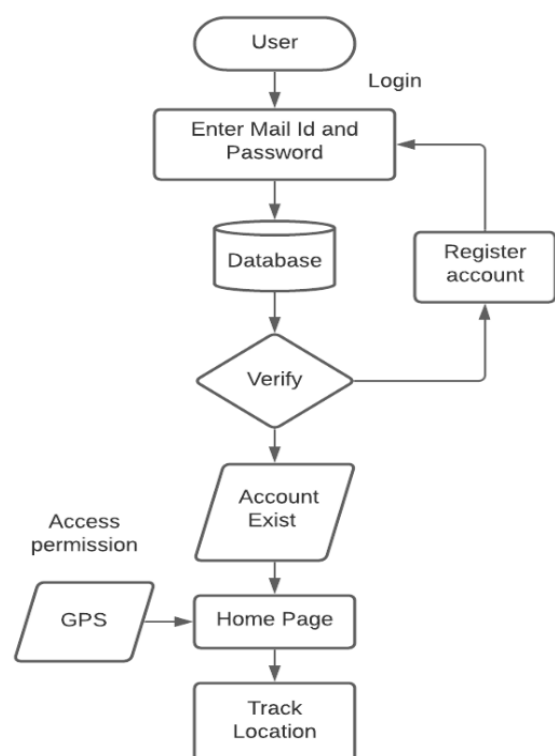
2.3 Operational Feasibility

This system is simple to use with an intuitive GUI which helps people with no technical knowledge to use it with none problems. The installation of tools and software is additionally quite easy and people can set this system up on their smartphones with none problems.

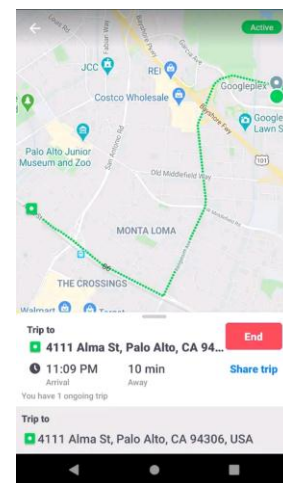
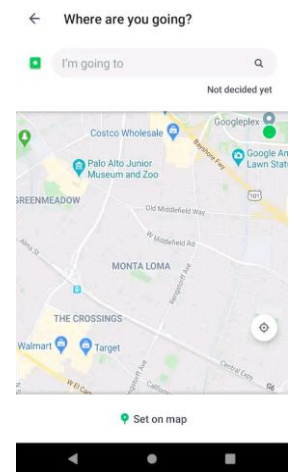
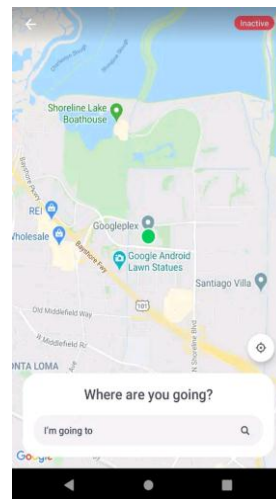
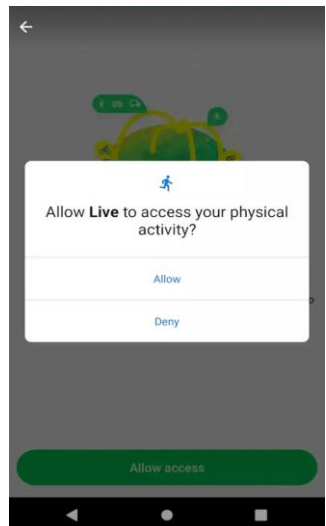
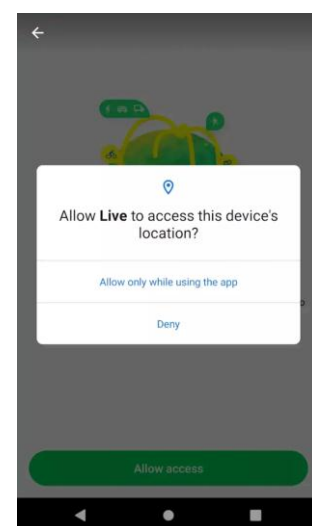
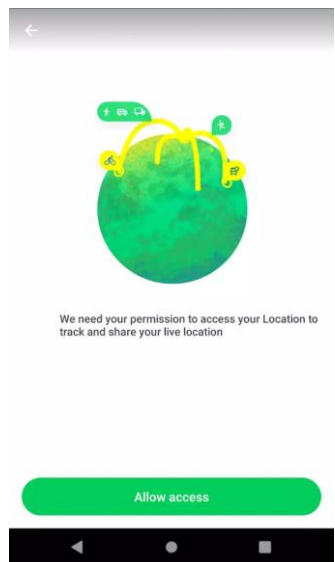
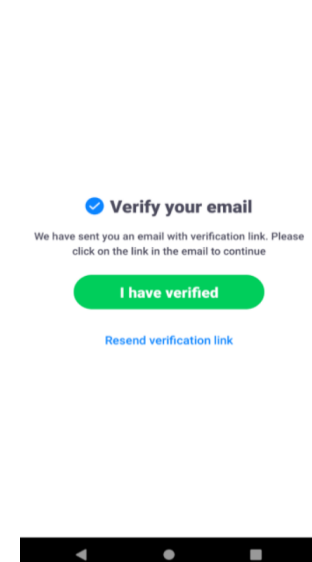
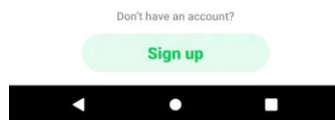
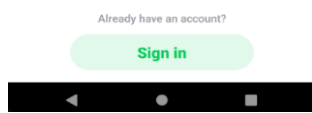
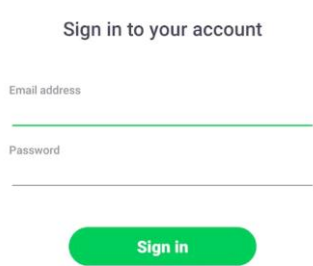
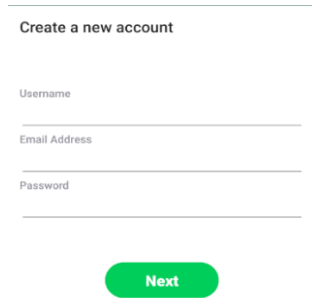
3. PROPOSED SYSTEM

- If you are travelling in a larger group, you can share your location for easy tracking purpose.
- This system is proposed based on approach that starts by allowing to share his/her GPS location through mail.
- It will share real-time location trip and when turned off will send end trip notification for security purpose.
- It also enables how much time is left to reached your selected destination.
- For your family ones, you can track them during their way to the home.

4. FLOW CHART



5. RESULTS



6. CONSLUSIONS

We have concluded that this proposed system is user friendly and easy to handle. This system is simple & gives fast response to the user/victim in need anybody who is using smart phone with the internet connection can able to trace his real time location and hence it also shows the destination which is required by the user.

Overall, the development of the tracking system was fairly effective. All design goals were met and all the primary objectives were achieved. Some extra features were also introduced and included to the system to convince its flexibility and enhancement.

REFERENCES

[1] Qadir, A. M., & Cooper, P. (2020, June) In *2020 8th International Symposium on Digital Forensics and Security (ISDFS)* (pp. 1-7). IEEE.

[2] Karkare, S., Rokade, P., Andhale, A., Bansode, S., & Ganorkar IJERT (2020, July).

[3] Sharif, S. A., Suhaimi, M. S., Jamal, N. N., Riadz, I. K., Amran, I. F., & Jawawi, D. N. IEEE (2018, July).

[4] M. T. Kamisan, A. A. Aziz, W. R. W. Ahmad and N. Khairudin, "UiTM campus bus tracking system using Arduino based and smartphone application," *2017 IEEE 15th Student Conference on Research and Development (SCoReD)*, 2017, pp. 137-141.

[5] Tushar Shinde, Harshal Pore, Tejas Chavhan, Amruta Pokhare, 2017, Employee Tracking System using Android Smart Phone, INTERNATIONAL JOURNAL OF ENGINEERING RESEARCH & TECHNOLOGY (IJERT) ICIATE – 2017, Dec.