Child Tracker

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Abstract- *Android operating system is at the top in market because of its features like portability, platform independence, and low memory consumption. As android operating System is used in mobile phones, tablets and laptops it has covered more than 80% of the market. Now everyone is using android phone. As android is an open source operating system many developers are developing various applications every day, Millions of applications are available for use free of cost. These applications are helpful for Ticket booking, Banking services, Online shopping, Tracking our family members etc. The Secure Child Application is designed for School and Parent to track the children while they are travelling through School Van. The days are Gone when one of the two parents will sit at home to take care of the children and one earns. Now time has come for both the parents to work; in such scenario the security of children is very important. The numbers of users have Android phone equipped with Global Positioning System which can be used efficiently for security and protection purpose. This Application is mainly developed for toddler going to school to make sure that at what exact time child has reached school and at what time he/she left school. Also gives the van location and information about van drivers and Babysitter which will be in van to take care of toddlers. This also gives the expected time of the van while pick up and drop. This "Secure Child" is a multipurpose children safety application which will work on android platform. And also staff to upload question bank, assignments etc. With the help of this system admin can easily maintain the records of many students without any paperwork.*

I. INTRODUCTION

Today is the world of Smartphone right from the villagers to metropolitan every one carries Smartphone. Among these about 84 percent of the market is covered by android and this share is growing continuously, considering this fact in mind, the very important issue of Children security can be resolved using Android phone. Children security is the main aim of this application. For a parent it is risky to give children with school bus driver. Will they reach school? Will the driver drive bus within speed limit? Will he bring them to home safely? Will he follow the proper root to home? All such question will come to the parent, so there is a need to solve these questions. This application Secure Child will be very helpful to such worried parents and assures them the safety of children. Internet has brought revolution in the field of communication. One can use internet for various purpose but the main aim of internet is sharing of information. The most useful application of internet is web services where internet plays a very important role. "Secure Child" is an application which will take care of your child while he/she is travelling to school and from the school here Global Positioning System reading is used for tracking the bus. This application is used by both School and Parent. School will maintain all the database of Student like Name of student, Parent name, Parent phone number, Van number through which child will travel and also the Drivers and Babysitters details like their Name, Phone number, Licenses number and Address. Any change in Driver or Babysitter will be immediately informed to the parent this is done to avoid the scenario of fake Driver or Babysitter. Also the Status SMS will be sent to the parent saying Reached school, Left School or Absent in School.

There are various locating technology as describe:

- GPS: It is Global Positioning System It locates a user through a device that is in communication with a constellation of satellites.
- Wireless Position: It locates a user using both private and public Wi-Fi access Point, user can be mapped according to the location of these access point.
- Cellular identification: It locates using cellular data of mobile phone.
- IP Location: It locates users using IP address of the internet network.

Figures:

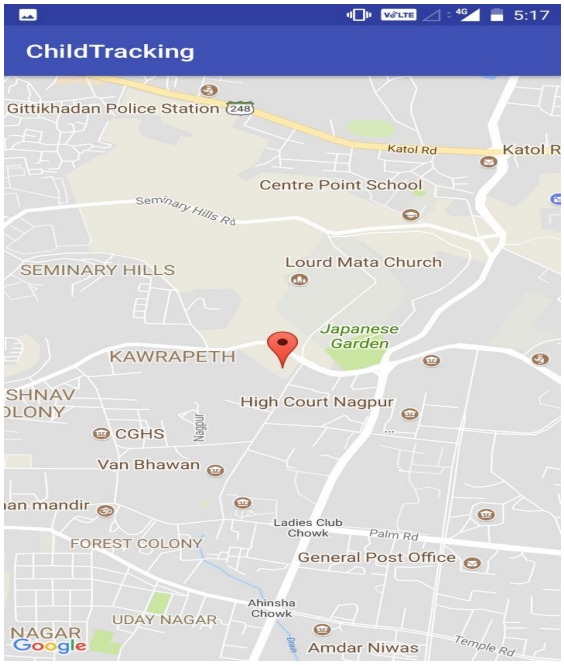

Fig 2: Child Location

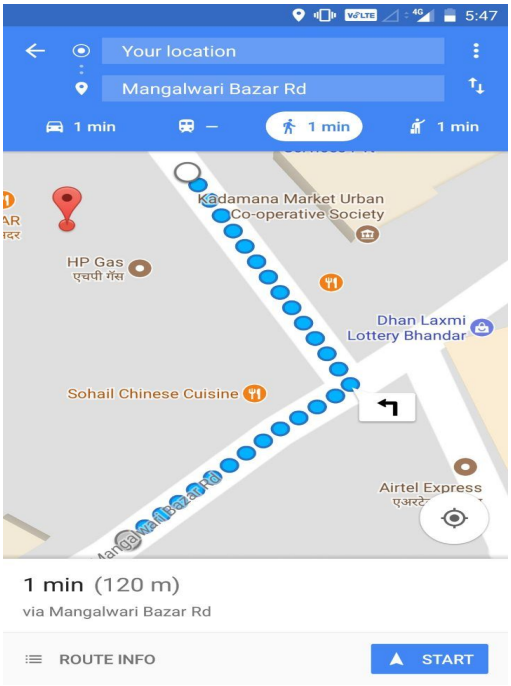

Fig 3: Location.

II. RESEARCH ELABORATIONS

Existing System

There are verity of general purpose and specific GPS based application such as Run keeper, Easy Tracker and Family360, Tracking pro. All these have main function of finding and storing location of friends on the map. Run keeper has added functionality of measuring the heart rate and consumption of calories. Family360 will ask the permission for sharing your location to the people you have included in your family. There is an application called CHEEKA which focuses on common usage by everyone irrespective of age group also irrespective of activities like sport or fitness. There are various locating technology as describe:

- GPS: It is Global Positioning System It locates a user through a device that is in Communication with a constellation of satellites.
- Wireless Position: It locates a user using both private and public Wi-Fi access Point, user can be mapped according to the location of these access point.
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Among these various technologies Global Positioning System is the most effective one to locate a user. With the emergence of Global Positioning System capable mobile, user started to write an application passing location data to a central server to make the location available to other user.

Proposed System

Secure Child application is developed in Android platform and database is created using SQLite which is the light version of SQL and works exactly same as SQL only difference is it takes very low space so best suitable for mobile apps.

1. The User Interface module that is front end and is done using Android SDK (software development kit). This will use XML for static User interface and JAVA for runtime changes in user interface.
2. User Authentication, Facebook integration and Google login integration. As shown in below Figure1, User Interface is created, user has to register either as a School or Parent, while registration as Parent all the required data should be entered such as Email Id, Password, Phone number, database is created using these fields which will be used throughout application. Password will be saved only once and n case of forgot password same password will be sent to the Email Id. As shown in Figure 2 here intent is used to send the password to the entered

email id. Integrating this application with the Facebook and Google will help in increasing the security of this app by this we can use corresponding Facebook and Google login id and password for this application. The important functionality is sending SMS about the status of child and also to notify changes in Driver and Babysitter details to corresponding parent as shown in Figure 2 and Figure 3.

III. CONCLUSIONS

This Application is developed in Android platform and used for the security of children while going to the school and coming back from the school which will be used for parent as well as School. Three methods will be used to track the exact location of Van and using accuracy check functionality the most accurate reading among all of three is obtained. The Reached School, Left School and Absent, status of the child will be sent to the parent just by one simple click which will assures parent about the safe delivery of their children. Driver and Babysitters details are also provided to be the parent, which includes Name, Address and Licenses Number. There are many applications present which will track location but this children tracking application which will assure parent the state of child and tracking of School van is new and very useful. As this application is developed in Android platform so cant used for other Operating System devices in future I would like to develop it for iOS as well. Many other options to track the Van can also be added into this application such as Van Speed limits Checker, to limit the speed of Van in School Zone and speed limit Zone. Integrating this application with the School App to enhance its feature can also be done in future. The most important Challenge is to generalize this application so that many schools can use it and different databases should be created for different schools as per their requirements.

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