# E-Tracker

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*Abstract*: **This application is meant to be work for field work users. The user will have his application in his android phone, when user will login in system, his /her image will be captured and his GPS location will be sent to admin where admin will view the GPS location and the image that is being captured in web application. After login GPS location of the employee will be tracked automatically by the system and send to admin after every 5 minutes .When the user logout the system again the image will capture as well as the GPS location will be send to admin. For building this technology we have use new technology i.e "React". React is framework which is developed by facebook for developing web and mobile applications. For web application we have used react js framework and for mobile application we have used react native framework. Both Nodejs and React are javascript languages that can be executed both client and server-side. Developers can execute the Reactjs code directly in Nodejs environment. As mentioned above our system is divided into two framework i.e web and mobile application .Admin is going to work on web applications and user or employee is going to work on mobile application, React framework is used for frontend purpose and for Backend purpose we have used nodejs and mongodb Servers. We worked on a Location Based Time and Attendance Tracking System Using Android Application. They proposed a smart location based time and attendance tracking system which is implemented on android mobile application on smartphone reducing the need of additional biometric scanner device. The location of an organization has a specific location, which can be determine by the GPS. Each employee's location can be determined by the GPS using smartphone.**

*Keywords*: **React, Admin, Employee, Web, Mobile Application**

## INTRODUCTION

Employee tracking system monitored and tracks company employee's using android technology. The application which developed for employee tracking is called as "E-Tracker". The manager can track Employees all day to day activities like SMS, call logs, data usage, web browser history, unauthorized calls. It also tracks the current location of the Employee.This app help to employee communications team members in a secure way. In this, we provide all functionality regarding it is a proper login, assign the task, Tracking the address etc. Using the reports manager can see the performance of employees.In various enterprise, the number of employees needed to perform many task could run into hundreds if not thousands. Managing and keeping track of these number using previous methods could prove diificult. The need for an employee tracking information system to assist in the management, monitoring, searching, tracking, updating of the employees records becomes challenge.Many corporate organizations have over 1000 employees. From the process of recruitment up to the employment phase, several data are collected from these employees. The personnel department stores these data manually. Searching for a particular employee record could take hours to find which is not productive in today's fast paced and technologically driven enterprises. This is a simple scenario which currently affects employee tracking system within some corporate organization. Another case scenario could be in keeping track of an employee's current department or departments. It is well known that an employee can serve in more than one department or be moved from one department to another. Keeping track of these transitions could become tedious if no proper system is in place. In this paper, an employee tracking system based on Android operating system was developed. All the activities of the Employee will be monitored using this system. This system is helpful for the admin to track their employees through website.

## 1. MOTIVATION

It was difficult for company to monitor the employee details special for the companies working on the field of marketing or delivery services. Proxy attendance, unknown to the employee location was some of main issues.  So this system is mainly useful for overcoming this type of problems.

## 1.    1 Problem Definition

Some problems arises in previous tracking system are:
- Inconsistency in data.
- Loss of data.
- Insecure communication between mobile and central server.
- Inaccurate location tracking.

## 2.　　　Objective

- Maintain customer information is secure and easy. And access information anytime anywhere.
- Performance evaluation of employees admin can generate report weekly, monthly and yearly.
- Admin gets employee location on the backend.
- No need to maintain a diary in manually.
- Admin sees the details of the task, status, completion date and response of customers etc.
- We provide chatting functionality for discussion purpose.
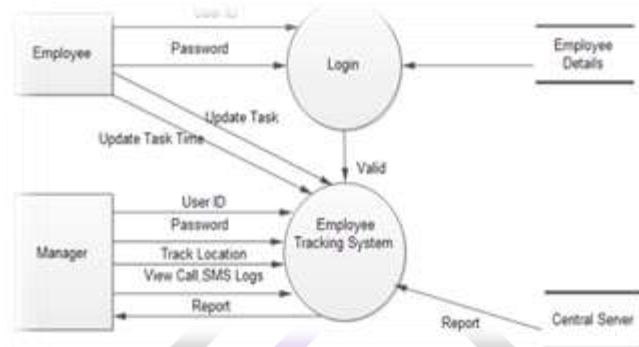
## 3.　　　SYSTEM ARCHITECTURE



**Fig -1**: System Architecture Diagram

**E Tracker Models**

**Planning**:-This is the first phase in the systems development process. It identifies whether there is the any need for a new system to achieve a business strategic objectives. This is a preliminary plan (or a feasibility study) for a company"s business initiative to acquire the resources to build on an infrastructure to modify or improve a service. The company might be trying to meet or exceed expectations for their employees, customers and stakeholders too. The purpose of this step is to find out the scope of the problem and determine solutions. Resources, costs, time, benefits and other items should be considered at this stage.

**Systems Analysis and Requirements:** - The second phase is where businesses will work on the source of their problem or the need for a change. In the event of a problem, possible solutions are submitted and analyzed to identify the best fit for the ultimate goal(s) of the project. This is where teams consider the functional requirements of the project or solution. It is also where system analysis takes place—or analyzing the needs of the end users to ensure the new system can meet their expectations. Systems analysis is vital in determining what a business"s needs are, as well as how they can be met, who will be responsible for individual pieces of the project, and what sort of timeline should be expected.
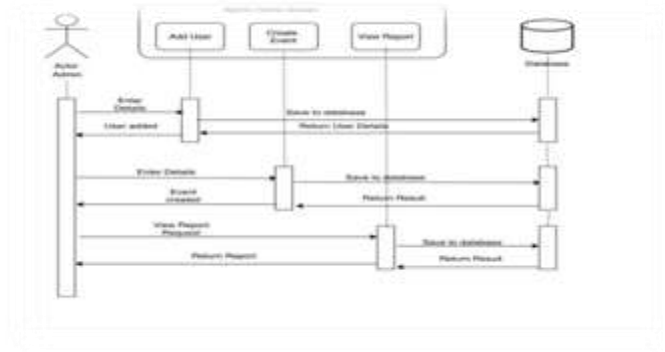
**System Design**: - The third phase describes, the important specifications, features and operations that will satisfy the functional requirements of the proposed system i.e Etracker which will be in place. This is the step for users to determine their specific business information needs for the proposed system. It is useful during this phase that they will consider the essential components (hardware and software) structure (networking potentiels), processing and procedures for the system to accomplish its objectives.

**Development**:-The fourth phase is when the real work begins—in particular, when a programmer, network engineer and/or database developer are brought on to do the major work on the project. Here we use flow chart which determines the process of development is properly arranged. The development phase marks the end of the initial section of the process. This process is sign of starting of the project.
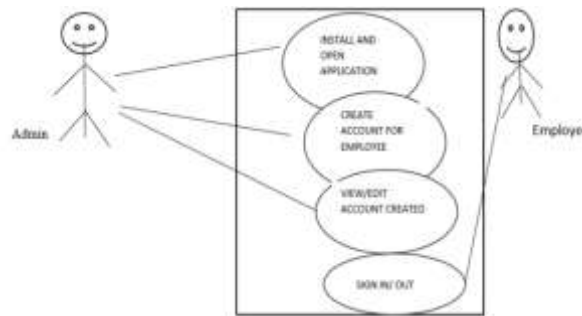
**Integration and testing**:-The fifth phase includes systems integration and system testing (of programs and procedures)which is carried out by a Quality Assurance (QA) professional to determine if the proposed system meets the initial set of business goals. Testing is done repeatedly to check for errors, bugs. This testing will be performed until the end user finds it acceptable. Other work of this phase is verification and validation, both of which will help ensure the program successful completion.

**Operations and Maintenance**: - The Final phase involves maintenance and regular required updates. This step is when end users can communicate with the system, if they have to, to increase performance speed, add new functionalities or meet more user requirements.

**SEQUENCE DIAGRAM**



**4.     CASE DIAGRAM**



**5.     FUTURE SCOPE**

However, there is still a lot of scope for future `improvement and add on in functionality.

▶       The following modules will be added in future :

1. A trigger of Notification.

2. Filters of responses.

3. Documents sharing.

4. Navigation Drawer.

5. UI panel that shows menu and setting, change the theme, about us etc.

**CONCLUSION**

The project titled employee tracking and management system is an web and android based application. The aim of the project was to easy work of marketing team. The project gives a good idea on developing a user-friendly application which satisfying different user. Hence the application has proved to work efficiently. This application is used to evaluate the performance of employees in the marketing team.
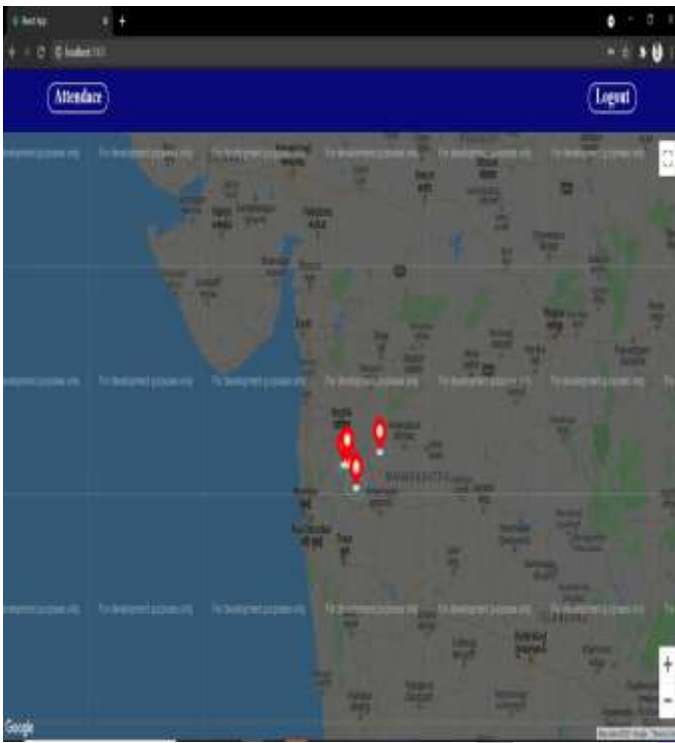
**SCREENSHOTS**

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