

# Employee Tracking System

Shivani Surve<sup>1</sup> Ashwini Thappa<sup>2</sup> Digvijay Singh Deora<sup>3</sup> Prathamesh Patil<sup>4</sup> Komal Sahare<sup>5</sup>

<sup>1,2,3,4</sup>Student <sup>5</sup>Guide

<sup>1,2,3,4,5</sup>Department of Computer Engineering

<sup>1,2,3,4,5</sup>Thakur polytechnic, Mumbai, Maharashtra, India

**Abstract**— Use of Smartphone is increasing day by day and is very effective tools for increasing computational power and security along with search and rescue. The aim of this research Employee monitoring system using android mobile is to automate the employee monitoring process in company by their Employees and also improve the organizational growth of the company. This application is user-friendly. This system improves accuracy in managing employees of the company by saving time, reducing manager efforts, Avoid the unnecessary use of company phones which are provided to the Employee for their office use only. Admin can monitor their Employees through Web application and know the employee location.

The Employee Monitoring System use network Technology which is supported by business Organization. Employee tracking system adopts a smart phone network. Based on the previous experiences such as inconsistency in the data, loss of data and findings of slow speed of 2G networks, we are implementing a new generation Employee tracking system called as proposed system. This proposed system has the five requirements respectively.

### A. Android:



Fig. 1: Android

Android is an open source and Linux-based operating system for mobile devices such as smartphones and tablet computers. Android was developed by the Open Handset Alliance, led by Google, and other companies. This tutorial will teach you basic Android programming and will also take you through some advance concepts related to Android application development.

### B. Android Architecture

Android operating system is a stack of software components which is roughly divided into five sections and four main layers as shown below in the architecture diagram.

**Key words:** Employee Tracking System, DVM

### I. INTRODUCTION

Google developed android operating system for mobile device which is based on Linux kernel. Android mainly focus on touch screen mobile devices. User interface is mainly based on direct manipulation. We can give input on-screen objects by using virtual keyboard. Application framework has Dalvik Virtual Machine and native libraries. Native libraries support the miscellaneous functionalities of Multimedia data processing, web browsing, database access, and GPS reception optimized with resource-limited hardware environment. The DVM (Dalvik Virtual Machine) runs Java code with low memory demand as being register-based. At the highest point of the layers, Android gives a component based programming structure so that developer can easily manufacture their own applications. Android has four Application components. Application components are crucial building blocks of an Android application. These parts are approximately combined with the AndroidManifest.xml which is application manifest file that describes each component of the application and interaction between them. First component is Activity, which is nothing but action on screen and also handle the user interaction with smart phone screen. Any screen on Android phone is activity. Second is Services, They handle background processing associated with an application. Then third is Content provider, Provide data to your activity. And the last one is Broadcast Receivers, They handle communication between Android OS and applications.

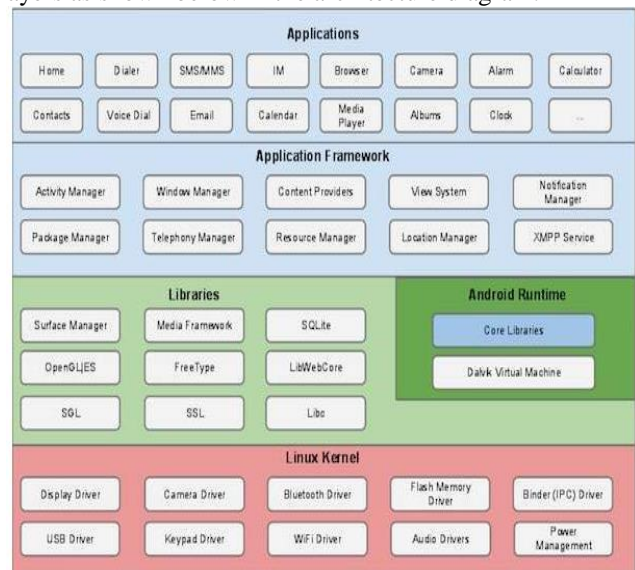


Fig. 2: Android architecture

### C. Linux Kernel

At the bottom of the layers is Linux - Linux 3.6 with approximately 115 patches. This provides a level of abstraction between the device hardware and it contains all the essential hardware drivers like camera, keypad, display etc. Also, the kernel handles all the things that Linux is really good at such as networking and a vast array of device drivers, which take the pain out of interfacing to peripheral hardware.

### D. What is Android?

Android is an open source and Linux-based Operating System for mobile devices such as smartphones and tablet computers. Android was developed by the Open Handset Alliance, led by Google, and other companies.

Android offers a unified approach to application development for mobile devices which means developers need only develop for Android, and their applications should be able to run on different devices powered by Android.

The first beta version of the Android Software Development Kit (SDK) was released by Google in 2007 where as the first commercial version, Android 1.0, was released in September 2008.

On June 27, 2012, at the Google I/O conference, Google announced the next Android version, 4.1 Jelly Bean. Jelly Bean is an incremental update, with the primary aim of improving the user interface, both in terms of functionality and performance.

The source code for Android is available under free and open source software licenses. Google publishes most of the code under the Apache License version 2.0 and the rest, Linux kernel changes, under the GNU General Public License version.

### E. Why Android?



Fig. 3: android for making our user side application  
We are using android for making our user side application.

### F. PHP

MYSQL is used as a database at the webserver and PHP is used to fetch data from the database. Our application will communicate with the PHP page with necessary parameters and PHP will contact MYSQL database and will fetch the result and return the results to us.

### G. Android - UI Layouts

The basic building block for user interface is a View object which is created from the View class and occupies a rectangular area on the screen and is responsible for drawing and event handling. View is the base class for widgets, which are used to create interactive UI components like buttons, text fields, etc.

The ViewGroup is a subclass of View and provides invisible container that hold other Views or other ViewGroups and define their layout properties.

At third level we have different layouts which are subclasses of ViewGroup class and a typical layout defines the visual structure for an Android user interface and can be created either at run time using View/ViewGroup objects or you can declare your layout using simple XML file main\_layout.xml which is located in the res/layout folder of your project.

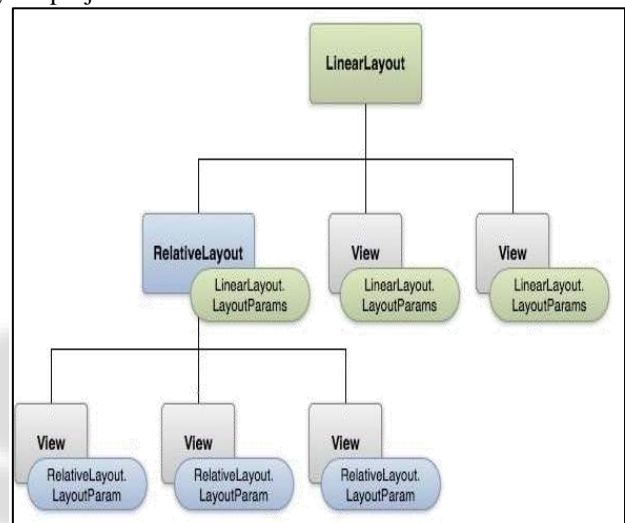


Fig. 4: Android - UI Layouts

Language use for android platform is java.

Tool use is android studio.

#### 1) Features

Admin WebApp-

Registration and login

Add Employee, enter details

View location on request

If GPS is off-notification to admin from employee

Employee Android app-

Enter id and password receive on mail

Location wise login

At the time of logout current location send to admin

### H. System architecture and explanation

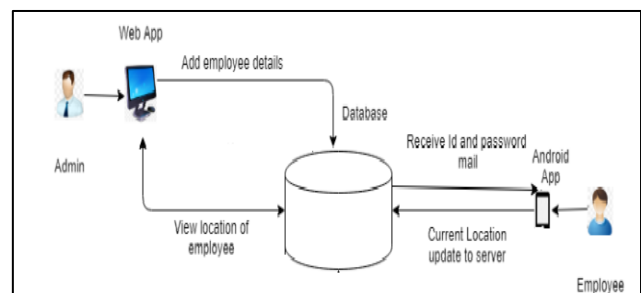


Fig. 5: System architecture and explanation  
Admin (Web app)

Admin Registration and login to application.  
Add employee  
Set user id and password for hr and employee  
View employee current location  
Employee (Web app)  
Login to app  
GPS location send to server  
Flow of Working

1) *Admin*

- 1) Admin registration and login to system
- 2) Add employee
- 3) Admin view the employee current location
- 4) View basic information of Employee

2) *Employee*

- 1) Employee login to app
- 2) GPS through location send to servers



Fig. 6:

I. *Hardware, Software Requirements*

1) *Hardware Requirements*

- Android Phone.
- Windows 7 or latest version
- 8 GB ram
- Pentium 4 + Processor
- 100 GB free Hard Disk
- Wi-Fi Router

2) *Software Requirements*

- Android SDK
- Android Studio
- Server on Java or php

3) *Advantages*

- Performance: End-user interaction speeds are faster on native applications, providing better response time with no network dependency.
- Richer user experience: Native apps allow development of better animation and graphical user interfaces.
- Easy to use
- User friendly

4) *Applications*

File sharing between students and teachers.  
Attendance management through android app.  
Notification about college's activities, events on android app.

II. CONCLUSION

Given the current versatility and variety of development options for mobile applications, the key is to determine what

platform will best align with your business problems and goals. Mobile applications are a powerful tool for connecting with consumers, businesses, and users, and their functionality and value is only increasing as the world continues to move toward mobility.

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