ATTENDANCE USING GPS AND SELFIE

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Abstract: In an organization there are several departments, each section has to perform necessary operations like data collection and preparation, entry, updates monitoring and reporting of data. The bang in the capabilities and features of mobile devices, like Smartphone's, tablets, and wearable's, combined with the ubiquitous and affordable Internet access and the advances in the areas of cooperative networking. Public want to get their things done as quickly as possible. They want effortless and fast access to each and everything. This paper analyzes the current attendance system with time- consuming, labor-intensive, low efficiency and many other shortcomings, and proposes an attendance system based on face recognition and GPS tracking and positioning. We have set up a number of functions in this system, not only adding a manual part, but also solving the phenomenon of students asking for leave and being late on the attendance system. At the same time, the system can meet the basic needs of classroom attendance. Whenever the class teacher is ready to start attendance, students can sign in according to the teacher's instructions.

Index Terms – **Attendance, GPS, Face Recognition.**

I.   INTRODUCTION.

In order to obtain a good result of recording the attendance, various methods are used which include either by manual recording or using the attendance machine. Each of these system either lack somewhere or are good to work with because of some reasons. In the manual attendance system, the infrastructure and installation cost is very less, but the accuracy is doubtful. It is also more difficult to do than the attendance system that uses machine. The cost of attendance system in the premises would be costly and the number of employees who will use the attendance machine must also be proportional to the number of attendance machine itself, otherwise it could have an impact on the queue when the employee simultaneously wishes to access attendance machine, such as when to come to work and clock out after work. Keeping in mind all the glitches, we have designed our system in a way to overcome these issues. In our system there is a feature to record the employee's position, which is absent in most of the systems. We utilize Global Positioning System (GPS) and image capturing available in the mobile devices already by default. We have developed our system based on android platform, since android is the most common platform that is easy to use, free for all and used by most of the people.

II.   LITERATURE SURVEY

Paper [1]This application is meant for field work users. The user will have this application in his android phone, when the user will login to the system his image will be captured and his GPS location will be send to the admin where admin will view image and GPS location in web application. After Login, GPS location of the employee will be tracked automatically by the system and send to the admin after every 5 minutes .When user logout the system again the image will be captured as well as GPS location will be send to the admin. Admin can view latitude and longitude of the GPS location sent by the employee.
Name : Suresh Babu.

Paper [2] From olden days there are many methods for evaluating the attendance, for example, paper and pen method in this method either the supervisor will take the attendance or under his control, the workers used to sing with their names, but this process had many backlogs and many proxies can be generated. Later on the technology developed to great extent in the similar way the way of taking attendance also developed a lot for example in current days they are using RFID chips, biometric devices, etc .
Name : Mr.J. Albert Mayan, Desu Vamsi.

Paper [3] The purpose that this tracking system serves is to keep track of the employees of the company who have the nature of their job which involves a lot of traveling to various locations on a day to day basis. It is an amalgamation of Android as well as a Web application. The employee is supposed to pass the location and image as per the terms and conditions specified to use the Android application. The web application is used by the admin department to access the information which would help them monitor the location of the employee in a timely manner.
Name : Kaival Dholakia

Paper [4] The Primary Purpose of This Paper Is to Track the Workers/Employee Using A Phone (Android). From the Old Days, There Is Much Technique for Getting Attendance Like Register Using Pen and Paper Where A Person Will Take the Attendance or Employee Manually Come and Sign the Attendance Sheet in Front of The Supervisor. But This Method Has Too Many Faults; For Example, Workers Can Be Done. As Technology Is Getting Advanced from Day to Day, Taking Attendance Also Advanced from Pen and Paper to Biometric Devices. Still, Each Method Has the Same or Different Faults. To Eliminate These Disadvantages and Get an Accurate Result; We Came Up with This Idea of GPS Tracking.
Name : Amir Shaikh, Khan Tanveer, Prof. Dipashri Sonawale.

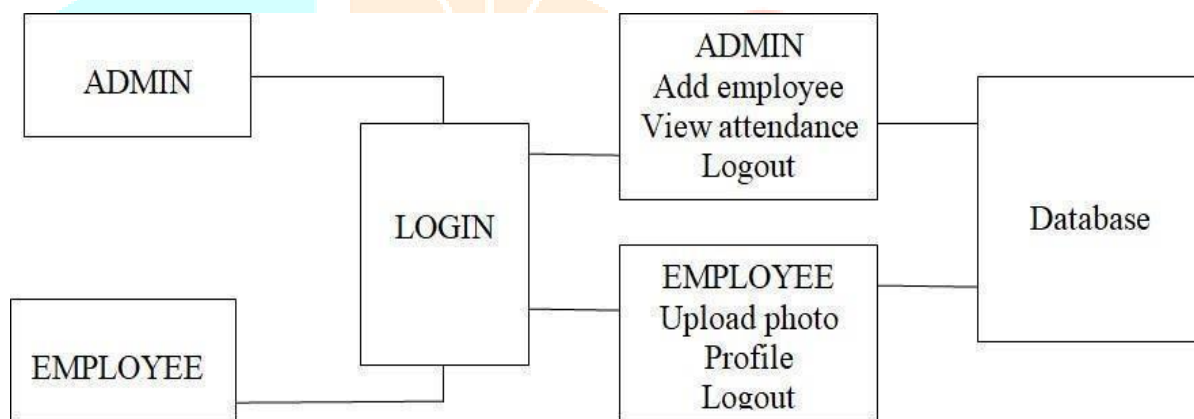## III.   IMPLEMENTATIONBlock Diagram

Fig : BLOCK DIAGRAM OF THE PROJECT

Software Implementation

Step 1: Preparing Your Development Computer

Before getting started with the Android SDK, take a moment to confirm that your development computer meetsthe System Requirements. In particular, you might need to install the JDK, if you don't have it already.

If you will be developing in Eclipse with the Android Development Tools (ADT) Plugin— the recommended path if you are new to Android—make sure that you have a suitable version of Eclipse installed on your computer as described in the SystemRequirements document. If you need to install Eclipse, you can download it from this location.

The "Eclipse Classic" version is recommended. Otherwise, a Java or RCP version of Eclipse is recommended. Install the SDK starter package from the table above. (If you're on Windows, download the installer for help withthe initial setup.)
The SDK starter package is not a full development environment—it includes only the core SDK Tools, which you can use to download the rest of the SDK components (such as the latest Android platform).

If you haven't already, get the latest version of the SDK starter package from the SDK download page.Step 2: Downloading the SDK Starter Package.

The SDK starter package is not a full development environment—it includes only the core SDK Tools, which youcan use to download the rest of the SDK components (such as the latest Android platform).If you downloaded a
.zip or .tgz package (instead of the SDK installer), unpack it to a safe location on your machine. By default, the SDK files are unpacked into a directory named android-sdk-<machine-platform>.If you downloaded the Windows installer (.exe file), run it now and it will check whether the properJava SE Development Kit (JDK) is installed (installing it, if necessary), then install the SDK Tools into a default location (which you can modify).Make a note of the name and location of the SDK directory on your system— you will need to refer to

the SDK directory later, when setting up the ADT plugin and when using the SDK tools from the command line.

Step 3: Installing the ADT Plugin for Eclipse.

Android offers a custom plugin for the Eclipse IDE, called Android Development Tools (ADT), that is designed to give you a powerful, integrated environment in which to build Android applications. It extends the capabilities of Eclipse to let you quickly set up new Android projects, create an application UI, debug your applications using the Android SDK tools, and even export signed (or unsigned) APKs in order to distribute your application. In general, developing in Eclipse with ADT isa highly recommended approach and is the fastest way to get started with Android.If you'd like to use ADT for developing Android applications, install it now. Read Installing the ADT Plugin for step-by-step installation instructions, then return here to continue the last step in setting up your Android SDK. If you prefer to work in a different IDE, you do not need to install Eclipse or ADT.

Step 4: Adding Platforms and Other Components.

The last step in setting up your SDK is using the Android SDK and AVD Manager (a tool included in the SDK starter package) to download essential SDK components into your development environment.The SDK uses a modular structure that separates the major parts of the SDK—Android platform versions, add-ons, tools, samples, and documentation—into a set of separately installable components. The SDK starter package, which you've already downloaded, includes only a single component: the latest version
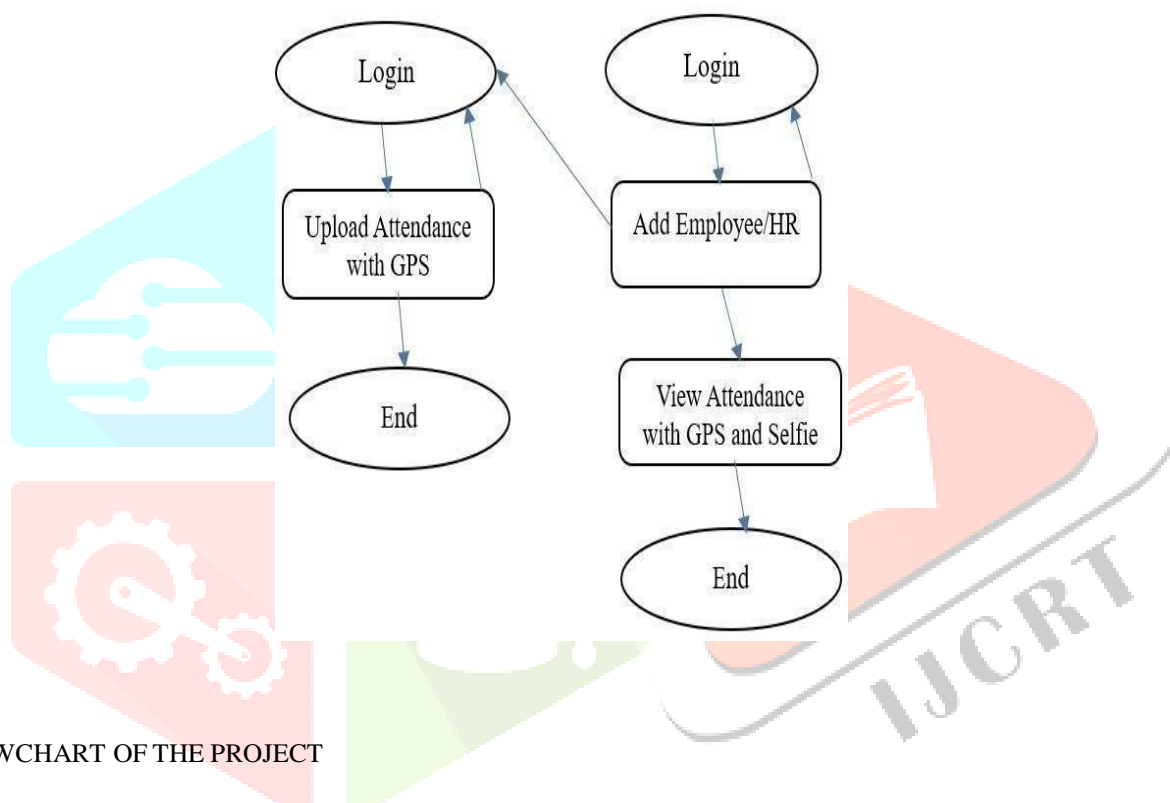
Flowchart

Fig: FLOWCHART OF THE PROJECT

IV.   CONCLUSION AND FUTURE WORK

With advances in digital technology, the quality of facial verification in face recognition attendance systems has improved, and the acceptance rate is relatively high. Face recognition attendance systems' appeal is enhanced further by their fast image processing time and ease of integration. The facial recognition attendance app improves employee attendance tracking while cutting costs. A system like this also provides an additional layer of protection to the workplace system. In Future the can be deployed for verification and Attendance tracking in various Government offices and Corporates. For access control verification and identification of authentic users it can also be installed in bank lockers and vaults.

V.   REFERENCES

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