Abstract

In this paper, we are discussing about our project Attendance Application. Here student Information Tracking System is an Android application to manage student attendance on mobile. In many colleges teachers use to take attendance in paper work. Main objective of this project is motivated due to the fact that the students' attendance records are one of the important elements that reflect their academic achievements in the higher academic institutions. This system helps teachers to take attendance through mobile and also keep in touch with student in some aspect. This System allow teachers to take attendance, edit attendance, view students bunks. And the record of the student attendance taken by the teachers will be stored in the server system of the college. It is also convenient to showcase the student's attendance in front of their parents.

1. INTRODUCTION

E-Attendance application is an android based application which will run on mobile. We have seen over the years that the process of manual attendance has been carried out across almost all educational institutions. The process is inefficient resulting in the false marking of attendance. This application provides an efficient way to the teachers to take attendance of students using their database. Database of students will be stored in the server computer and as per the requirement it will be fetched from it. And the attendance will be taken on it. After the attendance is done, result will be displayed on their system. Following this thought, we have proposed an attendance monitoring system based on the concept of web
services which is implemented as an Android mobile application that communicates with the database residing on a remote server. The scope of the project is the system on which the software is installed, i.e. the project is developed as an ANDROID application, and it will work for a particular institute. Our project is an efficient and user friendly Android mobile application for an Attendance Monitoring. In his application student can also registered with their name, branch, and year and with the roll number. If the student wants to see their attendance then they can see using their user name or id and also password which has been generated. Staff can also upload the any notice through the mobile which is visible to student by their own smart phone. The flow of this project has been elaborated appropriately in further steps.

Figure 1: Flowchart of monitoring system based on Android mobile application

Attendance Management System is software developed for daily student attendance in schools, colleges and institutes. It facilitates to access the attendance information of a particular student in a particular class. The information is sorted by the operators, which will be provided by the teacher for a particular class. In the present system all work is done on paper. The whole session attendance is stored in register and at the end of the session the reports are generated. We are not interested in generating report in the middle of the session or as per the requirement because it takes more time in calculation. At the end of session the students who don’t have 70% attendance get a notice.
2. METHOD IMPLEMENTED

- During this phase, users interact with systems analysts and develop models and prototypes that represent all system processes, inputs, and outputs.
- It resembles the final tasks in the SDLC implementation phase, including data conversion, testing, changeover to the new system, and user training.
- It combines elements of the system planning and systems analysis phases of the Systems Development Life Cycle.

The main task of our paper is to design a system which can detect an accurate attendance of student. The main benefits of this are no one can punch proxy attendance. This can be done in earlier process.

3. EXISTING SYSTEM LIMITATION

In the existing system whole work has been carried out on paper system which can be changed further changed in to server type. And at the end of this once it has been get implemented student will too get the whole information where they spend their time in institution. Disadvantages of Present Working System:

- Paper work
- Not User Friendly
- Difficult in generating reports.
- Fake attendance
- Time consuming
- Manual work

4. PROPOSED WORK

In this paper these system contains four main task they are as follows:-

- Exact Data
- Time Saving

Characteristics of Proposed System:

- Eco Friendly: The proposed system is user friendly because the retrieval and storing of data is fast and data is maintained efficiently. Moreover the graphical user interface is provided in the proposed system, which provides user to deal with the system very easily.
- Data generation: data can be easily generated in the proposed system so user can generate the report as per the requirement (monthly) or in the middle of the session. User can give the notice to the students so he/she become regular.
- Saving papers: The proposed system requires very less paper work. All the data is feted into the computer immediately and reports can be generated through computers. Moreover work becomes very easy because there is no need to keep data on papers.

The purpose of choosing this system is basically an operating system for smart phones that is based on a modified version of Linux. It was originally developed by a startup of the
same name, Android. Now the Android is all over available. Now is an exciting time for mobile developers. Mobile phones have never been more popular, and powerful smart phones are now a regular choice for consumers. Stylish and versatile phones packing hardware features like GPS, accelerometers, and touch screens are an enticing platform upon which to create innovative mobile applications. Android hardware will be designed to tempt consumers, but the real win is for developers. Android developers are free to write applications that take full advantage of increasingly powerful mobile hardware. As a result, developer interest in Android devices has made their 2008 release a hugely anticipated mobile technology event. The subsystem is built on an open source framework, and featuring powerful SDK libraries and an open philosophy.

Now, everyone having the Android smart phone, because it is cheapest because nowadays mobile companies like Samsung, Lava, Honor, Lenovo etc. are also develop the smart phone and provide it in low cost. Android devices come in all shapes and sizes. Android use, the recommended IDE is Eclipse, a multi-language software development Environment featuring an extensible plug-in system. It can be used to develop various types of applications, using languages such as Java, Ada, C, C++, COBOL, Python, are freely available on Internet and the Android SDK contains a debugger, libraries, an emulator, documentation, sample code, and tutorials are also downloaded from the net. And when the SDK Manager is started, it first checks for the packages that are available for installation. The packages contain the documentation and SDK specific to each version of the Android OS. They also contain sample code and tools for the various platforms.

5. DESIGNED SYSTEM

There are few steps for the implementation of this system they are as follow:-

**Step 1:** Usually first user name and password will be checked for authentication. There are two difference login given in this project one is staff login i.e. Admin and another is student login. Once the authentication process has been done it will move to the step 2 if user enters wrong credentials it will appropriately close that application and one error message has been occurred.

**Step 2:** Once the user has been login by their user name and password then they can access as per their designation if the users belong from staff then they can share any notes, they have priority to checks any one done manipulation in their attendance. If the user is
student then they can click on attendance if they are present and they also have an priority to open those notes share by admin users. If any user tries to apply proxy it will move to step3.

**Step 3:** If anyone try to punch proxy attendance first of all their location code has been send along with that normal attendance If their code number does not match it will unfortunately move in to proxy attendance and if they punch in class room it will show an successful message on front screen of application.

**Step 4:** Once this process has been done it shows the result whether the user attended their lecture or not.

**Step 5:** Result Process cannot be change by admin also that priority has been given to only a Head of that Institute or College.

**Step 6:** New user have to register to admin by their username and password once they get their credential step1 to step 5 is eligible to them.

6. **MODULAR DESIGN**

Our system is divided into few different modules described as follows:

**User Authentication:** When Staff login for the first time they have to register their username and password to their office and then they get an access to use by their own credentials.

**Database Activity:** Each and every user data has been get stored in their database and link to that app so user have to insert correct data.

**Marking Attendance:** As seen in the last module, the process of lecture is completed. Students would receive a notification to login using their respective phones running android OS. They use their username and password which is matched with the values stored in the database. Response is sent back to the user.

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**Figure 2: STUDENT LOG_IN**
7. FEATURE EXTRACTION

The feature extraction is extracting the data, which shows on the display of mobile application as an output. The extracted output is given to the threshold process. It applies to the entire process. In the approximate reasoning step the attendance area is calculated using the miss match method. It makes the fault data darker and appropriate data become brighter. Each transform coefficient is compared with a calendar which has been getting stored in an database which was linked to the coding as an back end process. If it is display an error statement than the threshold value, then it is taken as zero. If it shows a true value than the threshold, it will be taken as one. The threshold process is a comparison was each lecture is compared to another and matches the timing is it going properly or not.

Approximate Reasoning

In the approximate reasoning step the attendance is calculated using the miss method. On the other hand out is having only two values either black or white (0 or 1). Here 256x256 JPEG image is a maximum image size of this application. The binary image can be represented as a summation of total number of white and black pixels. This idea has been referred from European Journal of Comparing Research.

8. WORKING PRINCIPLE

Working of Attendance Application Firstly the user will click on the Application icon which will take user to the page for selecting the branch such as CSE, IT, MECH etc. After choosing the branch, a new page will appear corresponding to the selected branch. And the corresponding date of which we are taking the attendance will be automatically selected. A screen will appear where we can choose the option of viewing or taking the attendance. After choosing any one, database of the corresponding will appear. On opting TAKE option, user can take as well as view the attendance. The user is required to enter the Login-Id and password of their own to make available database on the screen. Thus, the result of the updated records will be stored in the server computer. On opting VIEW option, user cannot edit the database and is only allowed to view the attendance records and details. Hence, View option is just to view the student’s attendance record. There is one more option called Setting, which will help the user to do the necessary changes required in the database like edit, delete. B. Working of Attendance System Database will be created and stored in the server system with the help of PHP. And through the use of JSON parser it will be fetched from the system and will be passed to the connected android device (mobile phone) where the attendance will be taken and on clicking the save option in the android device , the resultant database will be transferred and stored back into the system by the same.
9. DISCUSSION & FUTURE ENHANCEMENT

The classroom attendance application named “Convenient Attendance” is initially being developed for the technical college. Thus its logic is built up basically for engineering campus. The app is ready for a single device, in it we can see the list of the Students and can then do further actions. The GUI displays a Menu based interface in which the user has to click on the option to proceed further for attendance. The user will have to select the branch name of engineering, passing batch name and proceed. The time and date will be automatically fetched from the device and stored in the database with the attendance record. Future work can be done to improve the application since paper is designed in flexible way. This application is helpful to make more changes based on the paper published. This can be implemented further to make more changes in this application based on various technique and methods. Even though this project fulfills the requirement of the present application there is always scope for future work. In the future we incorporate new techniques like different ways of detecting the various systems using other methods.

10. CONCLUSION

The purpose of developing classroom attendance application is to computerized the tradition way of taking attendance. Another purpose for developing this software is to generate the report automatically at the end of the session or in the between of the session. It has revealed that an online system for recording and reporting students’ attendances is indeed a needed application in order to make the process more convenient and time-saving. In this paper I have also proposed an extremely useful yet simple android application suite for student tracking. This application suite will be useful for all the participants allied to the student tracking. This suite enhances the time factor efficiency as well as develops an ease to integrate all the factors easily. We can easily implement this suite in android as it is rapidly growing technology and is easy to use. This paper also discusses the essential basic work flow of the suite which when followed will be easy to implement.

11. REFERENCES


