

Web and Android based Attendance System

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ABSTRACT

In the last few years due to improvement of technology education system in India has developed. Smart Class, video conferencing is some of the examples of modern trends in educational system. Student Attendance System is an web android based application which helps the institute to move forward, fulfill their vision accomplish their goals. It generates the attendance of the student on basis of their presence in class. It is maintained on the daily basis of their attendance. The staffs will be provided with the separate username password to take the student's status. It helps the teacher to take attendance through their smart phone and to keep the record of the attendance in their pocket for any time use. Over the years the manual attendance management has been carried across most of educational institutions. Student attendance system is the system of tracking the attendance of the student on basis of presence in class. Successful industries, schools, universities begin by engaging students and making sure that they will come regularly so the attendance rate become very important. To overcome the problems of manual attendance, we have developed "Web Android Based Attendance System". Web Android Based Attendance System is based on Android Web, which can be implemented on any Android Phone. It calculates automatically, the attendance percentage of students without any manual paper-based work. Managing the attendance using traditional approach is really a cumbersome process. The person has to be maintained the attendance record in registers and file using pen and paper. The problem with this approach is that it requires lots of paper which are the part of our non-renewable natural resources. We are in the age, where we have to think about sustainable development. Managing the attendance using mobile phones, provide an alternative way in this direction. Communication between teachers and the parent is also an important issue that should also be considered, because parent can only get the information about their ward after the interaction with teachers. So, we also tried to bring the system which enables parent to receive the information of their ward of regularity on daily basis. In comparison with other traditional attendance systems, the proposed system provides faster, cheaper and reachable system for online student attendance and generate the attendance report automatically.

Keywords: Android, Web Application, Attendance, MySQL.

Introduction

Now a days, mobile devices have become a way of life for students especially in higher education. Computers are now replaced by compact smart phones that can fit into pocket and can be carried anywhere. Attendance Management System is an application for taking daily attendance in schools and colleges. It provides minimal error in report generation of a particular student's attendance. Student's attendance tracking is a vital issue in order to monitor students' performance in the classrooms well as in their studies.

It becomes a key concern because the university authority maintains a rule that one student can only attend in the exam if his/her attendance is higher or equal to several percentages otherwise not. The traditional attendance system needs student's to physically sign the attendance sheet each time for the attendance of each class. This is unnecessarily time consuming to notice and mark student's name on the attendance sheet. This also happens that some students may accidentally or willingly mark the student's name like as proxy.

The hard copy of attendance sheet may get lost. Using Smartphone like as Android Technology the course teacher will be able to take attendance easily by our designed mobile application and save the attendance in

the phone as well as in server and can check percentage and also can print as hard copy. Using the stored information, this system is able to mark attendance, marking intruders' entry, attendance percentage calculations, send emails, and send SMS to the guardian to keep them updated about their child's attendance at the Institute. The designed system has an online access from any place and any moment which may extraordinarily assist the course teacher with keeping track of their student's attendance. In current scenario, management and maintenance of student information is a cumbersome task for any institution.

Motivation

In most educational institutions the attendance is taken manually. It is not only time consuming, but it is also unsecure and unreliable and it can be lost. Some institutions are using punch card for attendance while this will be difficult for teachers to keep track of the large number of students because by using punch card, a student can help the other students or his/her friend to punch their card even the other student may be absent or come late in class, so it is not reliable. To overcome these problems, I have developed a better system which is Web based; it is fully responsive where a user can use in mobile, tablets and different computer systems. In this system records are kept safe and secure and the attendance information of particular or all students of particular class can be accessed easily and without time consuming, the report is generated automatically.

Problem statement

To design web based attendance system for maintaining the attendance and generate the easily monthly, weekly, semester wise attendance report.

Objectives

The objectives of the system are

- To save time and eliminate paperwork.
- To manage historical data in database.
- Eliminate duplicate data entry and errors in time and attendance entries.
- To Increase security.
- Automatic calculation of attendance
- To test and validate the results.

System Architecture

Figure 4.1 the architecture diagram of Web Based Android Based Attendance System. Admin and Teacher are the two main modules of Web Based Android Based Attendance System. In the admin module, Admin can login into the system and can add student with roll no. and other details. Can add teachers with subject. The proposed solution of student attendance system where a course teacher takes attendance via Smartphone and then the Smartphone application processes the data and also the teacher can save the data in the web server as well as phone server. The teacher shall then register with a proper user name and password which they must remember for further login. Next the teacher needs to login from the login or register screen, by pressing the login button and providing the correct credentials without which they would not be able to log-in to the application. The faculty has the list on his phone now. He may see the list call roll numbers and select absent if the student is absent or select present if student is present. It assists the staff to mark attendance to the students for their subject. This will authenticate the staff before making the entry. This data is now stored in the faculty mobile phone. Faculty may also view it anytime on their phone.

System architecture has this major blocks

- Admin (Web) Login System
- Student Attendance List Creation
- Add Teachers and Attendance List
- View Report or Generate Report

Admin (Web) Login System

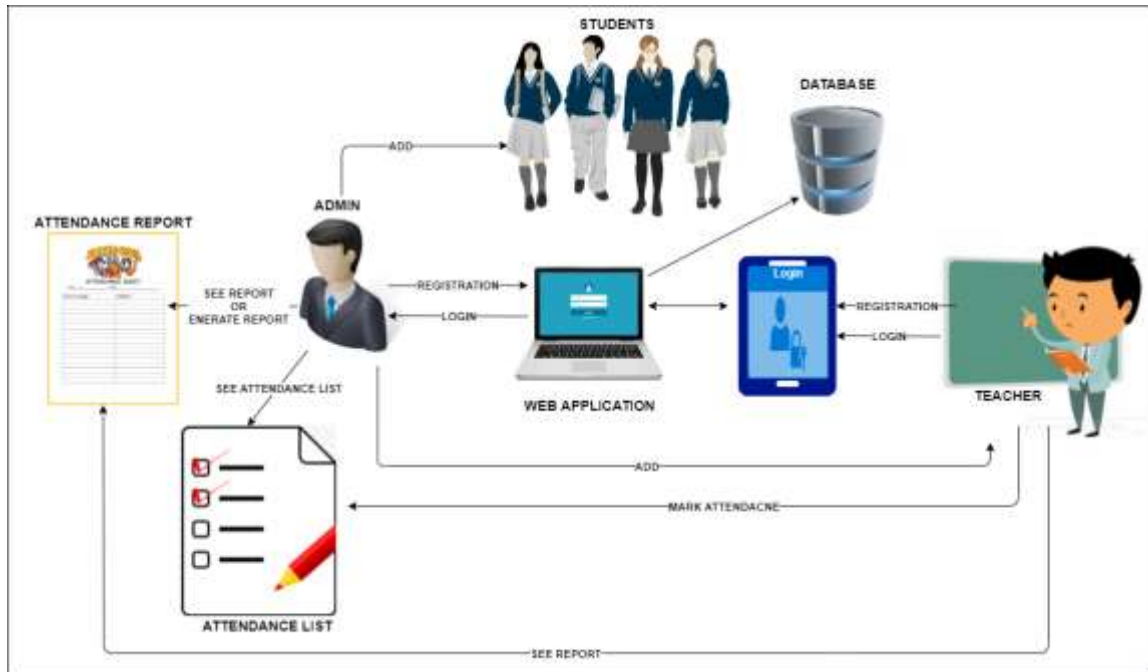


Figure 1: System Architecture

By using admin login page admin can create, delete, modify a Data in the Login registration portal users can register themselves and then can login through the loginportal. Every user has to register before login and have to set a password so they could access the event management system wherever or whenever they want. Registering will save the login credentials in the database and verify every time a user login through the login portal.

Student Attendance List Creation

Once this App is installed on a phone, as it allows user to create a student attendancesheet consisting of name, roll number, date, Absent/Present mark and subject. He has to fill student names along with associated roll numbers. In this module deals with the allocation of roll no and personal details for new batch.

Add Teachers and Attendance List

Admin can add teachers with subject. It helps to allot the subject and the subject code to the particular staffs. It provides the facility to have a user name and password to the staffs. The faculty has the list on his phone now. He may see the list call roll numbers and select absent id the student is absent or select present if student is present.

Add Teachers and Attendance List

It will be makes to the attendance database all students. Entered attendance to store in the database subject, period wise into the particular date. It will help us to the get report of weekly and consolidate of the attendance. Report can be taken by daily, weekly and consolidate: weekly report gets all hour details of attendance starting date to ending date and display the status. Consolidate report get all student attendance details starting date to ending date status help for the eligibility criteria of the student to attend the examination.

Modules of WABAS

Admin (Web) Login System

By using admin login page admin can create, delete, modify a Data in the Login registration portal users can register themselves and then can login through the loginportal. Every user has to register before login and have to set a password so they could access the event management system wherever or whenever they want. Registering will save the login credentials in the database and verify every time a user login through the login portal. This module is used to login for administrator, it has whole rights to monitor and manage the entire paper, through this module, new information can be insert, update, view and delete.

Function Of Module:

- Easy Login system
- Different users or teachers can do login

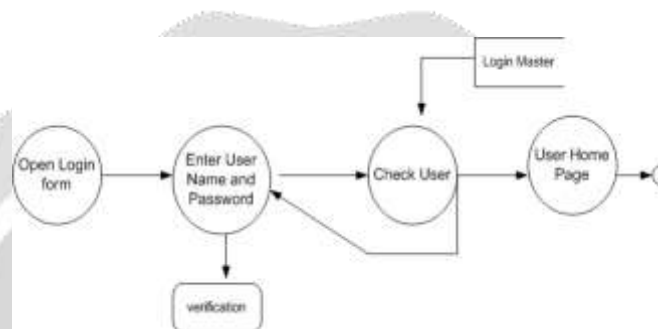


Figure 2: Login Module Diagram

Input

Username ID and password as registered earlier

Process

Add , update , view student history

Output

Update student info and attendance status

Student Attendance List Creation

Once this App is installed on a phone, as it allows user to create a student attendancesheet consisting of name, roll number, date, Absent/Present mark and subject. He has to fill student names along with associated roll numbers. In this module deals with the allocation of roll no and personal details for new batch. It will generate of personal details of student and academic details of the students with the photos.

Add Teachers and Attendance List

Admin can add teachers with subject. It helps to allot the subject and the subject code to the particular staffs. It provides the facility to have a user name and password to the staffs.

The faculty has the list on his phone now. He may see the list call roll numbers and select absent if the student is absent or select present if student is present.

See Report or Generate Report

It will be makes to the attendance database all students. Entered attendance to store in the database subject, period wise into the particular date. It will help us to the get report of weekly and consolidate of the attendance. Report can be taken by daily, weekly and consolidate: weekly report gets all hour details of attendance starting date to ending date and display the status. Consolidate report get all student attendance details starting date to ending date status help for the eligibility criteria of the student to attend the examination.

Teacher (Android) Login System

By using Teacher login page Teacher can login..

Attendance Marking

The faculty has the list on his phone now. He may see the list call roll numbers and select absent id the student is absent or select present if student is present. It assists the staff to mark attendance to the students for their subject. This will authenticate the staff before making the entry.

Attendance Storage and See Report

This data is now stored in the faculty mobile phone. Faculty may also view it anytime on their phone. Weekly report gets particular hour details of attendance from start- ing date to ending date and display the status. Consolidate report get all student attendance details from starting date to ending date status help for the eligibility criteria of the student to attend the examination. The faculty can transfer the file to a server (normal computer) via a Bluetooth connection where this data can be stored and maintained by the school or college.

Prototype Model Of Paper

This chapter introduce us about the prototype model (GUI) in which it known ushow paperlook like and implementation detail of first module



Figure 3: Login page

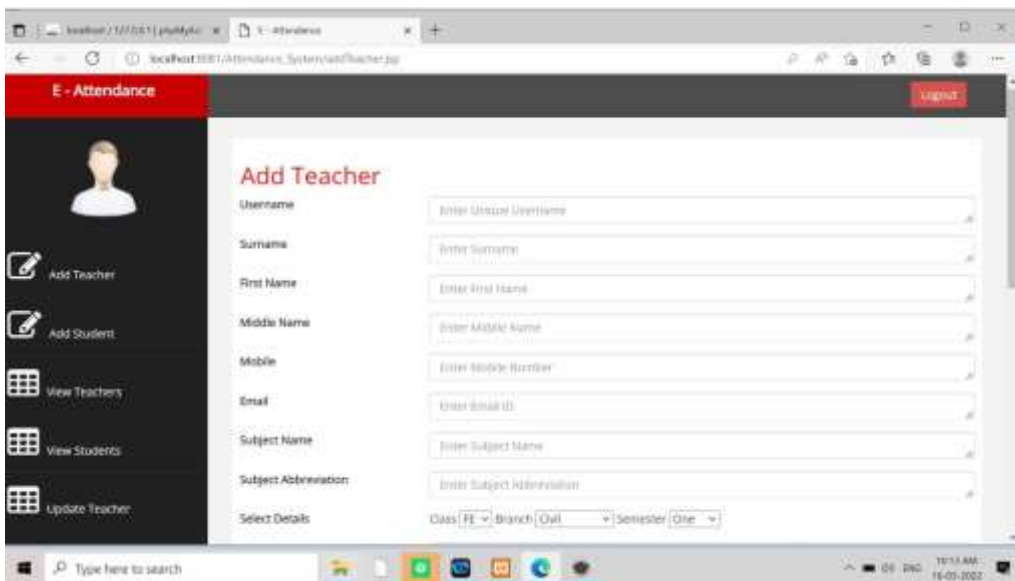


Figure 4: Teacher Registration Page

In the module shown in Figure 4, the user must enter all the necessary credentials required for the initial registration. Post successful registration the user data is stored into the application database and then he/she can easily log into the application.

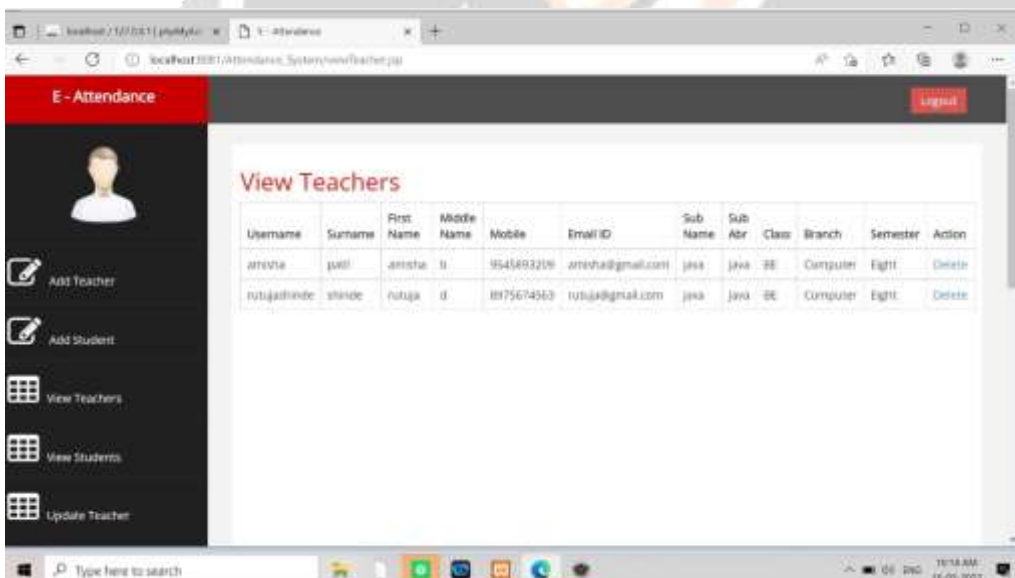


Figure 5: View Details



Figure 6: Login User



Figure 7: Take Attendance

Figure 8: Generate Report

Conclusions

Web and Android -based Student Attendance System will significantly de-velop the conventional procedure of student attendance framework in a univer- sity/college/school surroundings. Smartphone-based Student Attendance System is a computerized information accumulation technology, which leads to more precise data entry. The stored student attendance data are framed and investigate inevitably without any loss of data, compared to a traditional recording method. This work is to access the details about the student information and generate reports. The paper “Web Android Based Attendance System” is a collection of static and dy- namic pages. This paper offers user to enter the data through simple and interactive forms. This is very helpful for the students and staff members to keep and maintain the information about students easily. Further this work can be expanded to store the internal marks, semester marks and placement activities. In term of performance and efficiency, the proposed has provided a convenient method of attendance marking compared to traditional method of attendance system. In addition, it is user friendly system as data manipulation and retrieval can be done via user interface, making it universal attendance system. And adaptive for implement in any educational system.

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