Student Search Progressive Web application

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Abstract—The progressive application combines the best of web and mobile apps for student search records. It is a website built using web technologies for connecting server that acts like an app. So now days some problem raised how to student record is maintain user friendly. This problem is solved by using PWA enabled application. The user is given the advantages of accessing the webpage app-like by creating simple keywords which eliminates the need for multiple clicks. The most important characteristic of this progressive app is that it must work on all devices and must enhance on devices and browsers that allow it. In this system we check the student records like marks, attendance, extra activity using the PWA search to the teacher and authorized person.

Today students’ attendance is become more important part for any institutions. In order to reduce time and human effort instead of manual attendance system we can use online attendance system. Hence, we design software for online attendance system. In this software, we can send message to student as well as to parent whose attendance is below 75% and who are absent. We are able to calculate percentage attendance when we required. In this software only staff has log in account and has right of making daily attendance and generating report

Keywords—Classification, Information Storage and Retrieval, Student Record, Attendance Record, Marks details, Keyword based search, Data Mining.

I. INTRODUCTION

Today's mobile application has become a more use daily life and way of life for students especially in higher education. Computer PC are now replaced by compact smart mobile that can be suitable into pocket and can be carried anywhere. The progress in mobile technology application has created a new area which is known as mobile learning system. The mobile learning is most important i.e. next generation of e-learning system that leads attractive way of knowledge delivery especially used in teaching and learning process[2].

The development of this android application the student preferred more to use mobile devices as technology supported educational tool. This system is designed because notes dictation in the class is difficult considering semester duration, student might miss the exam and important notice displayed due to unawareness, chances of false marking of attendance is more due to more paper work and manual attendance entry, evaluation and report generation is tedious and time consuming job. Timely updates to parent are not possible. With this system teacher can upload notes, time tables, assignment on server and broadcast it to the registered mobile numbers so that it is easily accessible to student by their own smart phone. This system enables student to learn anywhere, anytime and at their own convenience. This system makes students to be active, responsive while learning their academic. Another application that is provided by this system is smart attendance evaluation and report generation[5].

Smart phones are based on operating systems like blackberry, IOS and Android. To design proposed project, smart phones with Android operating system are chosen because penetration rate of Android OS is 70 percent. The proposed system is open source and free ware we share the application to any students. The application is compatible with all Android versions. In this system, the staff has authority to fill attendance, to view attendance and if any student is absent the staff just want to tick mark infront of the student and automatically the message will be sent to their parent. Parent can also view attendance, send feedback to any of the faculty member.[12]

Goal and Objective:

• These applications help the institute to move forward quickly, fulfill their vision and accomplish their goals, E-way.

• The proposed system helps to the teacher to take attendance through smart phone and keep record of students for their progressive assessment.

• This system enables student to learn anywhere, anytime and at their own convenience.

II. LITERATURE SURVEY

Following traditional systems are used to mark attendance in the teaching process.

A. Manual Attendance System:

It is the conventional method of taking attendance by calling names or signing on paper but it is
inefficient due to more chances of malfunctioning and more paperwork as well.

B. RFID with Object Counter:
   Radio Frequency Identification (RFID) based attendance system is one of the solutions to address this problem, but that is time consuming and unsafe. Anyone can carry others card to mark proxy attendance [7].

C. Bluetooth Based Attendance System:
   In this, attendance is being taken using instructor’s mobile phone. Application software is installed in instructor’s mobile telephone, enables it to query student’s mobile via Bluetooth. It transfers student’s mobile Media Access Control (MAC) addresses to the instructor’s mobile phone and presence of the student can be confirmed. The problem of this proposed system is student’s phone is required for attendance. In case of absent student if his mobile is given to his friend and if kept in coverage area then also his presence would be marked [5].

D. Online Attendance Management System using RFID with Object Counter:
   In this, radio frequency identification (RFID) based attendance system is one of the solutions to address this problem, but that is time consuming and unsafe. Anyone can carry others card to mark proxy attendance.

E. Online Attendance Management:
   The system is more efficient. In many colleges, hardware is used to take attendance like card swiping. In this technique, there are chances of making proxy entry or failure of hardware, etc. Also there is chance of lost of card as the card is small in size, light weight if the person is irresponsible. [12]

F. RFID-Based Attendance System:
   In initial level task of any attendance tracking and management system is to get a number of a participant entering and leaving the premises, so to get accurate real time data on the number of attendance.

III. PROPOSED SYSTEM
   In order to overcome the drawbacks in existing system we propose a new System which does not required any hardware devices. In this system, the staff has authority to fill attendance, to view attendance and if any student is absent the staff just want to tick mark in front of the student and automatically the message will be sent to their parent. Parent can also view attendance, send feedback to any of the faculty member.

   In this project, we gave access to three user i.e. Admin, Student, Others. This project is based on client-server. In this project teachers or the admin will be filling attendance and sending message to the student who is absent. The flow of sending message will be attendance filled by teacher will be stored in database and also the message sent by teacher will be stored in database and when parent will open there account the message sent by teacher which is stored in database will be fetched and will view to parents or student. Also the system provides the facility to send message to the students whose Academic fees are pending.

   Admin means staffs who have access to the system. They will have privilege to fill attendance form, update attendance form, send message to the guardian’s account whose child is absent, also those attendance is less than 75%, and they also have privilege to send message to the students whose fees are pending. Each staff member will have its own user name and password they will be entering date, time along with the course while login. The staff can also view the message whenever they want and also can modify the details of students.

   Parents have privilege to view attendance and to view message sent by the teacher. This message may be for absentees of student, less attendance i.e. below 75% or for pending fees. Parents will have their username and password for login. So that the parents will be updated day-to-day. Students also have their account with the privilege to view message sent by the subject teacher and to view the attendance. His message may be for absentees of student, less attendance i.e. below 75% or for pending fees. Students will also have their username and password for login.
The system architecture above fig 1 shows, consists main three model of: the database, the application program and the server.

- **Database**: Above fig 1. System maintains the database consists of a number of tables, which stores records. We used apache derby database which is easy, fast and efficient and can store a large number of records and requires a little configuration.

- **Application Program**: Above fig 1. System, the application program is developed with Android programming language using net bean framework. The application program provides user interface to both the employees and office server. Programming in Android is simple, user friendly and android offers an excellent data connectivity.

- **Server**: Above fig 1. System, the server is for running the application program on the personal computer using apache-Tomcat7. Tomcat7 is free, robust and easy to deploy.

### IV. MATHEMATICAL MODEL

Input:

Let us consider a set $S$

where, $S = \{U, R, SER, D, G, C, I \}$

Here,

- $S$: System which includes:
  - $U$: Set of Users Where $U = \{U_1, U_2, U_3, \ldots, U_n\}$
  - $SER$: Server.
  - $R$: Set of Request.
  - $D$: Database.
  - $N$: user Inputs
  - $C$: Set of Centroid.

Where $C = \{C_1, C_2\}$ $C_1$=User centroid, $C_2$=Robot centroid.

If $C_1 > C_2$ then it is a User request, else it is a Robot request.

I: Internet Communication for Data transfer in PWA

### V. CONCLUSION

The proposed system is cost efficient by this system students can learn anywhere anytime as per their own convenience. Timely updates of student can be sent to students as well as their parents. Attendance marking and report generation becomes easy.

### VI. FUTURE SCOPE

In future this system can be implemented to automate most of the educational systems and it can be designed for cross platform.

### REFERENCES


