**Milestone**

**Attendance Management System (AMS) - Android Application**

**Prabhleen Kaur**

**Abstract:**

AMS is an Android Mobile Application which will work to manage the attendance for each individual student enrolled in different courses. It will have student and professor login account with the details about the student ,course and the schedule for the classes. It uses Authentication and encryption for student to login into its account and for submitting attendance to the professor. It uses Google Map APIs to display and store the student location while submitting the attendance .It is used to confirm and verify student ‘s presence by the location of the student.

**Introduction :**

AMS is an android app used to manage attendance. This paper discuss about the progress so far and what will be implemented further .It gives the complete details of the working and the features of the app. And also discuss the complete methodology and the purpose of the app, along with the experiments performed so far and system specification.

**Background and Related works:**

The concept of android app to track the attendance is not new and there are many apps in the google play store for the same purpose but the unique feature of this app is that when the student submit the attendance the location of the student is also recorded and submitted. It prevents the risk of the student cheating about their presence in the class and their attendance irrespective of the number of students in the class.

**Methodology:**

This works as every registered student will its account and will use these credentials .i.e. College user ID and password to access the account.

* When open the app ,first the flash screen with the delay of 5000ms will land us to the login screen which will ask the credentials for the user to login.

This page uses authentication for the user to access the account. It has two

Buttons one to login and other to clear the entered data.

* The login button is used ,it will launch the page with the tabs for each day of the week with only the tab accessible with the current day to the student
* After clicking the current day tab , student will be directed to the schedule for the current day .The page will include the course details. It will also display the status of the class if it is in progress or how much time left for the class to begin of if the class is over.
* Student can have access only to the courses with the class status in progress ,to submit the attendance to the professor for the approval.

By clicking on the submit button for the class in progress ,student can submit

attendance .

* The next page will display the status of attendance along with the students location whether the student is in the class or somewhere else at the time of submitting the attendance .
* The attendance will be in the status of awaiting confirmation till the professor accepts from the account.

**Experiment:**

1. Tested the application using the data for all the seven days of the week.
2. Tested the status of the class using the schedule for every hour and the details for the courses.
3. Tested the location by using fake student data and the account credentials.

**Analysis and possible additional features:**

The complete data is linked and stored using the Firebase .For tracking and storing the location Google Map APIs are used. The student data for authentication and course details are stored in the database using Json file. The encrypted data of the user is used for the authentication purpose.

Additional possible features:

* It can have overall record of the student along with the academic record and grades for all the courses student is enrolled in.
* It can be made available even if student is not connected with the data or Wi-Fi (in offline mode).
* Use of fingerprint or face detection feature to access the user account .
* Can be made available in different languages as per the user choice.

**System specification:**

Hardware : Mobile ,tablet or iPad

Software : Android version 4.3 and above

Programming language :Java ,HTML ,SQL ,JSON

IDE : Android studio 2.3.1

APIs : Google Map APIs

**Conclusion:**

The AMS android app will used to update and maintain the attendance by reducing the time and efforts of the professor to manually update and verify for the presence of each student during the class. This app will reduce the risk of false attendance of the student by recording the location of the student at the time of submitting attendance.

**Reference:**

* <https://developer.android.com/studio/intro/index.html>
* <https://firebase.google.com/docs/>
* <https://developers.google.com/maps/documentation/>
* Vishal Bhalla, Tapodhan Singla, Ankit Gahlot, Vijay Gupta, "Bluetooth Based Attendance Management System", *International Journal of Innovations in Engineering and Technology (IJIET)*.
* https://www.youtube.com/watch?v=k1D0\_wFlXgo
* Md. Milon Islam, Md. Kamrul Hasan, Md Masum Billah, Md. Manik Uddin, "Development of smartphone-based student attendance system", *Humanitarian Technology Conference (R10-HTC) 2017 IEEE Region 10*, pp. 230-233, 2017, ISSN 2572-7621.