**Android Based Self Attendance System Using OTP**

**Abstract:**

Attendance is very important for every organizations, Attendance taking has evolved with better solutions from the time it was invented, from paper based to Computer based System using so many new technologies that can make it better faster and accurate. In our proposed system we make use of Self attendance using OTP. In this system there are 3 Main users; Admin responsible to add class, subjects, teachers and students; second teacher who will take the attendance and the third Student who can mark him/her as present and see their previous attendance records. The process goes like this, the teacher select the class for attendance a OTP is generated which will last for 60 seconds, the OTP need to be entered in the Student’s app and mark him/her as present, once the OTP is expired the teacher can make the necessary changes in the attendance sheet and submit the attendance.

1. **Admin: (Web Application)**
	1. **Login:** Need to enter login credentials into web interface by the admin or the authorized person.
	2. **Add/View Course:** Can add a new course into the system and also can view it.
	3. **Add/View Subject:** Can add a new subject to the equivalent course into the system and also can view it.
	4. **Add/View Student:** Can register new student details into the system and also can view it.
	5. **Attandance Report:** System allows admin to generate student defaulters list.
2. **Teacher: (Android)**
	1. **Login:** Here, teacher need to enter the login credentials into android app in order to mark the attendance.
	2. **Generate OTP:** Teacher will generate an OTP which will be visible for 60 seconds and take attendance
	3. **View Attendance:** Teacher will be able to view student attendance of students.
3. **Student: (Android)**
	1. **Login:** Here, both Parent as well as student can login using the student roll no. or with an email id.
	2. **Mark Attendance:** Once OTP is generated by the teacher, students can input the OTP in their application to get their attendance marked.
	3. **View Attendance:** Here, student itself can view the attendance.

**Front End:** ASP.net with C# and Android

**Backend:** Sql Server

**Software Requirements:**

* Windows 7 or higher.
* Java
* Android Studio
* Visual Studio
* Google Chrome Browser

**Hardware Components:**

* Processor – i3
* Hard Disk – 5 GB
* Memory – 1GB RAM
* Android device (recommended Marshmallow and above)

**Advantages:**

* It excludes the use of paper work and human efforts.
* The system is helpful as it generates a systematic overall report of every class attendance.
* The system helps the faculty to easily find out defaulters in a single click.
* It maintains the records in a large database instead of conventional method of maintaining register which further simplifies the process of searching for a particular record.
* User may easily get attendance history of a particular student.
* The system introduces a manageable and systematic approach of maintain attendance records.
* It saves user time, cost and institute resources.

**Disadvantages:**

* The only disadvantage is that every teacher requires android phone to access the system.
* There should also be a Wi-Fi or internet connection available in every class.

**Applications:**

* The system can be used for schools, college, or universities for taking down attendance.
* The system can be used during parents meeting to show parents about their children's attendance performance.
* It can also be implemented in organizations for attendance.