

# Attendance Analysis System

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**Abstract:-** Attendance Analysis System is an Android application to manage student attendance on mobile. We are designing this system specifically for NGO. Most of the NGO's run programs where the Facilitator have to visit remote rural areas or urban slum areas having very poor infrastructure (such as minimal or no electricity, minimal or no network connectivity, no proper roads, no adequate schooling location, etc. The actual problem of the Management that can be identified from the above current As-Is state, is they are unable to maintain the accurate attendance record of the students/facilitators during the training camps, as a result of which management are unable to take appropriate decision on how to reduce/control the ratio of student drop outs during such training programs also they are unable to calculate the right compensation to be paid to the facilitators, who are associated to with such training programs. The project aims to develop an app to capture accurate attendance of students studying in remote villages of India with limited connectivity and syncing the data on central server & to track the attendance of facilitator working in remote villages.

**Keywords:-** Attendance, Analysis, Android, Facilitators, sessions, Log Report, Centre Review Report, Timetable,.

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## 1. INTRODUCTION

There are hundreds of schools (small and big) across India in remote villages with over thousands of students studying in each of school. There are ever increasing number of dropouts in these schools. The authorities are not in a position to understand the exact reason of these dropouts.

The challenge is high because there is no tested means of collecting attendance and making it available to the authorities at a central location to take corrective actions immediately once they start noticing a pattern in the absenteeism.

If this problem is solved, the assigned authorities can take up corrective actions in terms of ensuring adequate facilities, counseling to children and parents, enforcing teachers to conduct regular classes with an objective to ensure the child returns to the school and complete their education.

To overcome the above mentioned problem we have proposed a solution based on Android Operating System of cell phones namely Attendance Analysis System would be an automated and reliable system for capturing students as well as facilitators' attendance. The system will store some additional details about the facilitators and students which could be useful to analyze their performance thus helping the management to calculate the right compensation to be paid to the facilitators.

Since each facilitator has to take training sessions in more than one centre our system will allow them to create different sessions for different group of students belonging to different centres. This will be helpful for facilitators to take attendance in more feasible way while conducting their sessions. The application is not just limited for taking attendance, it will also be used to check and store records about the dress code in students, snacks provided or not etc. The app provides features for NGO management to create timetable, check uploaded monthly attendance sheets by facilitators as well as fill review and feedback forms related to facilitators using a different login. Apart from monthly attendance sheets it will also be used to generate the following sheets:

- 1.1 Log Report
- 1.2 Centre Review Report
- 1.3 Timetable
- 1.4 Centre Feedback Form

### 1.1. Log report

Log Report is a report which is filled by the Facilitator everyday which include Session details conducted by them. The content of Log sheets is basic information such as In & Out time of the coach in the centre, time when the session started and ended and total related to snacks, attendance, etc.

## 1.2. Centre review report

The NGO Authorities are responsible for filling this report by examining following points:

- Quality of sessions conducted by facilitators
- Performance of facilitators
- Life skills
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## 1.3. Timetable

App allows NGO management to create new Timetable or update timetable which will be followed by facilitators while conducting their sessions at different centres.

## 1.4. Centre Feedback Form

App allows NGO management with a form to submit their reviews, suggestions or recommendations related to facilitators.

## 2. EXISTING SYSTEM

### 2.1 Working of existing system

Currently the attendance and other measures are recorded manually in papers/registers during such training program by the facilitators and then entered in the system in the head Office and forwarded to the nearest centre on a weekly or monthly basis. Everyday facilitator has to fill the Log report manually on paper. NGO Authorities have to visit centre personally on weekly or monthly basis to examine coach performance and the sessions conducted by them in order to fill Centre Review reports. All these tasks are time consuming.

### 2.2 Disadvantages

- Not Feasible
- Not user friendly
- Time consuming
- Use of lots of paperwork
- Difficulty in generating reports
- Not Secure

### 2.3 Features of proposed system

#### 2.3.1 Cease of paper work

The proposed system is replacement of manual work into digital. That means facilitators don't have to maintain bunch of papers for filling daily log reports and for taking attendance. Our application can be used to do the same in more efficient way.

#### 2.3.2 User friendly

The interface of app is very user friendly and easily understandable. As we are using the same attributes which have been used in existing system while creating reports it will be easy for facilitators to understand the app's functionalities.

#### 2.3.3 Reports can be quickly submitted

User can export any report only by clicking on export button present in system. System consist of an export button when clicked will open reports in an excel format which user can view as well as share with others.

#### Backup of data

Users get the benefit to save/forward/upload their generated sheets of data in a common database on server to maintain backups in case they lose their cell phones or have less space to store data locally.

## 3. RELATED WORK

The application is divided into two main modules:

### 3.1 Admin module

This module will allow Admin or any Centre Head to access and fill Centre Review Report, Timetable and Centre feedback form.

#### 3.2.1 Checking for monthly attendance

Here by clicking a button, Admin can view monthly attendance sheets for all sessions in excel format. The attendance sheets in this module can be differentiated by facilitator's name, session name, etc.

#### 3.1.1 Centre review

Admin can fill as well as view Centre Review report. It consists of attributes like facilitator's punctuality, facilitator's performance, session time, session's quality, etc. in order to examine facilitator's performance.

#### 3.1.2 Time table

The facilitators conduct their sessions at different locations and at different timings. So the app provides the NGO Authorities to prepare weekly timetable/schedule for facilitators to follow. This timetable can be mailed to all facilitators after getting the view in excel format.

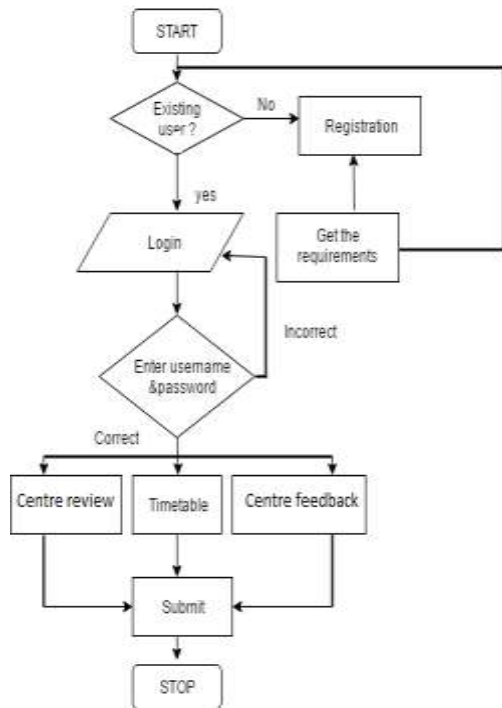


Figure .1 Admin module

### 3.1.4 Centre feedback

This is the feedback form which will be filled by admin or centre authorities where they can comment on facilitator’s performance as well as put their suggestions and recommendations in this form for their improvement.

## 3.2 Facilitator Module

This module will be used by the facilitators for taking attendance and filling log reports related to their sessions.

### 3.2.1 Session

Facilitator has to attend session at different centres (locations) on the same day. So, to distinguish between students belonging to different centres facilitator can create new session for each centre. Later on by clicking on session name for respective centre the facilitator will get the list of students to mark their attendance.

### 3.2.1 Student Registration

For every new student, registration will be carried out. Facilitator is responsible for registration by collecting student’s detail like name of student, date of birth, gender, facilitator’s name, centre name, etc.

### 3.2.2 Take Attendance

This is the vital as well as functional requirement of our application. Here facilitator will mark the attendance for each

student by just single click. The following attributes will be checked for each student:

- Student is Present/Absent.
- He/she wearing shoes or not.
- Snacks are provided or not.
- Neatness of their uniform.

### 3.2.3 Log report

Facilitator is responsible for filling Log Report everyday which consists of attributes like session quality, children behavior, snack given etc. Facilitator can give ratings or yes/no comment to these attributes.

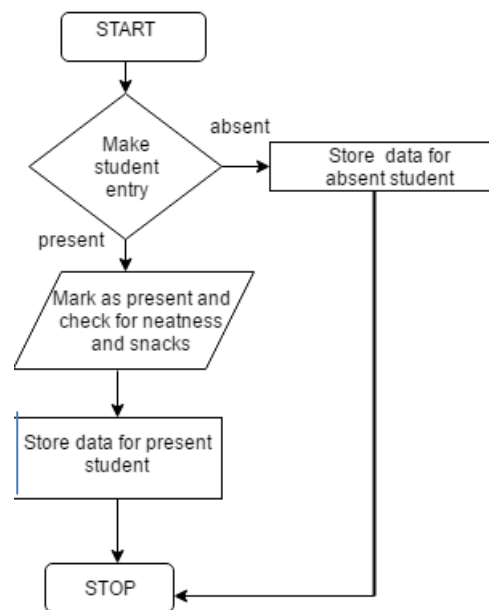


Figure .2 Facilitator’s Module

## 4. IMPLEMENTATION DETAILS:



Figure .1 Login Page



Figure .2 Create New Session



Figure .5 Timetable



Figure .4 Student Registration



Figure .7 Centre Review Form



Figure .6 Take Attendance



Figure .8 Centre Feedback Form



Figure .3 Options for Admin

## 5. BACKEND PROCESSING:

- 5.1 SQLite
- 5.2 MYSQL

### 5.1 SQLite

SQLite database system is an open-source, stand-alone SQL database. SQLite is available on every Android device. For Mobile Shopping application SQLite is the perfect choice to create databases [6]. It is an in-process library that implements a self-contained, server less, zero-configuration; transactional SQL database engine which does not requires any database

setup or administration [6]. These features of SQLite can be used for storing data in android phones without the need of internet.

As per the requirement of NGO the application should work Offline or with limited network connectivity. Hence, we are using SQLite local database to store application data in the device itself.

## 5.2 MYSQL

MYSQL is used as a database at the webserver and PHP is used to fetch data from the database [2]. Our application will communicate with the PHP page with necessary parameters and PHP will contact MYSQL database and will fetch the result and return the results to us [2].

As the Local storage of any device is limited we are providing facility to send data on server in the app itself where the local data will send to the MySQL server.

## 6. FUTURE SCOPE

### 6.1 Multilingual

In future, we will add this feature to make our app more efficient. So, more number of people can use this app.

### 6.2 Multiplatform

Now we are targeting only Android OS. But we are planning to make it Multiplatform in order to run on any platform like windows and iOS etc.

## 7. CONCLUSION

The proposed system allows users to add mobility and automation in the existing attendance process. This system helps Facilitators to take attendance through mobile and also generate reports. The application offers reliability, saves time and ease of access. It can be used as a reference for creating similar applications for tracking attendance and creating reports in other education as well as in corporate sectors.

The system provides different login for facilitator and admin so they can access their respective modules, thus maintaining security. As our application is reducing the manual and hectic paper work, facilitators can concentrate on their sessions and can spent more time with their students.

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