ANDROID BASED SMART STUDENT ATTENDANCE SYSTEM

BY

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This Report Presented in Partial Fulfillment of the Requirements for the Degree of Bachelor of Science in Computer Science and Engineering

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9th July 2020

APPROVAL

This Project titled "Mobile Application for Attendance Management System ", submitted by Md Hafiz Al Ashad, ID No: 151-15-5115 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 09 July 2020.

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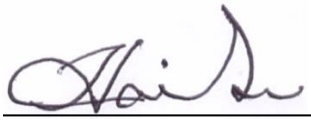

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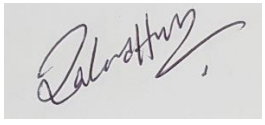

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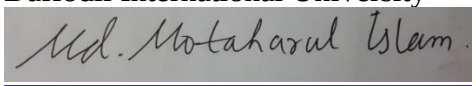

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In this project I declare that, this project has been done by us under the supervision of **Ms. IsratFerdous, Lecturer, Department of CSE** Daffodil International University. I also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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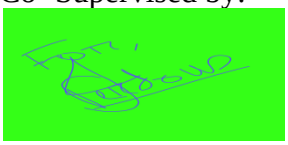

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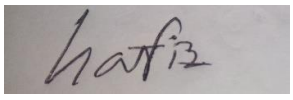

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ABSTRACT

"Android Based Smart Students System" is application based project with the support of smart phone. Students attendance system which is use for students present in class. It will become very important things begin successful all Educational Institution by engaging students and make sure regularly attendance that they will come. This organization kept, maintain and taking about student's information report to their parents. Future this work will be keep about extended information about students those are:

- Information.
- Semester CGPA
- Attendance Count

And other activities involved in this system. Respect all parents their children's will be upgrade attendance and another performance through this mobile smart application. In case, Design and implement of smart student's attendance system is based on android operating system. It compression different with other traditional attendance system, the proposed system is faster, reachable and cheaper for student's attendance and it automatically gather all student's attendance report.

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CHAPTER-1

Introduction

1.1Introduction

Student maintenance and management information is a difficult challenge for any Educational Institution. The respective classes consists of the student academic information of monitoring and progress periodically that seems handle and huge workload on lecturers upgrade on the subjects. Attendance is manually recording way of tradition and desktop application converting into it. Sometime this generation reports lead to error and technical fault. Sometimes apart from this, the attendance sheets are lost misplaced or wrong information entered for various reasons. In case, manual work and achieve more managing efficiency reduce to student information, using smart phone based mobile application solved this problem to make more easy and every way beneficial. Student information will sent and store to right person. A mobile based android attendance system development it help lot of them. This project will be help to teacher they can understand and easily collect student record. All student attendance management system this software development for university, schools and colleges. A particular class student attendance information to access if teacher wants. The operator is helps by the information that will be given by the teacher for every class. Evaluation of student attendance will also help this system. This android based attendance system will run android operating system. There are some modules are:

- Process user authentication.
- Process attendance making.
- Information collect about students.

Every day on each working days attendance will take in everywhere like colleges, schools and university it will be helped for kept information record without paper. In a simple reasons, our natural environment will be saved for our next generation.

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1.2 Motivation

If a country will be develop around all over the world education is the main key for development. Every country build up their nation great to make education system great. In Bangladesh, this major sector have been taken several steps. Modern facilities for the educational institute and also less modern student is their required. Follow this attendance system, we ahead one step process in modernization. Attendance system is under the paper based maximum institute now a day's. Take a few initiatives some of institution are not automated completely.

When the teachercollects the presence all of student the process looks like this which is submit paper based attendance upgrade authority. Then that authority responsible to send SMS to their parents about their student attendance. It is a long process and killing time and slow process. This process badly affected sometimes this SMS become irregular. Our project work on "student attendance system" which is user friendly, time consuming and safe.

1.3 Objectives

Teacher use paper make attendance manually its already known well. Paper based manual process have lot of disadvantages of utilizing. Here example: Manual signing of attendance discover the hassle of having lecturers by teacher most likely teaching from distract and full getting attendance all students. The lecturer can't track all history of student in particular semester. Teacher also access single copy limited only at work place. In attendance analysis, the student percentage obtain to procedure and lecturer has also has perform manual which is normally lot of time. Respected parents don't have notification about the attendance. Theconventional attendance collecting system by having the limited imposed, we find out of the solution form our application.

There are some facilities:

- Very easy to get attendance this system to help teacher.
- This system is also help for each individual student automatically count percentage.

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1.4 Expected Outcome

This project help us to solve problem in educational institution. Here are:

- An individual monthly attendance report automatically generate for respected student.
- The monthly attendance report summary will get respected parents about their children's.
- All the information is saved on database without use any paper.

1.5 Report Layout

Chapter01: Introduction

This chapter, we discussed objectives, motivation and expected outcome of the project.

Chapter02: Use Requirement

In here, we discuss about requirement like description design specification and logical data model.

Chapter03: Specification of Design

This chapter, we discussed about all project design with proper example and description and also discussed individual description of design.

Chapter 04: Implementation Plan and Testing

In chapter, we discussed about implementation plan of interaction design and UX, implementation and result of test.

Chapter 05: Conclusion and Development For Future

In final chapter, we discuss about conclusion and development for future which madea vast sector for system.

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CHAPTER -2

Requirements Specification

2.1 Introduction

"Android Based Students Attendance System" for mobile application is design by project that will help to provide monitoring studentspresence.This applicationcounts present student'spresence. ourapplication support to run smoothly any android device without any lagging. So, the discussion will be helped about the Use Requirement for our project build up.

2.2 Requirement for "Android Based Students Attendance System"

There are some minimum software and hardware requirements to complete this android based attendance system. If we run our project this requirement have to needed order. General list of software and hardware component which requirement we are using to build our project. This are :

- Some hardware those are given :
  - ❖ Personal laptop/ desktop.
  - ❖ Minimum memory size 2 GB.
  - ❖ Smartphone- Android mobile.
- Some Software those are :
  - ❖ Database Management-SQL Server.
  - ❖ Android Studio (Application Development).

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- Some Programming Language and other :
  - ❖ Java Script.
  - ❖ My SQL.
  - ❖ API.
  - ❖ NDK.
  - ❖ SDK.
  - ❖ XML.
  - ❖ Pure Java.

2.3 Model For Use Case

The use case model shows the relation between users and how to use in this system.

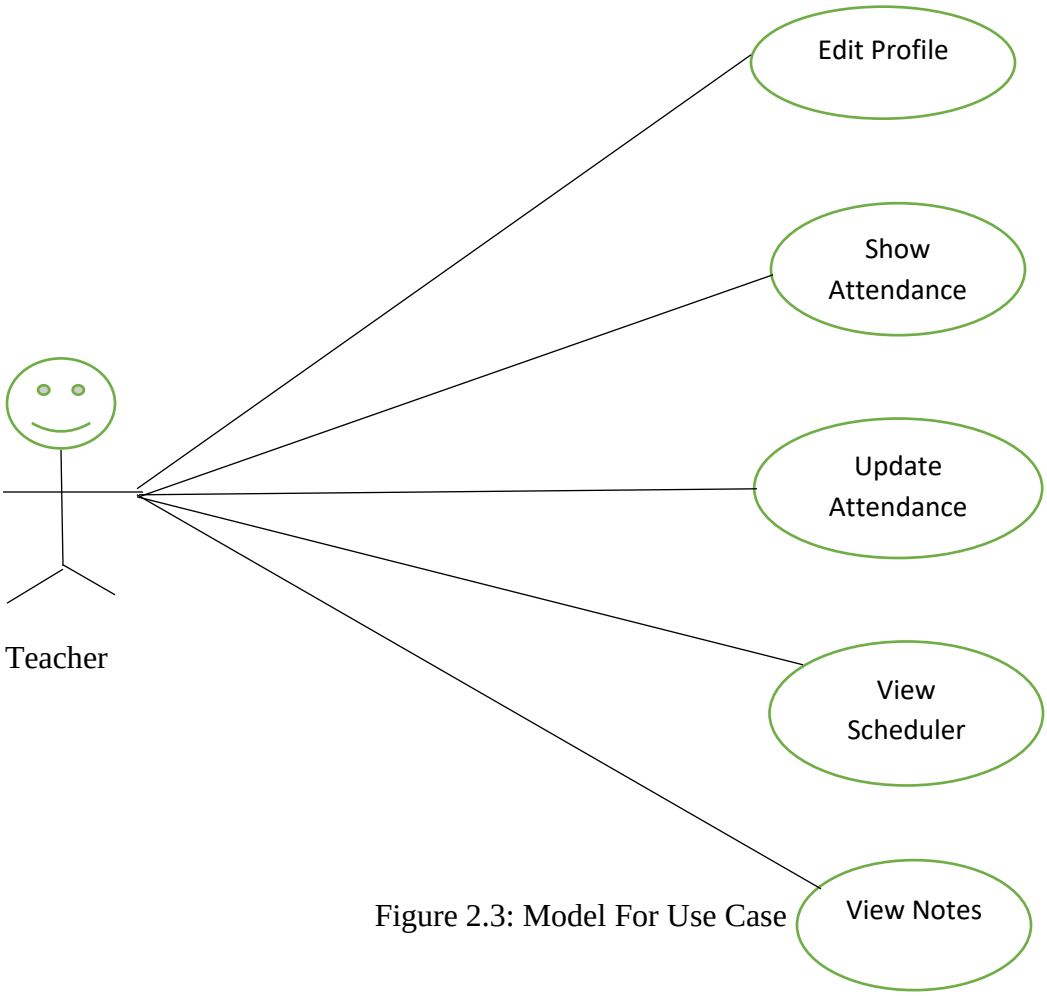

Figure 2.3: Model For Use Case

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2.4 Description of Use Case

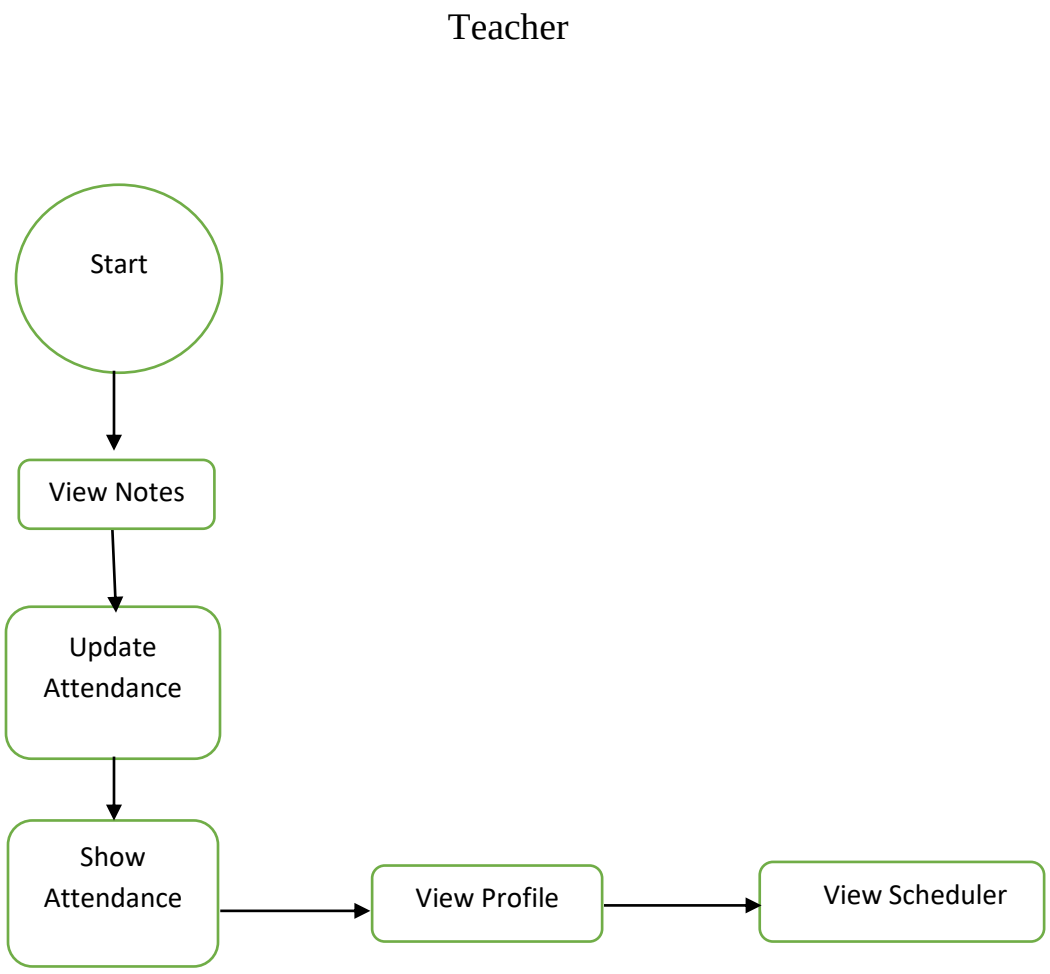

Figure 2.4: Description of Use Case

NOTE: It is for done by teacher. User can follow this step to use this system.

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2.5 GUI Navigation Menu

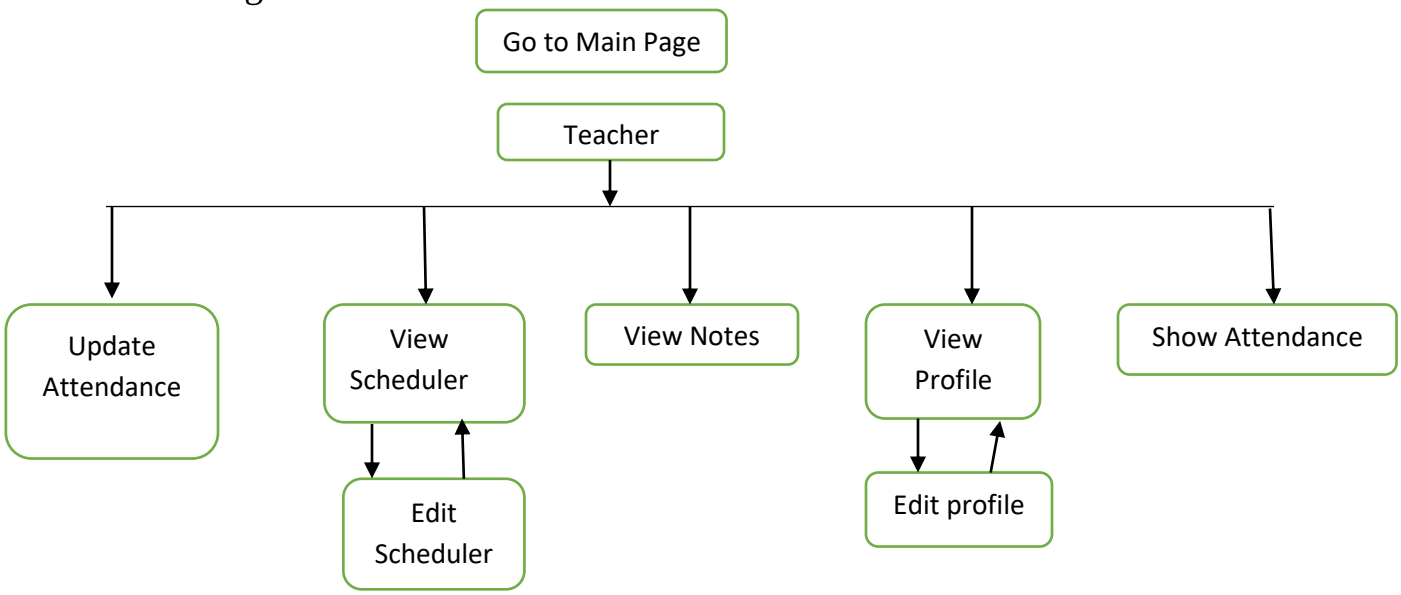

Figure 2.5 : GUI Navigation Menu

2.6 Logical Data Diagram

Teacher
+ Name + ID + Email + Password
+ Add Attendance (); + Add Marks ();

Figure 2.6: Logical Data Diagram

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2.7 Design Specification

Design specification give usthe details about the project characteristics. Structure or a system product it’s use is called wheremeet a need. Use case is scenario of a model where a developer can understand how to use in this system in project.

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CHAPTER 3

Specification of Design

1.1 Design

Design is involved everywhere what users sees in application. Actually, design deal with layers those are connection with presentation layers. Which is only one connection our application?our front design makes sure when the application is open to user, they will find out all information about it all easy format. Our front develop we are using this method to create front design.

Those are:

- Main Activity.
- Welcome Message to the Main Activity.
- Add Button in Main Activity.
- Create Second Activity.
- On Click Method.

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3.2 Add Class

It will help to kept information store in this application. It will need to follow this:

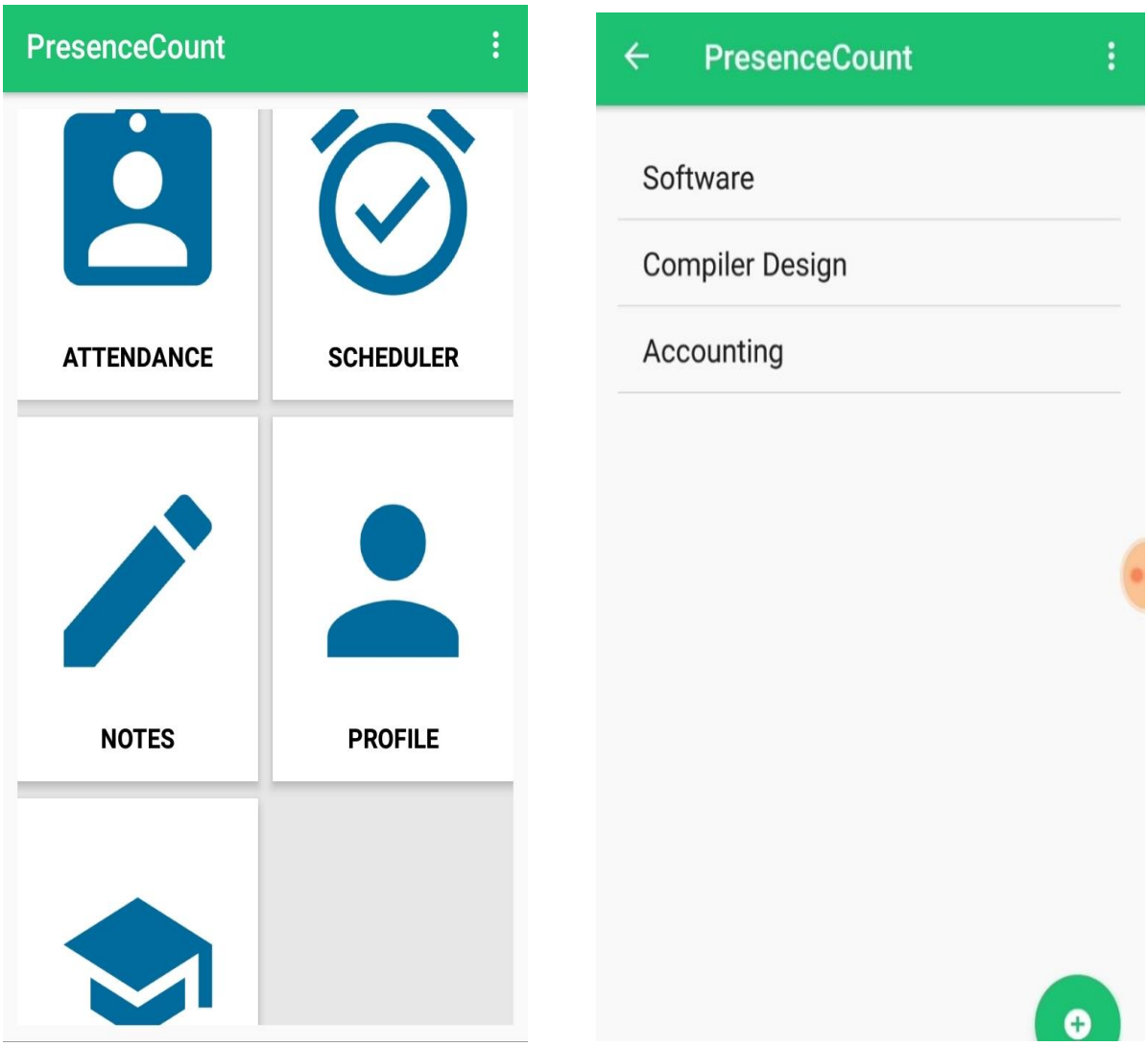

Figure 3.1: Add Class

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3.3 View Scheduler

View Scheduler will be shown here all information to help user.

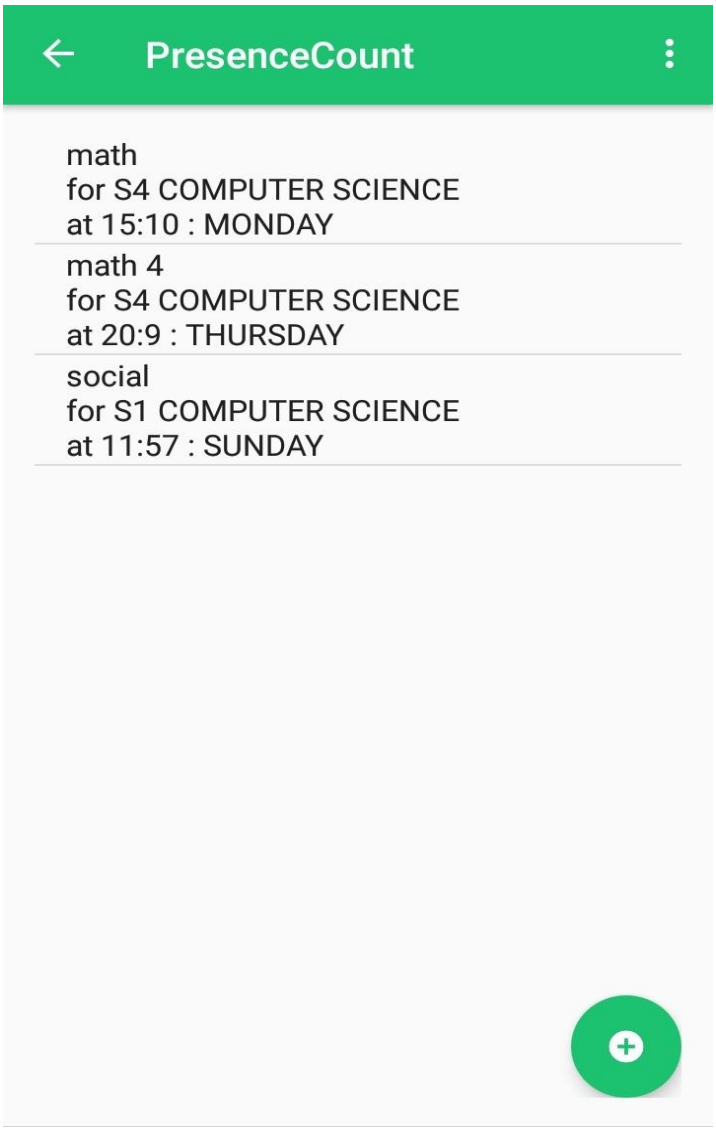

Figure 3.3 : View Scheduler

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3.4 Add Attendance

Student attendance can be collected through this system. The user must fo follow the steps.

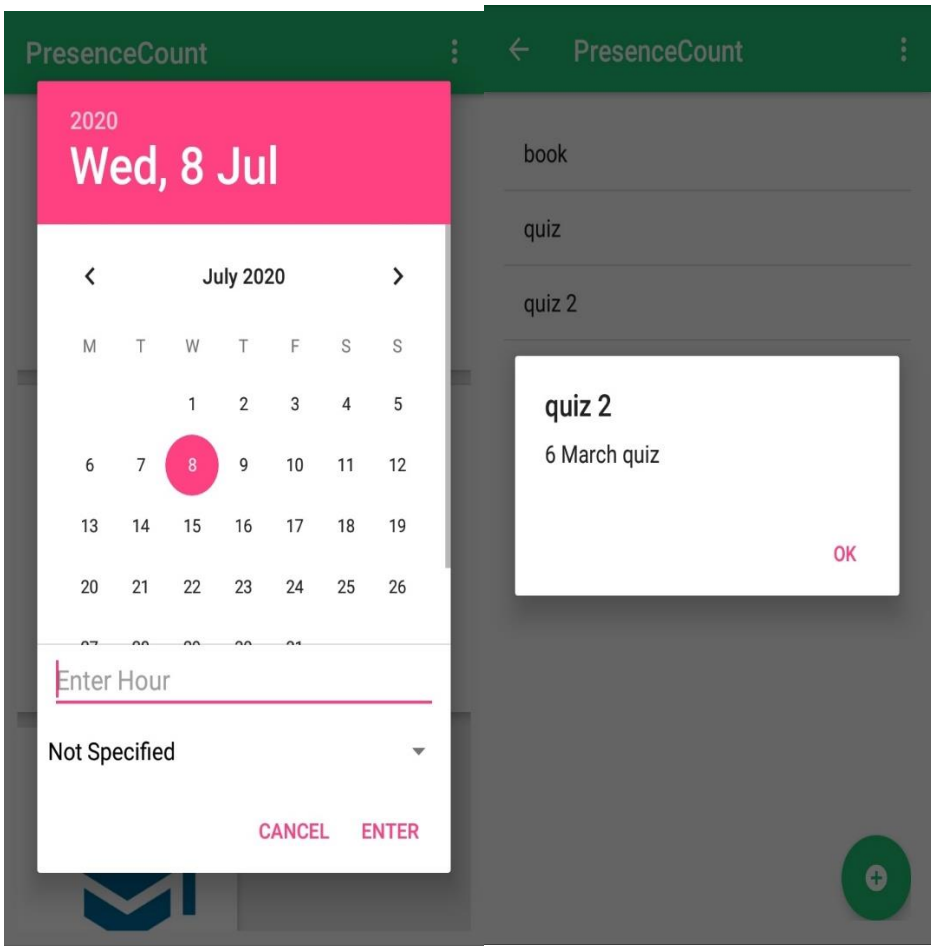

Figure 3.4 : Add Attendance

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3.5 View Profile

Through the application, user can view profile and information about students.

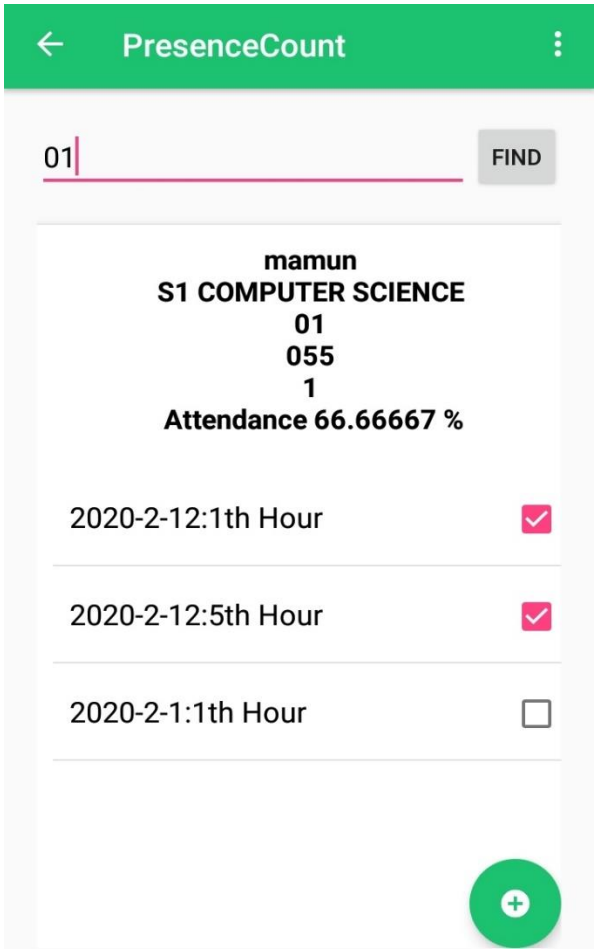

Figure 3.5: Edit Profile

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3.6 End Design

To end design, we use some logical program, its helps us to finish our project like we add some API, database or server. This kind of staff make our application more functional. Everything you can’t see without effectively. Example: Servers and databases create by end design developer. Our end design is using those language:

Here some language we are used:

- Java Script
- My SQL
- Pure Java

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CHAPTER 4

Implementation Plan and Testing

4.1 Implementation Plan of Database

The implementation of DBMS from beginning is to equipment requirement, here database programming stage and equipment that on best run, burden and database make sure information about it. Information imported any DBMS data existing. Moreover, developer can develop database and thecustomer that is security engineers to their necessities.

To follow those step to implementation plan are:

- Install DBMS.
- Turn on equipment, programming and some conditions by demonstrated setup factors.
- Create tables and database.
- Load using data.
- Set security and users.
- Implement regime backup.

4.2 Implementation of Design Front-End

Android application development we built our front-end by Java Script. Our application core design java Script. Because it is lightweight interpreted or JIT- programming language compiled with first class function. Which is most known scripting language most for use mobile pages. Java Script is multi-paradigm, supporting object-oriented, declarative styles and prototype based. Why we use java Script there are some reasons.

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Those are here:

- Easy to learn Java Script language.
- No needed compilation.
- Test and debug to easy.
- It is based on event based language.
- Programming capabilities procedural.

4.3 Interaction of Implementation

Our system make in order (Android Based Students Attendance System) interaction us to make sure responsive the users interface. Also hassle free service to build as well as strong server. The system design is users friendly. Users will use as long as logged in the system.

4.4 Implementation Of Testing

Testing is the most important part, particulars specialized testing alludes to the route toward usage. Toward is putting an activity executing arrangement detailed. When the arrangement ought finish than our destinations ought to be planned in the arrangement clear testing every last one before execute to be usage trying.

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Table 4.1: Implementation of testing

Test Name	Input	Outcome Expected	Outcome Obtained	Result	Date
1.Profile	Add student Name, ID , Class, Department	Successful save	Successful save	Successful	10 October, 2019
			Successful save	Successful	10 October, 2019
2.Attendence	Save student attendance using android phone – student id & Name, date, class	Successful save	Successful save	Successful	10 October, 2019
			Successful save	Fail	10 October, 2019

4.5 Testing Report and Result

The formal way of reflect testing, that is given estimated scope testing results very fast. Implementation is only one way for detailed arrangement for towards putting an activity. implementing arrangementto finish before our goal every last one of this activities to be execution trying planned in the arrangement. If all types system passes, then it is ready to laun

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CHAPTER-5

Conclusion and Development for Future

5.1 Conclusion

We build this application only for our teachers. It saves their time and organize their work. It's the future of our education system. now days' maximum organization use web portal, its takes too much time those also need online backup but in our case we build it offline. If anyone need they add this application in online. we also insure that it causes no harm in any android phone.It also insures student security like there marks, proper attendanceetc.in future we add more educational feature in this application.

5.2 Development for Future Scope

- System update routinely.
- Security will be upgrade in future.
- In future we will alert security improvement in this application.
- We will take responsible more security information for database.

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APPENDIX

Project Reflection:

From the Fall-2018 Semester, we had started our journey to make a system through that we can monitor the attendance system so that it can be helpful for the Educational Institute. Also, parents can get a notification about their children attendance randomly. Which helps to digitalize the attendance system. We also thought about an easy and hassle-free system so it can be saved valuable time. This is our keen believe that our "Android Based Student Attendance System" Using mobile Application‖ will have a useful and positive thing for the users. Very soon we will ready to upgrading our system with a regular basis as it required.

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Android based attendance management system

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