

Requirements of Final Project Report

- Name – Unmitkumar Patel

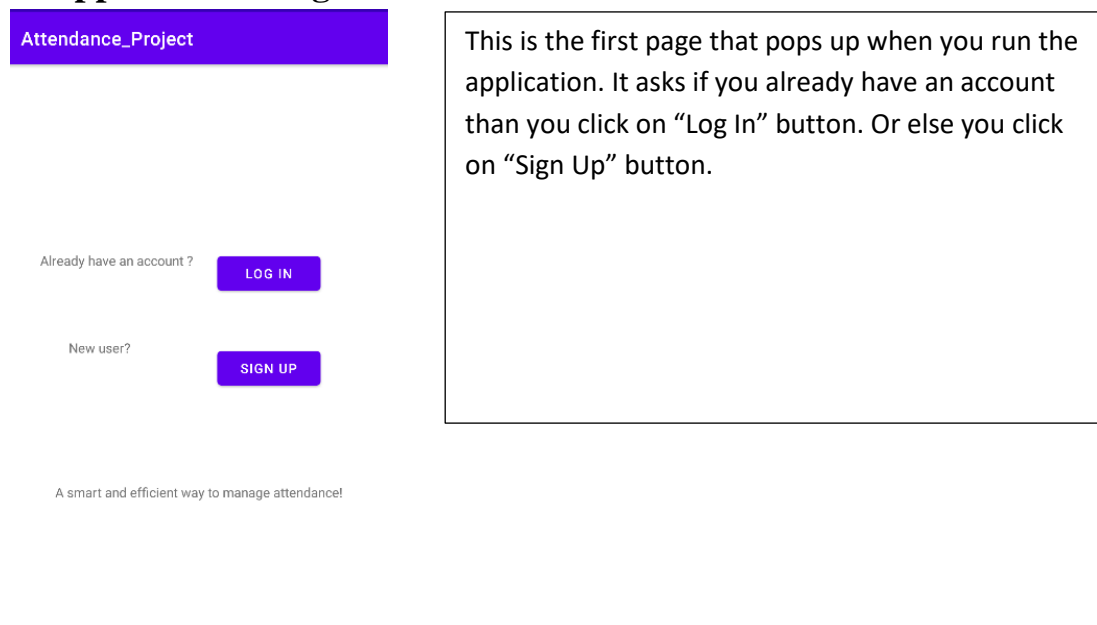
Project Description Document

This project is about an attendance management application created using Android Studio and Kotlin Programming language and SQLite Database to store the entries and other details for the application.

1. Project Statement

I was always interested into building applications related to database and specifically which can be used to make work easier. The purpose of this project is to help take note of the attendees in a large event or in everyday bases like college lectures in-person or online. I got idea of this project when teachers, or instructors want to take attendance and to make their tasks easier. Yes, there is already a similar platform available related to my application, but it used internet to fulfill the requirements. There is no special requirement for using this application. It works approximately on 100% of the devices.

2. Application Design



Attendance_Project

Username

Password

LOGIN

This is the page that pops up when you select “Log In” button. It asks to input username and password. The Username and Password is stored in an SQLite Database. The information from database is fetched as Credentials datatype created by me. The credentials datatype stores the username and password associated to it. If any of the credentials is not entered. The toast message is delivered to input all information. And then you can click on login button. And then classes associated with the account will come up for checking attendance and generate the class code.

Attendance_Project

MATH
CLASS CODE: 720343

Create Code or Check Attendance

CODE CANCEL ATTENDANCE

ADD A CLASS!

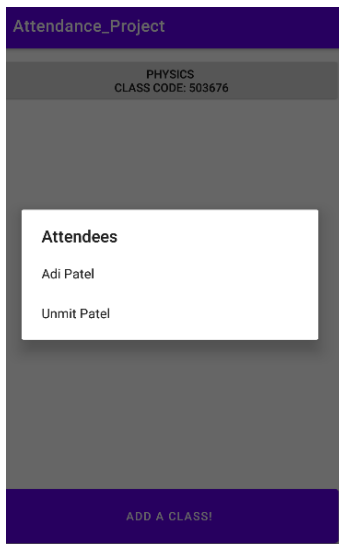
Attendance_Project

MATH
CLASS CODE: 720343

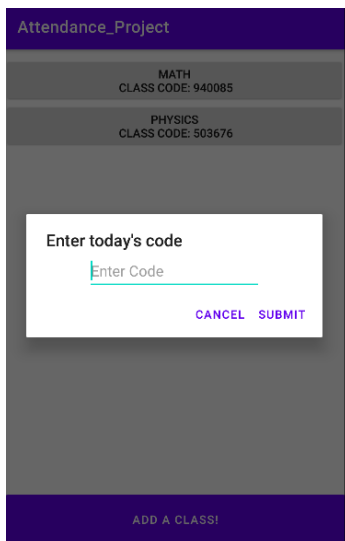
Today's lecture code is:
562890

ADD A CLASS!

This is an example account I created. It is an instructor account. As you can see in the image there is a class created named as “Math” with Class code: 720343. When you click on the class, the dialog box comes up asking to set the lecture code as “code”, to check the attendees as “attendance” and cancel but to move out. When you select code it will give message as “Today’s lecture code is” with random class code generated. The instructor send out this code to their students manually and students put this code under the class and submit the attendance. The lecture code can be generated multiple times and it will replace the previous lecture code in the database.



When the student submit the attendance, their name will be stored into the data base, and it will be popped up when the instructor selects the “Attendance” button. There is also “Add a Class!” button beneath that asks instructor to enter the class name and when they press insert button, The class is created with automatic permanent class code.



This is an example student account I created. When the student clicks on the class, the dialog box appears to enter the lecture code to submit the attendance. When the student enter the code. The program checks if the code is correct which means it is the code created by the instructor of that class. If it is correct another dialog box pops up to enter the students full name or else it will pop up message saying code is incorrect. There is an “Add a Class” button below which asks to enter the class code which is permanent code represents the subject or course and the class related to the course will be added to the student’s account.

Are you signing up as:

INSTRUCTOR

OR

STUDENT

This is the page that comes up when you press Sign Up if you are a new user and you are creating this account as instructor or student. When you select instructor or student the account creation page pops up. There is a condition set for the username and password that it's length should be 5 and 7 characters long. The program also checks if the username already exists or not. If it exists, the Toast message is popped up saying "Username already taken". When the account is created the appropriate page for instructor or student shows up based on their selection of account as instructor or student.

3. Application Implementation and Evaluation

I have created different classes for different pages of the application. First I created the design of the page and then focused on the code and logic to make it function properly. I have created 6 SQLite database classes for student credentials, instructor credentials, content of student (stores the courses that students are involved in), content of instructor (stores the courses that the instructor teaches), name of the class and its class code, class code and the lecture code. I tested the app using the mobile emulator built inside the android studio, I did multiple trials and tests to check if app is working correctly or any other conditions I need to take care of. Multiple tests and try and error method eventually helped me to come to a satisfactory result. The app always work correctly under all situations.

4. Experiences and Thoughts

Overall it was very great experience to work on such project and building a useful application that can be used for real life purposes. I would include a feature to delete the class. I might have also included a feature that would let students enter the lecture code for attendance for only the amount of time the instructor allows them to. After the time limit is over the lecture code deactivates and student can be marked as late in the class.