




GROUP ASSIGNMENT

23-03-2024

Group 4

Submitted by

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Lecturer: Un Virak

<i>LECTURER'S COMMENTS/GRADES</i>	<i>For office use only</i> <i>Date:</i> <i>Time:</i> <i>RECEIVER'S NAME:</i>
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1. Project Description

The Attendance Tracker App is designed to streamline the process of logging student attendance in class. Utilizing a user-friendly mobile interface, the app integrates a QR code scanner to swiftly record attendance. Students simply scan the QR code provided in the classroom, and their attendance status is promptly updated in the database. This efficient solution enhances classroom management by automating attendance tracking, ensuring accurate records with minimal effort.

2. List of Important Requirements or Features

- Feature for student to scan QR code to track attendance
- Feature for student to see through past records of students
- Feature for faculty members to generate QR code
- Feature for faculty members to see reports of student records.
- Feature for managing student and faculty account into the database

3. Project Team

- Hing Zodiac Jack
- Socheat Sovichea
- Hak Monghout
- Soy Rithy
- Chy Sovan

4. Project Architecture:

The Student Attendance Mobile App focuses on the Android application, which involves the student and faculty components, and the web admin server which allows administrators to manage students and faculty members. The architecture ensures maintainability, and security while meeting the diverse requirements of students, and faculty.

Component:

Android App for Students:

- Allows students to scan QR codes provided at the entrance to log their attendance.
- Provides access to attendance history, enabling students to view records over time (present, absent, late).

Android App for Faculty:

- Enables faculty members to generate QR codes for attendance tracking.
- Make the process of taking attendance using QR codes easier.
- Provides the faculty with the ability to view reports of student attendance and generate comprehensive reports.

Web App for Admin:

- The ability to add students and faculty members into the database

5. Project Methodology

Planning:

- Identify Requirements: List down what the app should do, like scanning QR codes, recording attendance, and providing reports.
- Set Goals: Determine what you want to achieve with each phase of the project, like completing the app design, implementing features, and testing.

Design:

- Create Mockup: Use software tools like Figma to create a simple mockup of each screen to visualize the app's layout and flow.

Development:

- **Start Coding:** Begin coding the app using a programming language like Java for Android development.
- **Build Features:** Implement the features one by one, starting with the QR code scanner, attendance recording, and then adding functionalities for viewing history.
- **Test Continuously:** Test each feature as you build it to ensure it works as expected. Fix any bugs or issues you encounter along the way.

Testing:

- **Test Functionality:** Use the app on different devices to check if all features work correctly, including scanning QR codes, recording attendance, and viewing reports.
- **Check for Bugs:** Look for any errors or unexpected behavior in the app and fix them promptly.

6. Tool and Technologies

- **Firebase**
- **Github and Git**
- **Java**
- **Android Studio as IDE**

7. Design Mock Up

Attendance

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John Doe

Semester 3

Current Class

Software Testing & Reliability

Saturday, 20th April
(08:30AM - 11:00AM)

FLOOR 8 - ROOM 805

Status: In Progress

Oum SoaKosal

Next Class

Cloud Computing


Wednesdays, 3th April
(08:30AM - 11:30AM)


FLOOR 6 - ROOM 601


Status: Next

Dy Chanpisith

Home



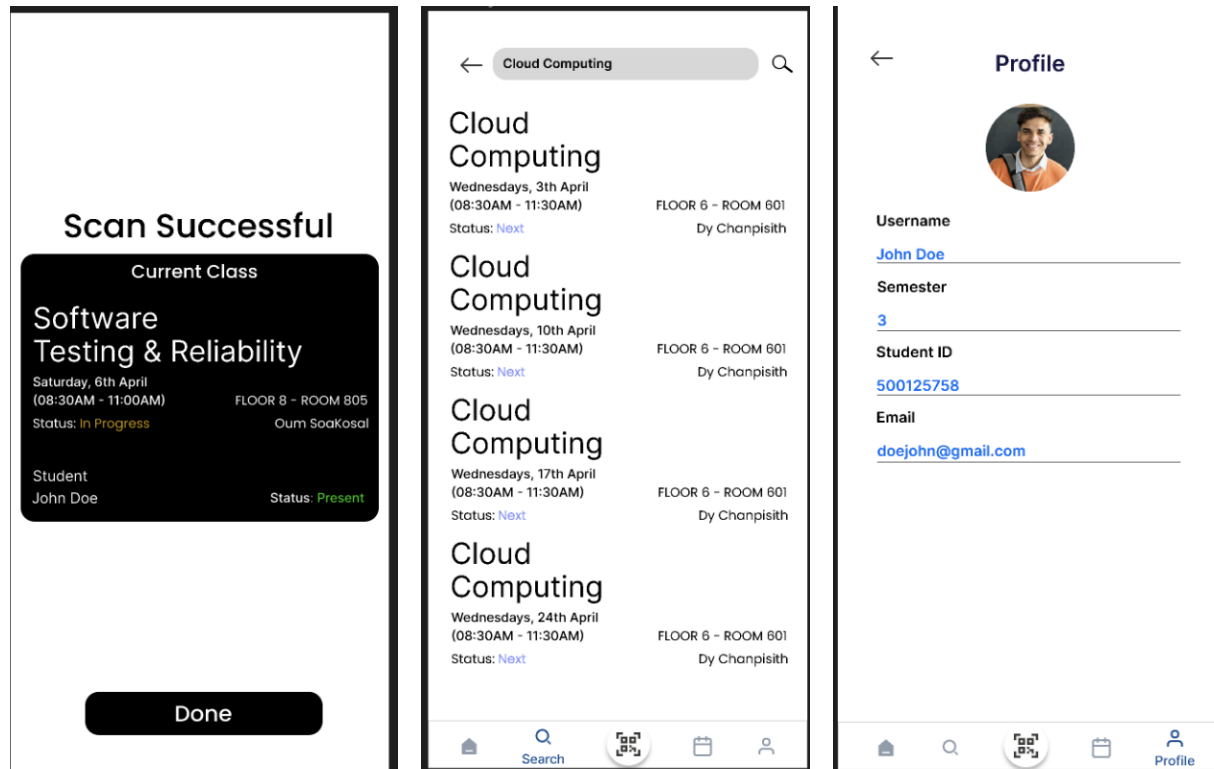




←

Scan

Scan the QR code to mark the attendance



8. Quality Control and Testing

Our project will primarily focus on functional testing to verify that the requirements and features are working as intended. Unfortunately, due to constraints, we won't be able to conduct performance testing or usability testing.

9. Communication

Our team maintained effective communication throughout the entire project. We scheduled 5-6 meetings to discuss the project during its development, and we also had daily discussions during class time. These regular interactions allowed us to address any questions, clarify doubts, and ensure that everyone was on the same page. Our commitment to open communication fostered a collaborative environment, enabling us to tackle challenges together

and make informed decisions. As a result, our project progressed smoothly, and we achieved our goals within the specified timeline

10. Project Development Difficulties

During the development process, we have encountered several obstacles throughout our journey. One of the challenges is configuring the QR code process to allow us to scan which would track the student attendance records. We were able to solve this problem after a lengthy process and learn a lot from this. Another problem we face is connecting the application to the web admin server which would allow the admin to create an account and see reports of the students.

11. Lesson Learned

From our development journey, we have learned a lot about the process of attendance tracking. We learn the flow of the application and create an interface that is easy to use. We also learn new technology such as QR coding which is a profound experience as it allows us to experiment and open doors to new possibilities for our team. This project has been a great learning experience for future development projects.

12. Conclusion

In conclusion, the attendance tracking app streamlines the process of tracking attendance by tracking attendance through QR code, generating reports, and allowing students to see their records. This application will ensure a new way for students and the school to operate up to modern digital standards.
