Project Title:

Library Buddy Mobile Application

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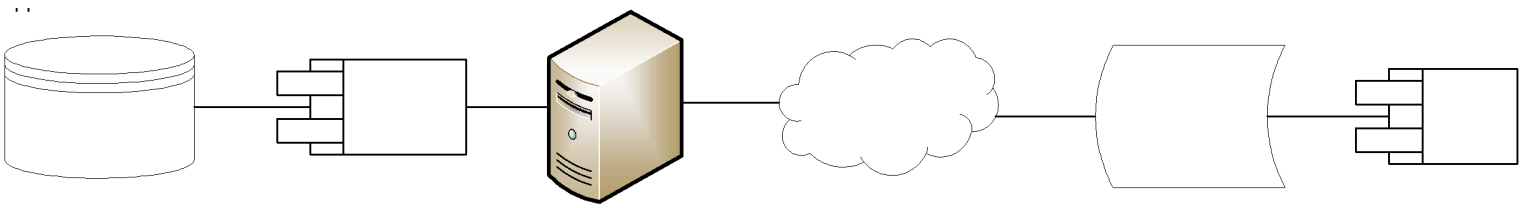
1. Project Description

This project is called Library Buddy Mobile Application. It is an android mobile application that allow users to view books and borrow books by using request form. Its objective is to make users become easier in search their favorite books. This project is done using Java Programming Language.

2. List of Important Requirements or Features

- User can view book, upload profile, logout and search through books list (insert, view, update, delete)
- Create and verify user accounts
- Login with Email address and Password
- Admin controlling book information (view, insert, update, delete)

3. Project Architecture



4. Project Methodology

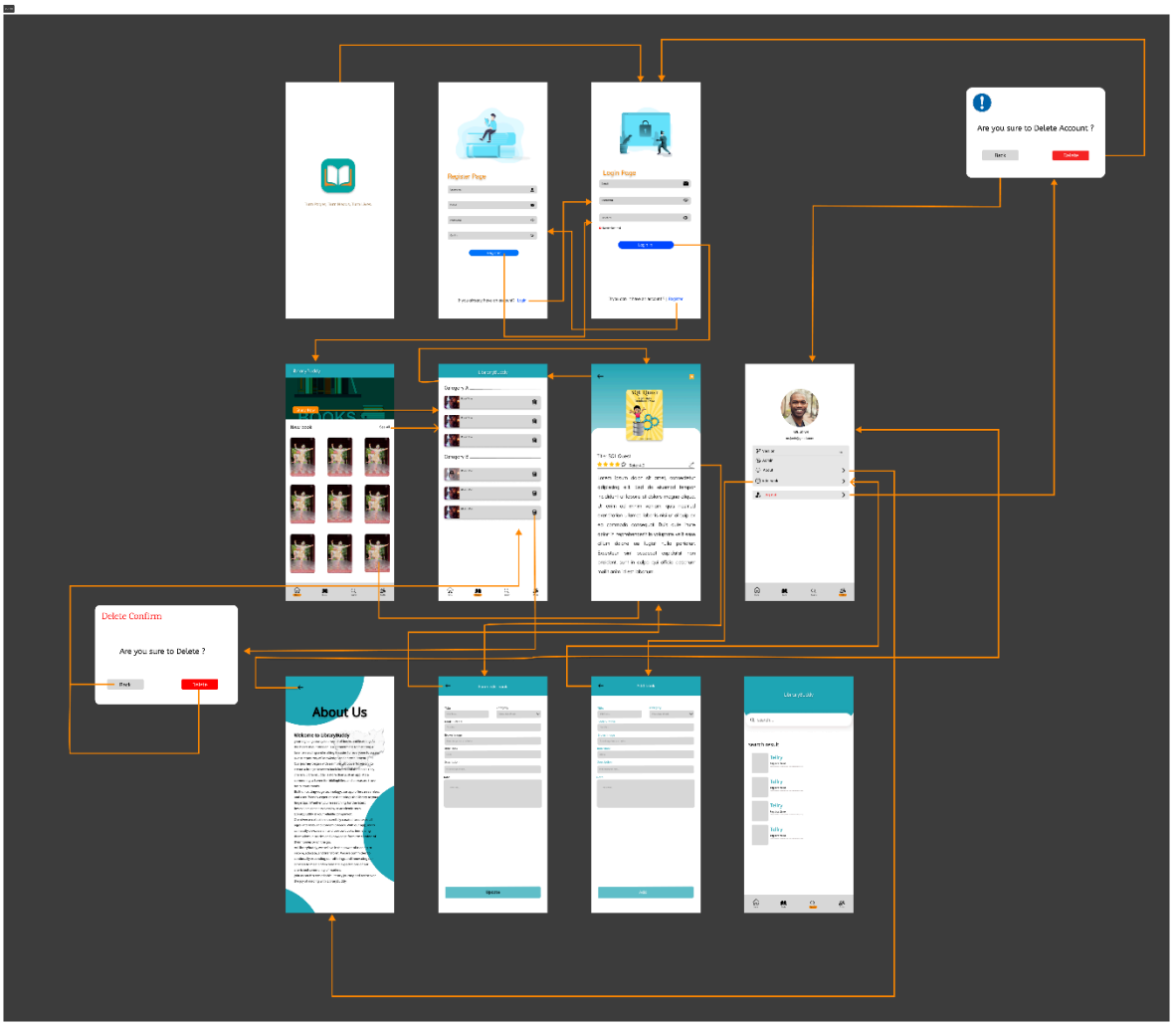
This project had eight parts. First, we came up with the idea for the app. Then, we made plans to know exactly what the app needed to do. After that, we set some rules for what the app couldn't do. In the fourth and fifth parts, we drew pictures of what the app would look like and made models of it to see how it might work. Then, we started writing the code for the app in the sixth part. Once the code was done, we spent a lot of time in the seventh part testing the app to make sure it worked well and wouldn't break. Finally, in the eighth part, we put the finished app on the Play Store so people could download it and try it out.

5. Tools and Technologies

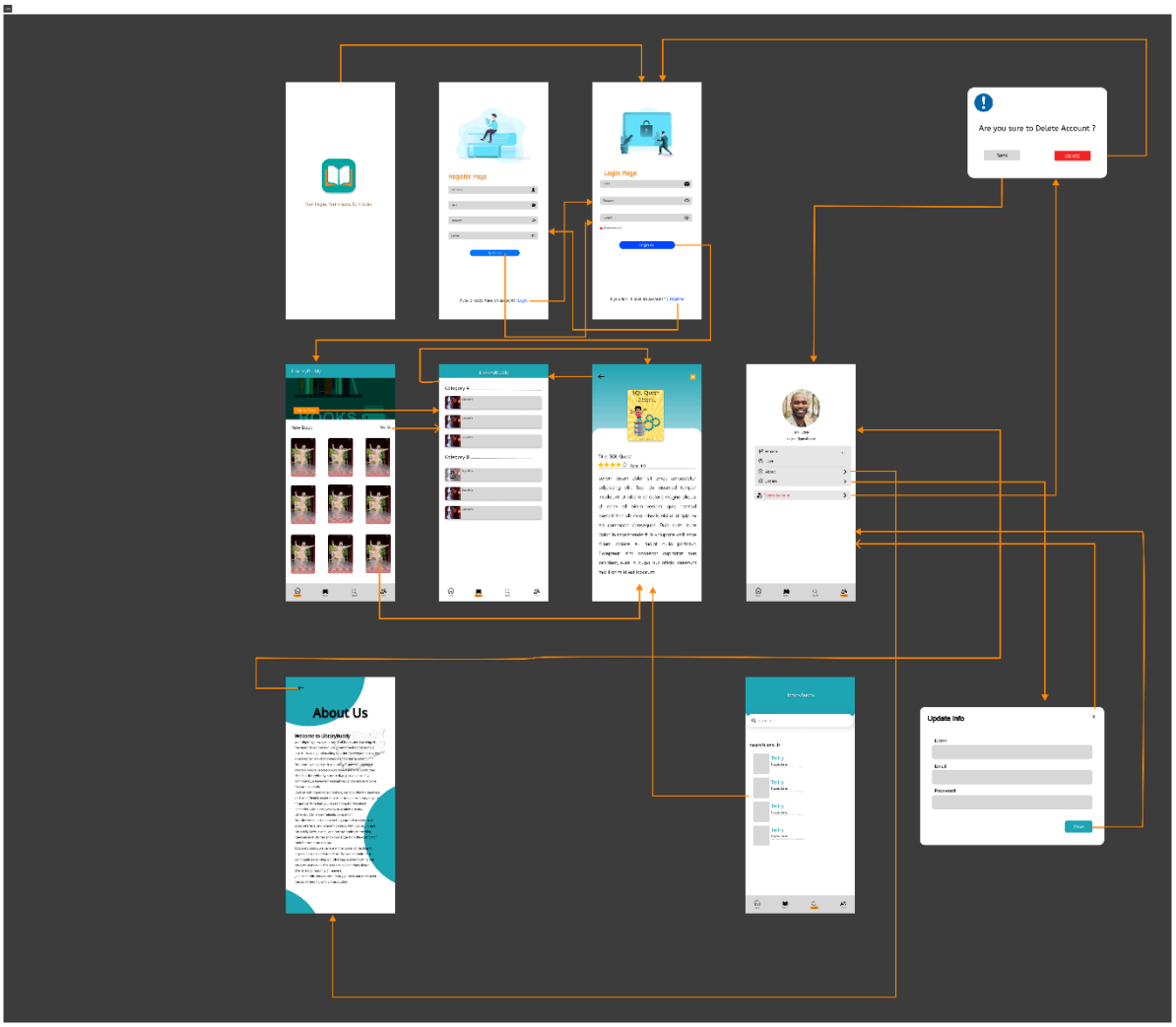
- Java Programming Language
- Android Studio IDE
- Git Community
- Figma Design
- Firebase Realtime Database
- Firebase Authentication
- Firebase Storage
- Picasso Library

6. Project UI Design

Admin



User



7. Quality Control and Testing

Due to limited time, this project primarily focuses on functional testing to ensure that all features and requirements operate correctly. Unfortunately, this time constraint means we are unable to conduct performance and usability testing.

8. Communication

Throughout the duration of this project, our team maintained excellent communication. We scheduled 5-6 formal meetings during the project's development phase to discuss progress and strategize. Additionally, we took advantage of our daily class sessions for impromptu discussions and to address any immediate questions or concerns, ensuring a seamless and collaborative workflow.

9. Project Development Difficulties

During the development of this project, our team faced several challenges. One significant hurdle was working with the Firebase database; as first-time users of Firebase services, we encountered difficulties in executing read, write, and query operations. Another obstacle was the integration of our code. Since we had divided the work, focusing on individual features separately, merging these distinct components into a cohesive whole proved to be a complex task.

10. Lesson Learned

The development of this project has been a substantial learning experience for us. We gained new skills and knowledge, particularly in working with the Firebase database and managing user authentication through Firebase Authentication. Additionally, we learned how to implement CRUD (Create, Read, Update, Delete) functions in relation to Firebase. This project also provided us with valuable experience in handling and processing book information, further broadening our technical expertise.

11. Conclusion

In conclusion, the LibraryBuddy Mobile Application is a user-friendly platform that enables users to browse and search from our library app. This application has been meticulously developed using the Java Programming Language, integrated with Firebase Services, to provide a seamless and efficient user experience.