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COURSE INSTRUCTOR: MR. JOHN KORANKYE ASSIAMAH.

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GROUP: 1

MEMBERS:

LAWERTEH DANSO MICHEAL - 10956332

DOE AGUDEY DANIEL - 10956661

ACQUAH EDWARD AYIREBI - 10986982

DANSO TWUM KWADJO - 10947466

ACQUAAH-ARHIN ABBA - 10957499

EYIRAM ABA AGBORSON - 10955078

WURAPA LARRY KWABENA - 10966173

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CREATION AND DEBUGGING OF A LOGIN, REGISTRATION, AND DASHBOARD PAGE IN FLUTTER

Abstract:

This lab report aims to document the process of creating a login page, registration page, and dashboard page in Flutter and debugging the application. Flutter is a cross-platform framework that allows for the development of mobile applications. In this report, we will discuss the introduction, methodology, results and analysis, observations and discussions, and conclude with a summary of the findings.

Introduction:

Mobile applications often require user authentication and a user-friendly interface. The objective of this project is to create a login page, registration page, and dashboard page using Flutter. The login page allows users to authenticate themselves, the registration page enables new users to create an account, and the dashboard page provides access to various application features. Additionally, debugging techniques will be employed to identify and resolve any issues encountered during the development process.

SOFTWARES USED AND FUNCTIONS

- Figma
  Figma is a web-based design and prototyping tool used for creating user interfaces (UI) and user experience (UX) designs. It allows designers to collaborate in real-time, create interactive prototypes, and handoff design assets to developers. Figma is popular among designers for its ease of use, powerful features, and cross-platform compatibility.

- Flutter
  Flutter is an open-source UI software development kit (SDK) created by Google. It is used for building cross-platform mobile, web, and desktop applications from a single codebase. Flutter uses the Dart programming language and provides a rich set of pre-designed widgets and tools for developing high-performance and visually appealing applications.

- Dart
  Dart is a programming language developed by Google and used for building applications using Flutter. It is an object-oriented, class-based language with a strong static type system. Dart is known for its simplicity, productivity, and performance. It is used to write the logic and functionality of Flutter applications.

- VS Code

VS Code (Visual Studio Code) is a popular source-code editor developed by Microsoft. It is lightweight, extensible, and supports various programming languages, including Dart for Flutter development. VS Code provides features like code completion, debugging, version control integration, and an extensive marketplace with extensions to enhance productivity for developers.

In summary, Figma is used for designing UI/UX, Flutter and Dart are used for building cross-platform applications, and VS Code is a preferred code editor for Flutter development.

Methodology

The methodology employed for this project involves the following steps:

a) Setting up the Flutter development environment: Install Flutter SDK, set up an IDE (Integrated Development Environment) such as Android Studio, and configure the necessary dependencies.

b) Creating the login page: Design the login page interface using Flutter widgets such as Buttons, and Form. Implement the logic to authenticate users against a database or authentication service.

c) Creating the registration page: Design the registration page interface with relevant input fields for users to enter their information. Implement the logic to store user details in a database or authentication service.

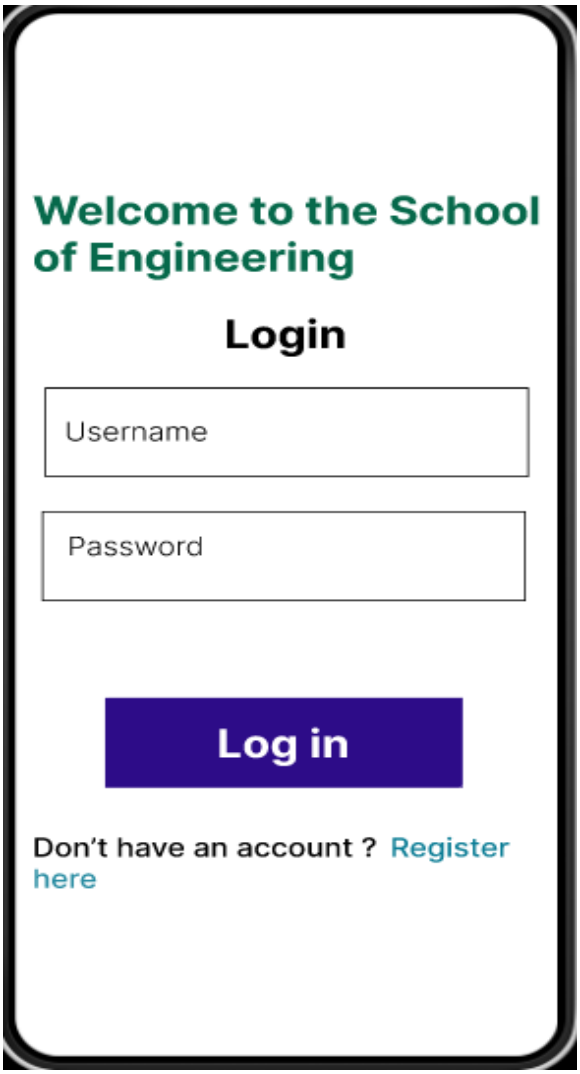
d) Creating the dashboard page: Design the dashboard page interface to display relevant information or features. Implement navigation between different sections of the application.

e) Debugging the application: Test the application thoroughly, identify any bugs or errors, and utilize debugging techniques to isolate and resolve the issues encountered.

SKETCH OF PAGES.

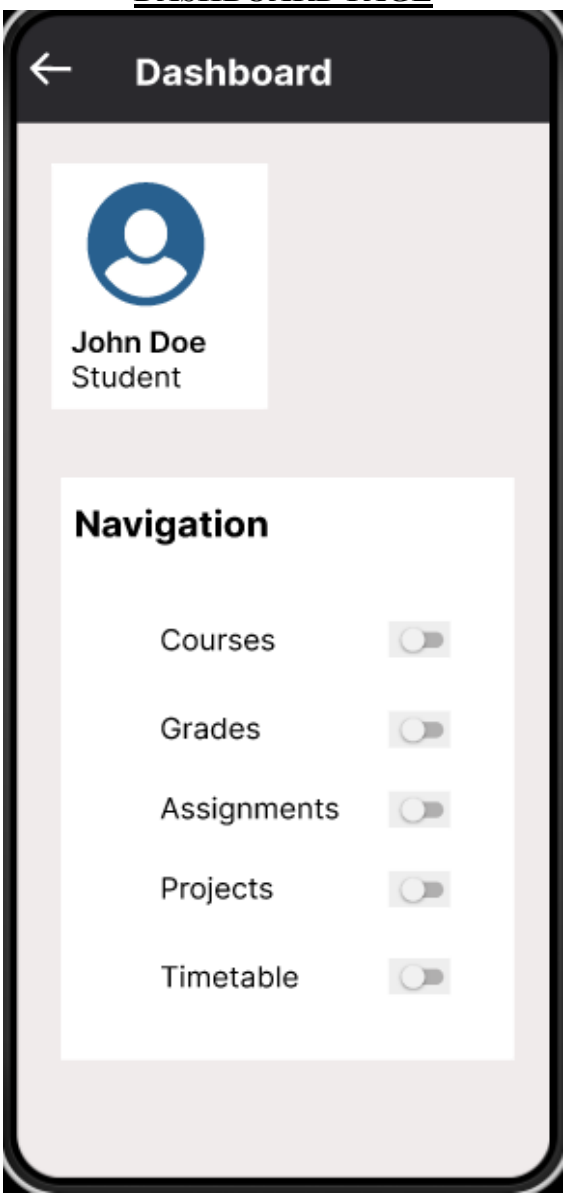
Before the project we made sketches of the pages using figma.

LOGIN PAGE



REGISTRATION PAGE

DASHBOARD PAGE



Observation and Discussions:

The following observations were made

The login page accurately authenticated users based on their credentials.

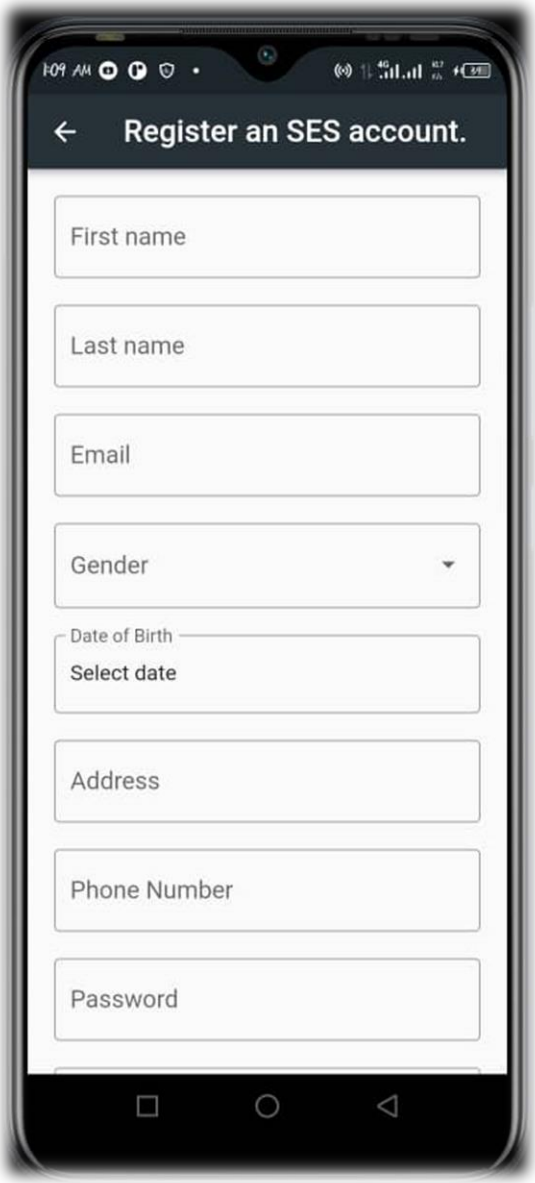
The registration page will be able to effectively store user information and allowed the creation of new accounts.

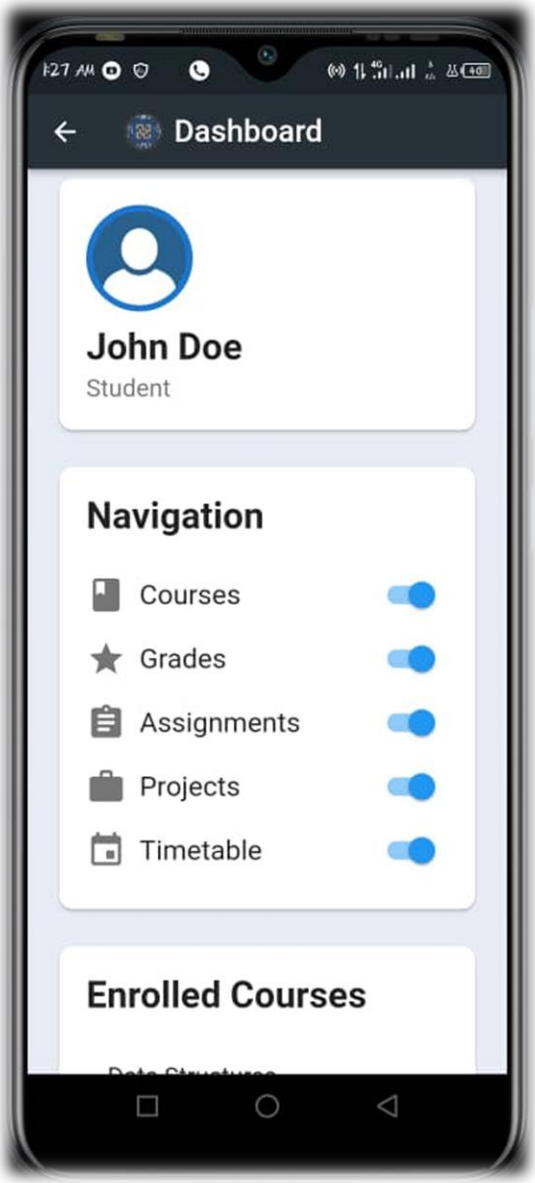
The dashboard page provided easy access to different sections of the application.

During the development and debugging process, several challenges and observations were encountered. Proper error handling and validation techniques were crucial to ensure a seamless user experience.

Furthermore, user feedback and testing revealed the need for additional features, such as password reset functionality and improved UI/UX design. These observations highlight the iterative nature of application development, emphasizing the importance of continuous improvement and user feedback.

PICTURES OF THE WORKING APP





Conclusion

In conclusion, the development and debugging of the login page, registration page, and dashboard page in Flutter were successfully completed. The application demonstrated effective user authentication, registration, and navigation functionalities. The project highlighted the significance of proper error handling and the use of debugging techniques. However, it is essential to consider user feedback and iterate on the application to enhance its features and usability. The project serves as a foundation for further development and improvement in future iterations of the application.