
**UNIVERSITY MALAYSIA TERENGGANU**

**FACULTY OF OCEAN ENGINEERING TECHNOLOGY & INFORMATICS**

**[CSM3114]**

# FRAMEWORK BASED MOBILE APPLICATION DEVELOPMENT

**(GROUP 1)**

## FINAL REPORT PROJECT 2:

## E-COURSE APP

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**Executive summary**

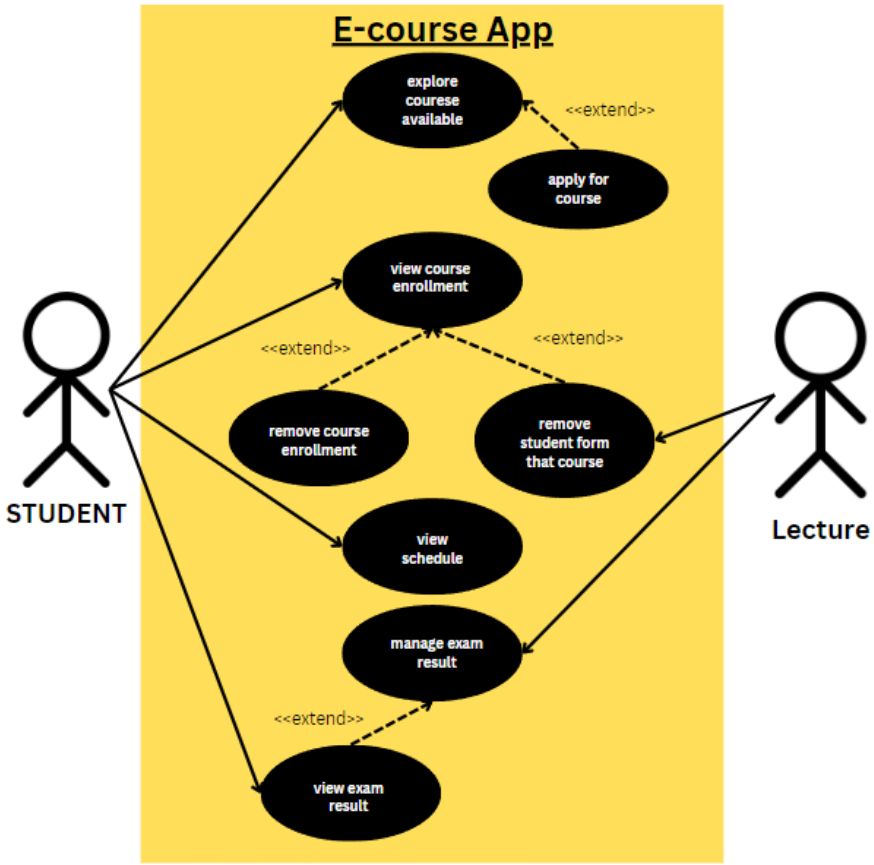
The Flutter-based e-course application revolutionizes online learning by providing a seamless and user-friendly platform for external participants. This innovative tool streamlines the registration process, allowing individuals to effortlessly enroll in a variety of courses that cater to their interests and learning objectives. The intuitive interface enhances user experience, enabling easy navigation through the diverse range of available courses with features like login, add course , scheduling, enrollment, and exam result.

Designed for accessibility, the application empowers participants to engage in online classes from any location, offering a flexible and versatile learning experience. This flexibility not only accommodates individual preferences but also fosters a more inclusive and diverse educational environment.

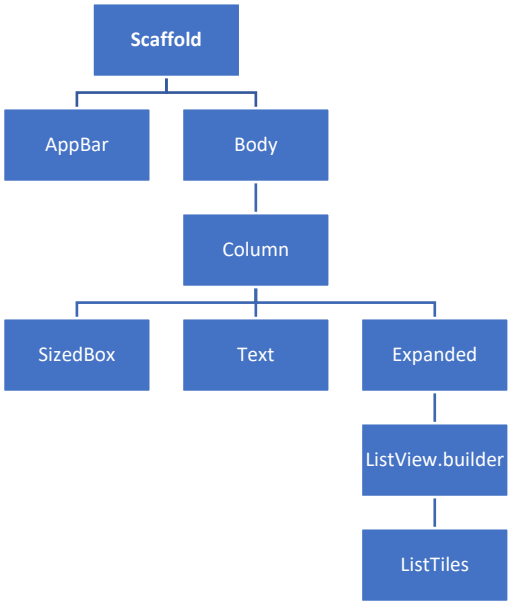
With a focus on user independence, the app grants participants the freedom to choose courses at their convenience, promoting a personalized and self-directed learning journey. The convenience of accessing courses from any location and at preferred times enhances the overall learning experience, making education more adaptable to diverse schedules and lifestyles.

In summary, the e-course application developed with Flutter not only simplifies the registration process but also transforms the learning landscape by providing participants with a user-friendly, flexible, and accessible platform. This executive summary emphasizes the app's key features, highlighting its potential to revolutionize online education and empower learners to pursue knowledge on their terms.

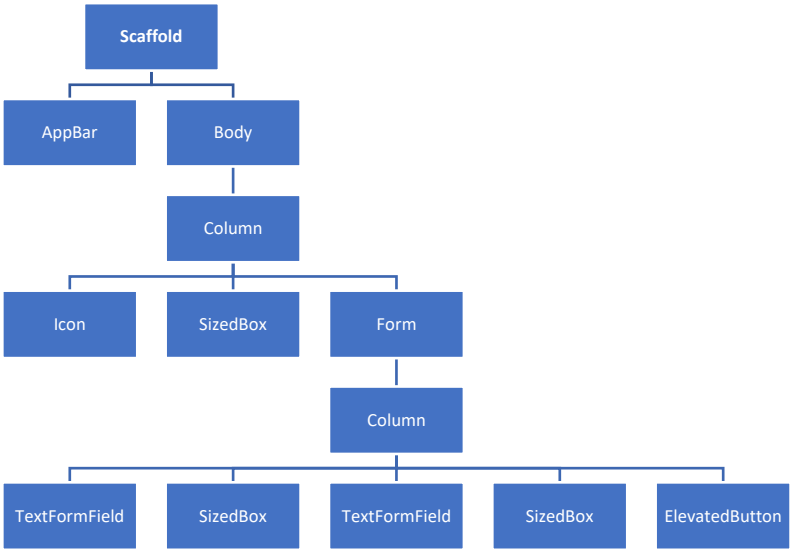
**Use Case**


E-course App
explore courese available
<<extend>>
apply for course
view course enrollment
<<extend>>
<<extend>>
remove course enrollment
remove student form that course
view schedule
manage exam result
<<extend>>
view exam result
STUDENT
Lecture

**The common structure of tree widgets**

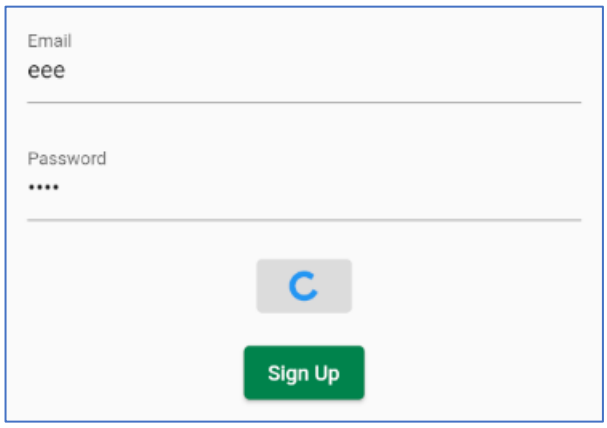



This structure is utilized for managing information related to student enrollment, student schedules, student exam results, and lecture-student information through the files: studentEnrollment.dart, studentScheduled.dart, studentExamResult.dart, and lectureStudentInfo.dart.

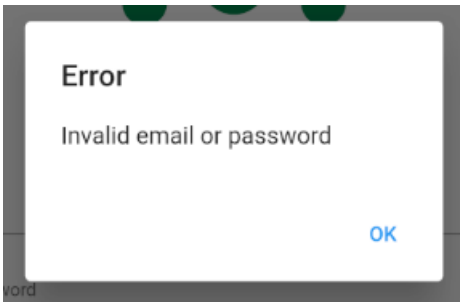



This structure is employed for handling sign-up functionality in signup.dart, managing login operations in login.dart, and handling other form-related functionalities in various coding files.

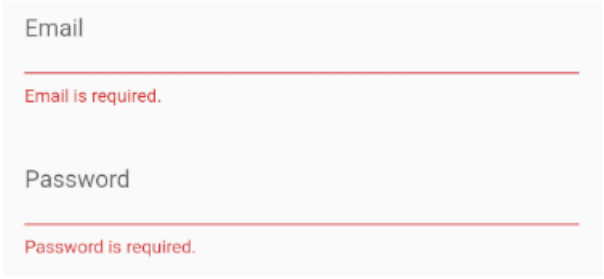
**Flutter widget and features adopted in the application**



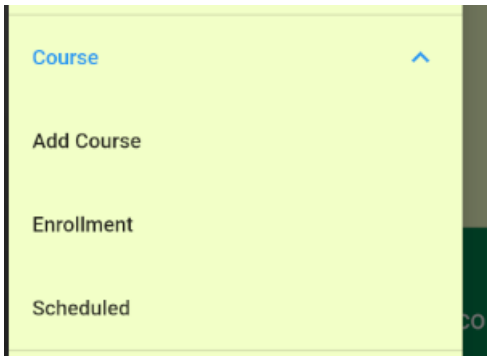

A CircularProgressIndicator is displayed inside the "Login" button when the user is in the process of logging in.




An AlertDialog is shown in case of errors, with an OK button to dismiss the dialog. The _showErrorDialog function is responsible for displaying error messages.

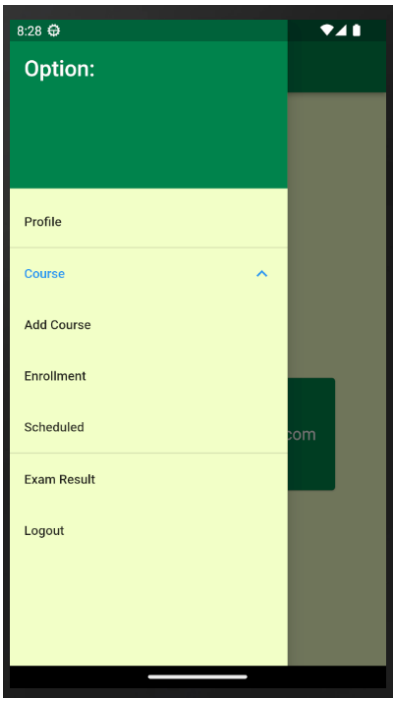



Form and Form Validation use TextFormField widgets are used for email and password input, with validation functions to check if the input is empty.

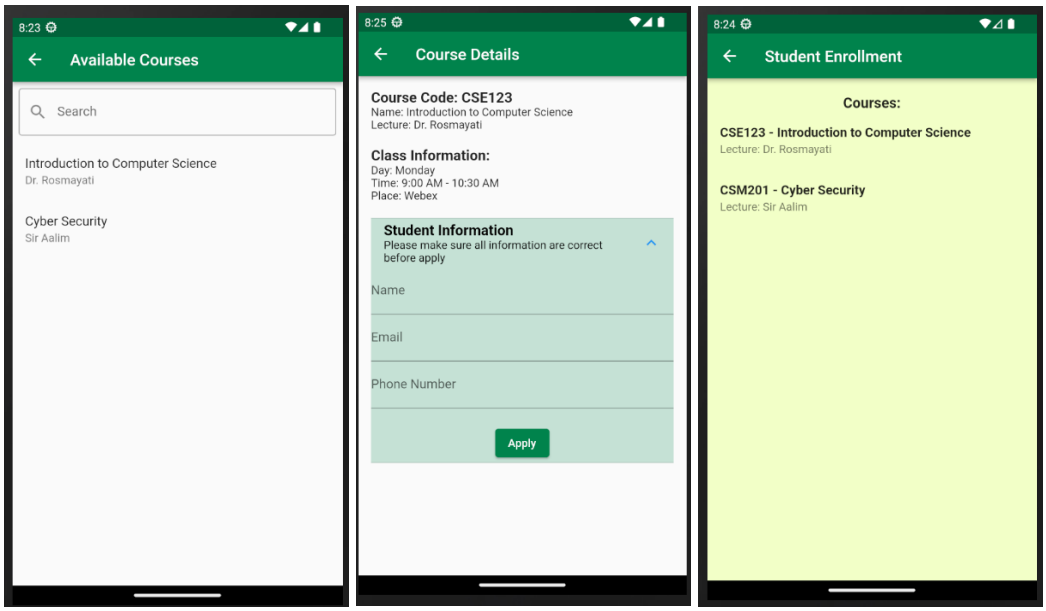



An ExpansionTile widget is used to create an expandable tile for displaying add course, enrolment and scheduled.

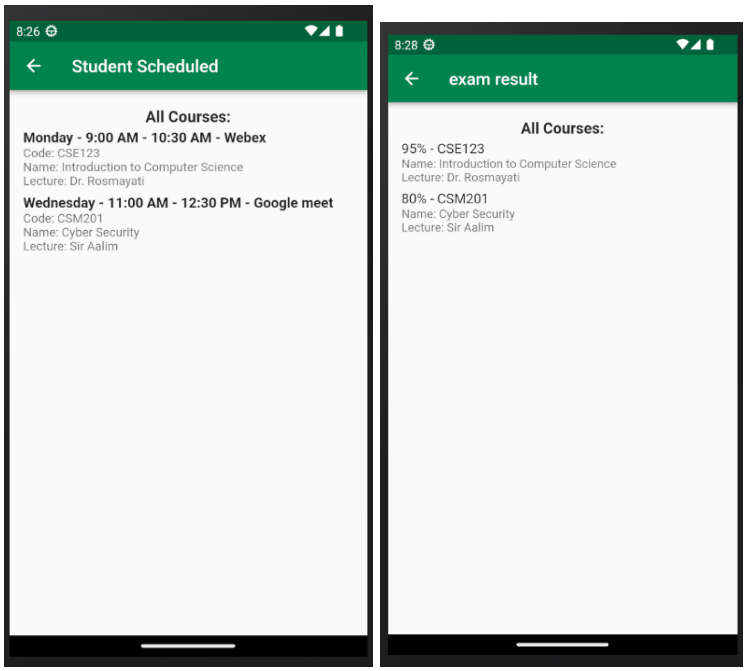
**Sample of Interface with the explanation**




In a Flutter project, there is a side drawer containing options such as Profile, Course, Exam Result, and Logout. The "Course" option utilizes an ExpansionTile, which, when clicked, reveals three additional buttons: Add Course, Enrollment, and Scheduled. Clicking any of the five buttons (Profile, Add Course, Enrollment, Scheduled, Course, Exam Result) navigates the user to a different page. The Logout option logs the user out of their profile, returning them to the login page.




On the left side, there is a display of available courses, allowing students to explore and search for specific ones. Upon clicking on a particular course, the user is directed to another page, as depicted in the middle image. This page provides comprehensive details about the selected course, including its code, name, lecturer, schedule (day and time), and location. Below this information, there is a section for student confirmation, emphasizing the need for users to verify the accuracy of the provided details before proceeding. Upon clicking the "Apply" button, the enrollment status is updated, and the newly applied course is showcased (shown in the image on the right).




The schedule (on the left side) is categorized by days, displaying information such as day, time, and location as the title, while the course code, lecture name, and other details are presented as subtitles. Only courses that students have applied for will be visible in the schedule. On the right side, a picture displays exam results. If a lecturer has not yet registered the results, it will show as null. However, if results are registered, percentages are shown, with the marks arranged from the highest to the lowest. Both schedule and exam result information are retrieved from Firebase, ensuring that students can only view the data. The task of entering exam results is reserved exclusively for lecturers.

## Conclusion

The e-course application, developed using Flutter, facilitates the seamless integration of external participants into online classes. This user-friendly platform enables individuals to effortlessly register and independently choose the courses they wish to pursue. The intuitive interface empowers users to navigate through a variety of available courses, giving them the flexibility to select the ones that align with their interests and learning goals. With the convenience of this application, participants can engage in online classes from any location of their choice, providing a versatile and accessible learning experience. The app not only streamlines the registration process but also enhances the overall learning journey by offering the freedom to acquire new knowledge at the participant's preferred time and place.

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**GitHub**

**https://github.com/srabiatul/s62651_project2.git**