UNIVERSITI MALAYSIA TERENGGANU

FACULTY OF OCEAN ENGINEERING TECHNOLOGY & INFORMATICS

FRAMEWORK-BASED MOBILE APPLICATION DEVELOPMENT

(CSM3114)

Title of the Project
PSNZ Room Booking System

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Github:

https://github.com/Nurizazi/CSM3114/tree/main/Project%201

[Mobile Computing (KMA)]
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1.0 Executive Summary of Prototype

A computerized platform that can be called as a library room booking system is intended to simplify and oversee the process of making reservations for room inside the libraries. The system was made to make it easier for all the student at University Malaysia Terengganu to reserve the room they like by making the study rooms, meeting rooms and other library services conveniently schedule able and reservable. Students does not need to book the room at the library instead can book the room inside the Mynemo platform. The system seeks to improve the effectiveness of library space utilization and it is an easy to use user interface, real time availability updates, alerts of reservation confirmations and have the option to change or cancel bookings that are usually considered as a key features. It is also provide the staff members and librarian with the administrative tools to efficiently supervise and plan room usage.

The principal objectives of the system is to provide library users with a systematic and expedient approach to entering and employing library areas for diverse objectives, hence augmenting the overall library environment experience. The system ensuring a more structured and user-centric experience that approach strives to maximize the utilization of library spaces while meeting the demands of both staff and librarians. Other than that, it promotes better resource management, increased the customer satisfaction and more efficient use of library resources by centralizing the booking process.

The PSNZ Room Booking System prototype offers a comprehensive way to improve and expedite the process of making reservations for library spaces. The goals are to improve the overall space use of the library, boost operational and improve the user experience. To sum up, it is provides a cutting-edge, user-focused approach to maximize the library space management and quick booking procedure make the library experience better for both users and employees.

2.0 Prototype Design

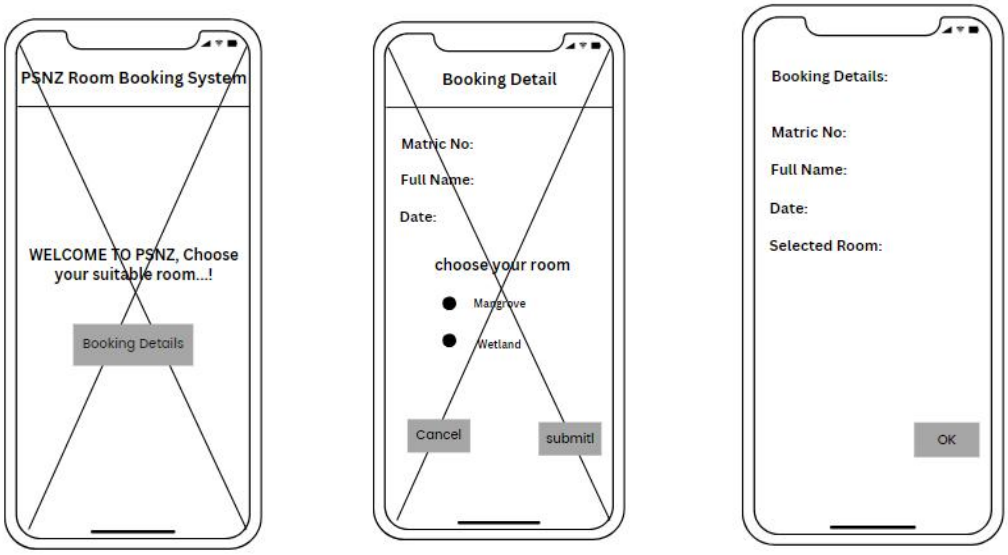

Figure 1 - Wireframe of PSNZ Room Booking App

The figure below show the wireframe of the PSNZ Room Booking App that was been made before I starting my code. It is the idea of how I gonna build my app before implementing it to the real app.

3.0 UI for the Application

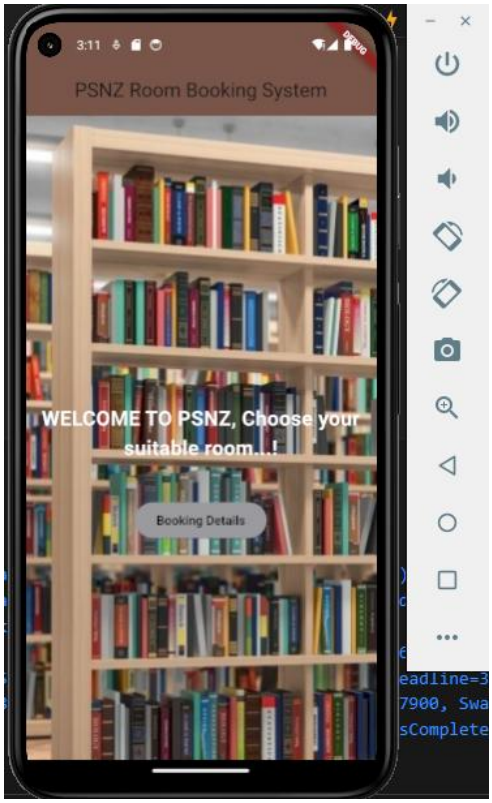

Figure 1 - Main Screen

Figure 1 show the main screen of PSNZ Room Booking System that has been build by the flutter code. I have used the Scaffold to design visual layout structure and AppBar widget that contains PSNZ Room Booking System text at the top of the screen and adding a background colors as a brown. Other than that, I have added the Welcome text at the center so the screen will be more interesting. The booking details button is a material design that will go to the next screen when pressed that we called as ElevatedButton widget.

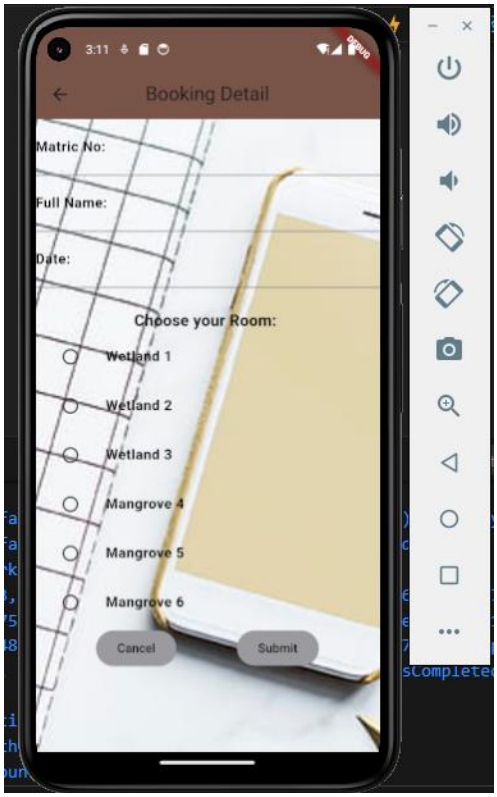

Figure 2 - Booking Details

The next screen show the booking details of the system where the users key in their information and submit the form. The users need to filled in all of the information needed and the user can choose either cancel or submit the form. The cancel button will go back to the main screen while the submit button will display the information that users has key in. Furthermore, the user can choose their own room and can book the room using the date that has been provided.

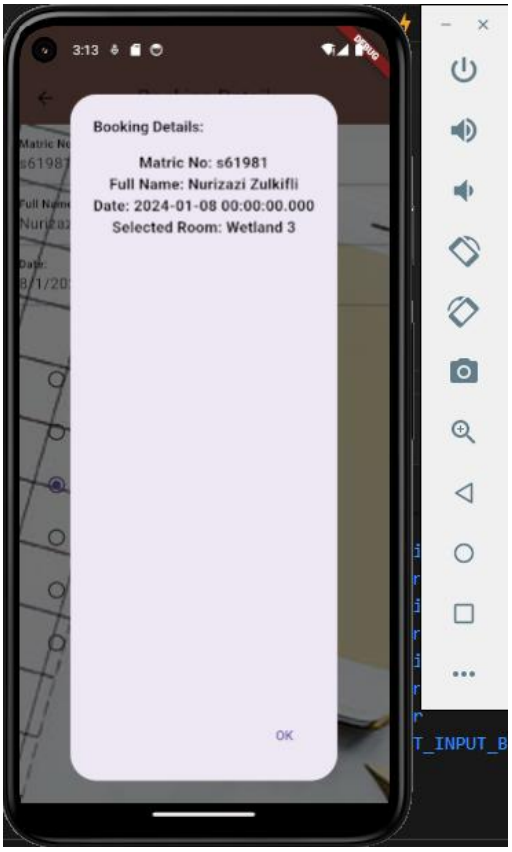

Figure 3 - Display data

Last screen is to display the information that has been key in by the users. I have used the show dialog function to display the information and also used the ElevatedButton as a OK.

4.0 Potential Commercial Value and Pricing the Prototype

Most frequently, students book room for group projects and when it comes to the meeting times, students will searching a place for them to accommodate. The target audiences for the PSNZ Room Booking System is mostly for the students at UMT and other staff UMT. From what I have research about other library room booking app, I have come out an idea to make it more interesting by adding a picture as a background and make it easier by choose the room and key in information in one page.

Without the apps, it will take a lot of times and work for the staff member and librarian to handling the reservations and this will increase the risk of mistakes. Students might not be able to get information about the room that available and booking possibilities if the system is manual and they need to get in touch with the staff during the particular hours. The app was build to give the easier way for students to booking their own room without needed get in touch with the staff. They can arrange their study sessions with the schedule they wanted and can choose any room that suitable for them

It have been concluded that a tiered subscription model, with a one-time- purchase for individuals users is just RM5 per users, aligns with the perceived value and meets the diverse needs of the target audience while ensuring scalability and sustainability. The decision was made after conducting market research and taking into account the unique features and benefits of the innovative library room booking app prototype.

5.0 Lesson Learned

The flutter code of PSNZ Room Booking System teach me a lot of useful things. It gives the significance of a clear and easy to understanding user interface and user experience design such as skills in utilize the layout, navigation patterns and flutter widgets to produce a smooth and intuitive system. Besides, making a design that is responsive guarantees a consistent user experience on a range of screens and devices which is the layouts that work effectively across a range of screen sizes, orientations and resolutions by utilizing the flutter's responsive design concepts.
It is critical to create unit and widget tests in order to confirm functionality and guard against regressions and tests are implemented for crucial application components to guarantee dependability and stability. The system give the benefit, which can help me to improve and refined while also providing a strong basis in flutter code for future growth and maintenance.

6.0 Conclusion

Overall, the system places a high value on a smooth user experience and an easy to use interface, which makes the room reservations and administration simple for visitors. The offering of the real-time availability updates and empowering users to make educated booking decisions and also effectively tackles the problem of optimizing library space utilization. Other than that, a strong administrative tools let the staff members and librarians efficiently manage the reservations, handle disputes and provide usage data. The scalability was considered during the designed to ensure it could adapt to a variety of library contexts and future additions or adjustments. It is a consistent and engaging user experience system across a range of devices and screen sizes, responsive design concepts are applied. The code base follows industry best practices for structure, organization and documentation, that encourages developer cooperation, readability and maintainability. To sum up, the system solves the pressing need for a quick and easy way to reserve a space and ensuring that the system continues to be effective in serving the needs of both library personnel and staff members.

7.0 Reference

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