SECJ3623 MOBILE APPLICATION PROGRAMMING

PROJECT PROPOSAL AND REQUIREMENTS

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Section A: Introduction

1.0 Project Title

Library Room Booking Application

2.0 About the Organization

Sultanah Zanariah Library is a landmark and resource center for Universiti Teknologi Malaysia in Johor, Malaysia. Sultanah Zanariah Library now offers a newly developed digital library system to support existing content with easy access to electronic information proving that Sultanah Zanariah Library is always focused on providing its users with the best and latest services for universal information access using information technology.

UTM Library has provided a number of study rooms for UTM students and sraff to utilize. Those rooms have to be booked by them before they can use it so that the usage of the room would not clash. By giving a matric card or lecturer card and then requesting a room at the library counter, room booking can be made.

Figure 1: Sultanah Zanariah Library, UTM JB

3.0 Problem Background

Our focus for this project is for Perpustakaan Sultanah Zanariah (PSZ). The main library administration system is not up to date, and there are no library management mobile apps. The reservation of the Carrel Room, Seminar Room, and Discussion Room must be done manually because the existing system requires users to book rooms manually at the library's counter.. Few problems that have occured in the manual system are:
- It takes more time in booking process at the counter
- It cause a difficulty to maintain the manual system as it requires a lot of physical move
- It may cause a booking clash with the heavy workloads or on a busy schedule of the staff's library

4.0 Project Goal

The goal of our project is to equip PSZ with an online mobile application for library management. The main function of this application is to enable users such as students and staff to book and reserve their preferred room for their studies, discussion or meeting. This application will ease their booking process as they can only use their mobile devices to reserve or book their room instead of going to the library to book manually by themselves. Furthermore, this application will provide the library with an automated booking system which enables them to manage the room reservation easily and faster.

5.0 End Users

There are two types of users for our application which is :
- Utm Students
- Utm Staff

Roles
- Manage Account
- View Available Room
- Manage Booking - > Book Room - > Update Room Info - > Delete Room

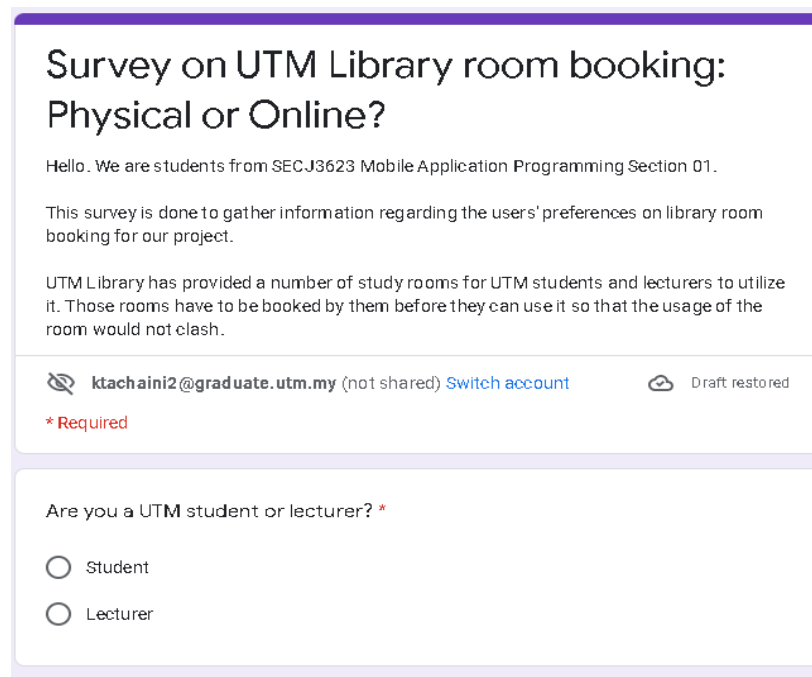# Section B: Application Requirements

1.0 Requirement Gathering Method

The technique used to gather the required information is through survey. An online survey using Google Form is conducted due to the current pandemic. From the survey, we will be able to identify the students' preferences on the room booking system at the library. The general guideline to determine the questions for a survey are how, where, when, who, what and why.

List of questions:
1. UTM student or staff?
2. How frequent do you use the library study room in one semester?
3. Reasons to use the study room
4. How long does it take to book a room at the counter?
5. Which way do you prefer to book a room in the library?
6. Why do you prefer physical booking?
7. Reasons to not prefer physical booking
8. Or else, why do you prefer online booking?
9. Reasons to not prefer online booking

Google Form link: https://forms.gle/QX84sTS7YB6jinG37

Figure 2: Online Survey

2.0 Use Case Diagram

The primary functions of the library room booking application are shown in the use case diagram below. UTM student and UTM staff, such as lecturer, are the two sorts of users in this programme. Users can manage their accounts by registering, logging in, changing their password, viewing their profile, and updating it. They can view available rooms and make reservations by clicking on the "Book Now" button. After customers confirm their booking, they can also change and delete it.
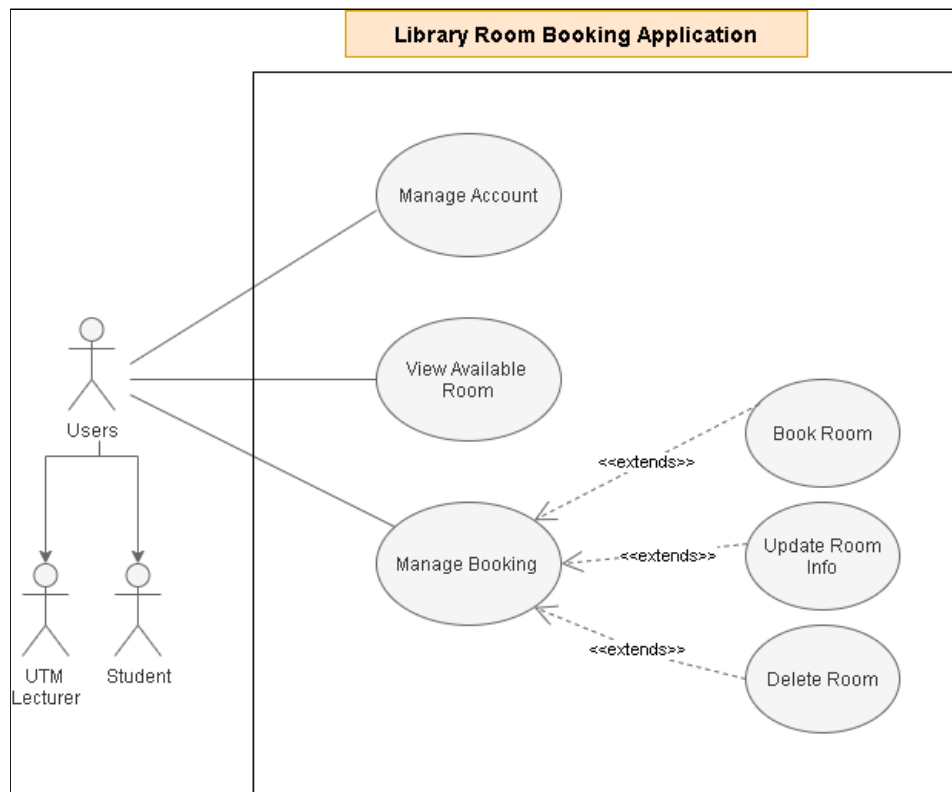

Figure 3 : Use Case Diagram Library Room Booking Management

Link:
https://drive.google.com/file/d/1wqpHcdq8xAlMxwEoRdyafbuK_xlF0QmO/view?usp=sharing

3.0 User Stories

US01: As a UTM student or staff, I want to register an account so that I can access the application.

US02: As a UTM student or staff, I want to login to the account so that I can book the room.

US03: As a UTM student or staff, I want to reset my password if forgotten.

US04: As a UTM student or staff, I want to manage my account profile so that I can view and edit my profile.

US05: As a UTM student or staff, I want to view the list of available rooms so that I can book a room.

US06: As a UTM student or staff, I want to book a room online so that I can save more time

US07: As a UTM student or staff, I want to update the details of the booked room so that I can change my room information.

US08: As a UTM student or staff, I want to delete the booking so that I can remove my booking in case I am not able to go
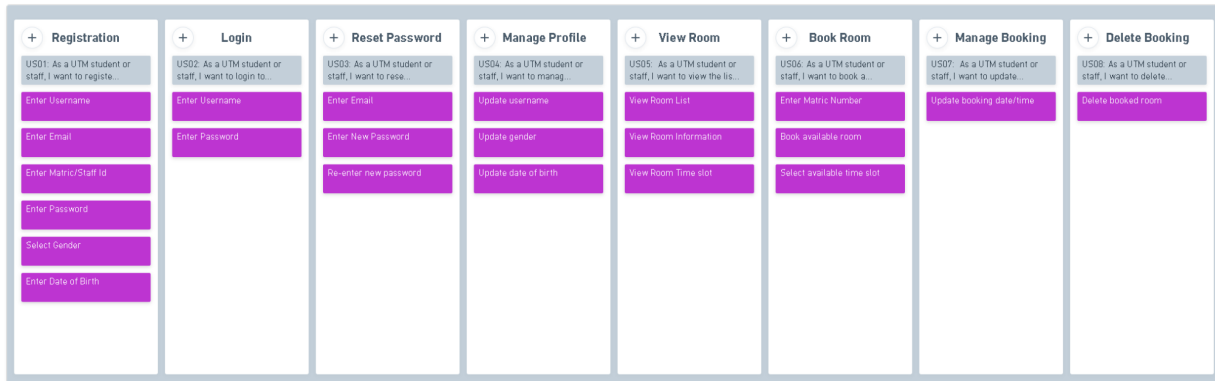
4.0 Story Map

Figure 4: User Story Mapping

Link whimsical:

https://whimsical.com/story-map-of-library-room-booking-app-DSG2yceutWDtY72wEKsRZs