



Faculty of Computer Science & Information Technology

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SSE3151

MOBILE APPLICATION AND DEVELOPMENT

Group Project Proposal Inception Document

Project's Name: Menuyo Mobile Application

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1.0 Introduction

Menuyo application provides a simple interface for student to view and place order in the university campus café/stall. As we know, the current situation forbids people to stay close to each other and avoid touching things that is not belong to us due to pandemic Covid-19. With this Menuyo application, it will reduce the infectious since restaurants do not need to provide the paper menu. For example, student can scan the QR code provided on the counter to place an order and pay. The order will be directly sent to the kitchen. The development of this system is motivated since people are afraid to touch the paper menu provided by restaurants and bill because it can probably be infected.

1.1 Purpose

The purpose of the document is to present a detailed description of the Menuyo mobile application. This document will explain the different functional requirements of the system, features of the system, interface of the system and how the system react with users. The document also will provide a clear understanding of what is expected by the stakeholders.

1.2 Problem Statement

During pandemic Covid-19 occur, people are more aware and careful about eating on the outside. This is because people afraid that they will be infectious occurred. People are very cleared that they must be careful to what they touch whenever they go outside since the disease spreading mechanism is mainly through touching. As we know, most of the restaurants are using their physical type of menus to display their menus such as booklets and papers. So, this will increase the probability of infectious.

By using Menuyo mobile application, it will reduce the probability of infectious since people can view the menu list and place order by using their phone only.

2.0 Overall Description

This section will provide all the detail explanations regarding the project.

2.1 User classes and Characteristics

The user classes who involved in the usage of this product are up to two levels. The two user levels in Menuyo mobile application are:

2.1.1 Student

Student can use Menuyo mobile app to view the menu and add to cart the meal that that available

in café and stall around the university campus. Student can scan QR code on the counter using meal plan card balance. When the payment is successful, then the money will deduct from the meal plan card balance.

2.1.2 University Campus Café/Stall

Each university campus café and stall can contact us to update their menu detail.

2.2 Backend

For Menuyo mobile application, backend plays an important part of the project development. It stores and sorts the important information that the end user does not see. Below is the backend that we use while developing the project:

- Cloud server

This project use Firebase as our cloud server. This server will keep all the information about the system such as email, password, and menus.

- Language

This project use flutter dart language. The layout of dart is declarative and programmatic, and it is easier for developers to read and visualize.

- Framework

This project use Flutter as the framework. Flutter was released with the latest MWC and open-source packages that use Google's own programming language-dart. A single unique codebase can work for Android as well as for iOS.

- App development

This project use Android Studio IDE as the app development.

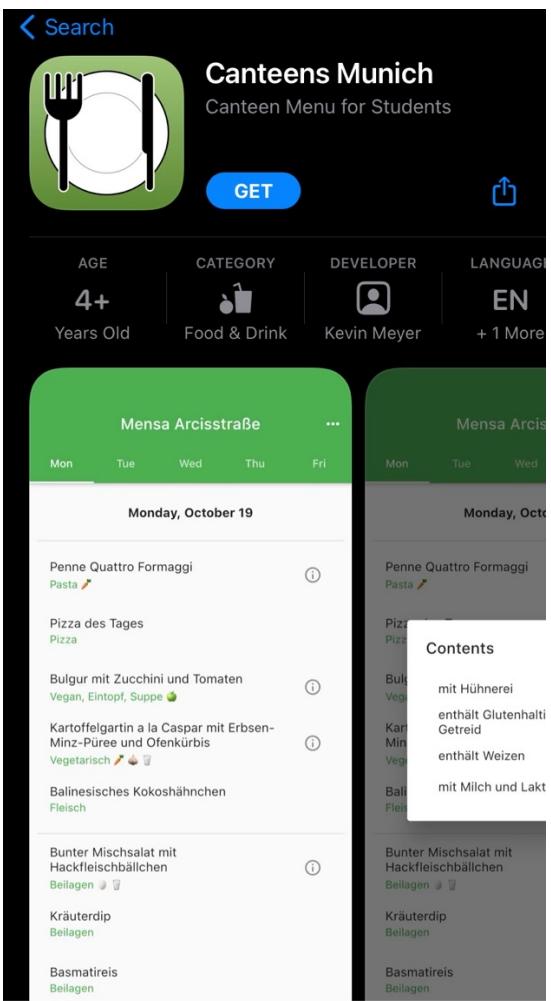
2.3 Monetization Mechanism

Menuyo mobile application is a free application. So, Menuyo mobile application will earn money with the help of app monetization. The key strategy that we use for this project is:

- In-App Advertising

Publishers can gain profit from displaying ads. Types of mobile ads that can be used is banners, interstitials, video ads and native ads.

2.4 Comparison with Existing App



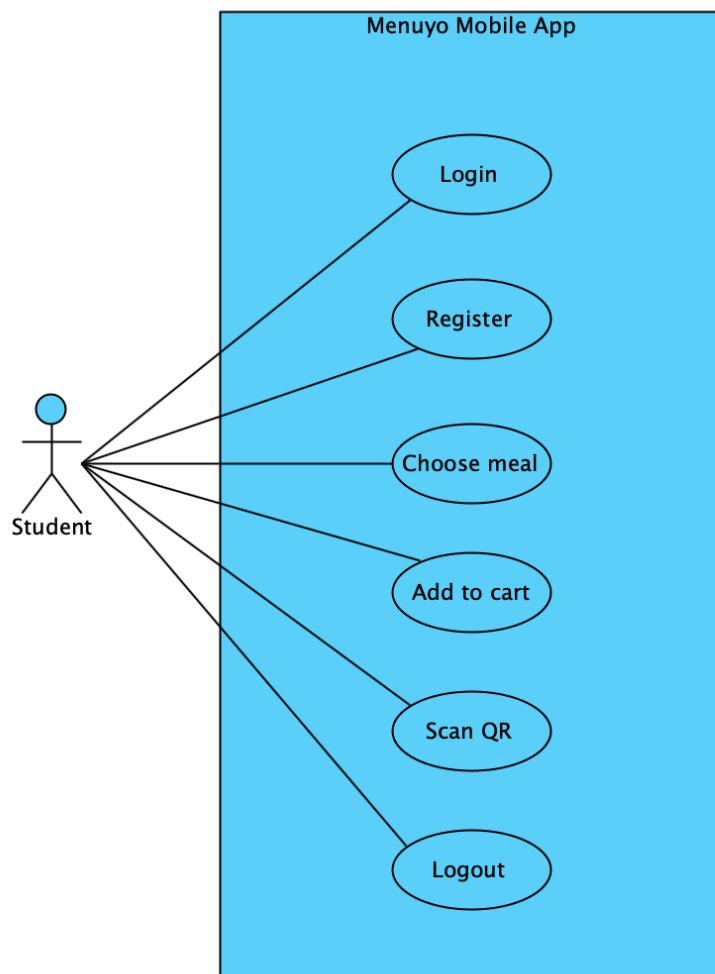
Canteens Munich	Menuyo
There is not user authentication or login.	Users need to create account first to access all the app features.
User cannot add to cart the meal, but only view the menu that available daily.	User can add to cart the meal and make payment in counter by scan the QR code.

2.5 Commercialize Value

The Commercialize value for Menuyo mobile application is RM 25 000.00 as it is worth it as the features provided.

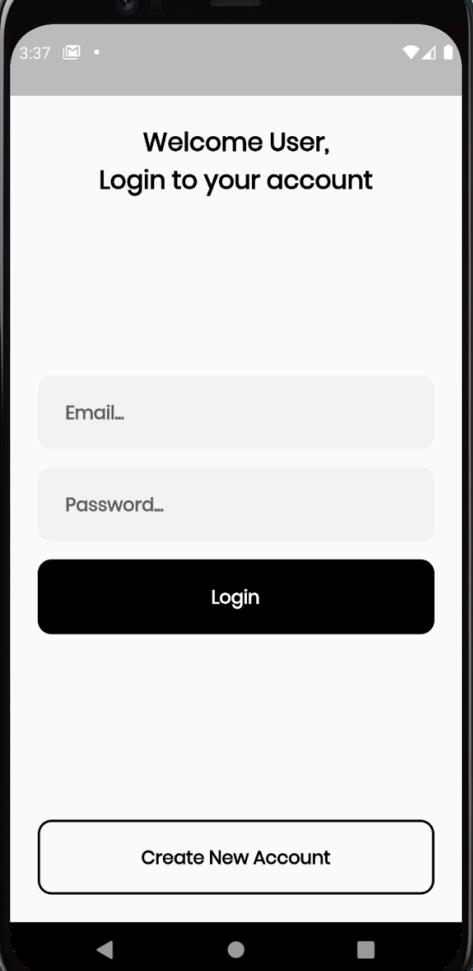
3.0 System Use Cases

Below is the system use case for Menuyo mobile application.

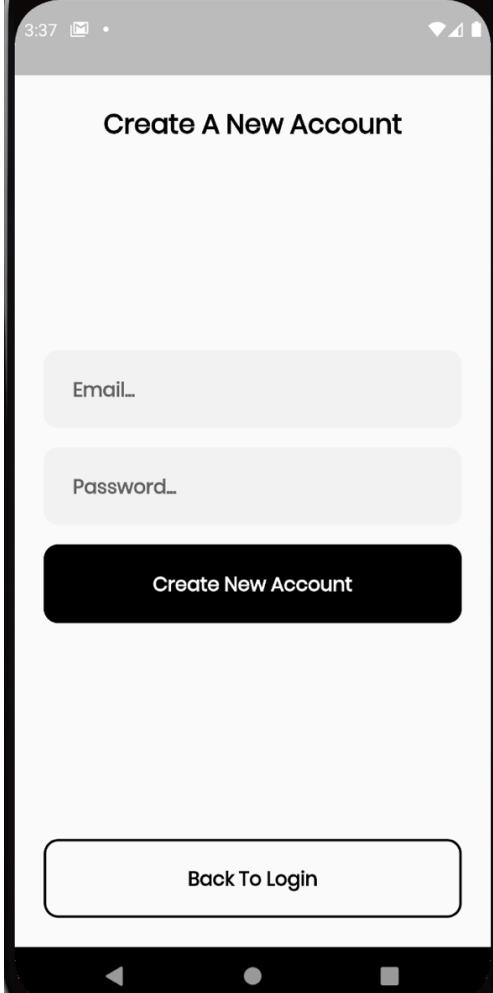


Identifier	Use Cases	Description of Use Cases
U1	Login	User login using email.
U2	Register	User register using email.
U3	Choose Meal	User chooses meal available around university campus café/stall.
U4	Add to Cart	User click add to cart the meal he/she wants to order.
U5	Scan QR	User scan QR to pay for the meal in counter.
U6	Logout	User logout from app.

3.1 Login

Unique identifier	U1
Objective	Only authenticated user can login to the system.
Priority	High
Actor	Student
Pre-Condition(s)	User has registered.
Flow of events	1. User enters email and password that has been registered.
Alternative flow	1a. System display 'incorrect email and password. Please try again' if user enters incorrect email and password.
Post condition(s)	Users have successfully login to the system.
Prototype	 <p>The image shows a mobile phone screen displaying a login interface. At the top, there is a header with the text "Welcome User, Login to your account". Below the header are two input fields: one for "Email..." and one for "Password...". A large black rectangular button labeled "Login" is positioned below the password field. At the bottom of the screen, there is a link labeled "Create New Account". The phone's status bar at the very top shows the time as 3:37 and some connectivity icons.</p> <p>Figure above shows the login prototype. Users are requested to enter email and password to login the system.</p>

3.2 Register

Unique identifier	U2
Objective	Only authenticated user can login to the system.
Priority	High
Actor	Student
Pre-Condition(s)	User has not registered.
Flow of events	1. User enters email and password to register.
Alternative flow	1a. System display 'password is weak' if the password entered do not pass the password credibility.
Post condition(s)	Users have successfully register to the system.
Prototype	 <p>The figure shows a mobile phone screen with a white background. At the top, there is a grey header bar with the text 'Create A New Account'. Below the header, there are two input fields: one for 'Email...' and one for 'Password...'. Underneath these fields is a large black rectangular button with the white text 'Create New Account'. At the bottom of the screen, there is a white rectangular button with the black text 'Back To Login'. The phone's status bar at the very top shows the time as 3:37 and some signal strength icons.</p> <p>Figure above shows the register prototype. Users are requested to enter email and password to register to the system.</p>

3.3 Choose Meal

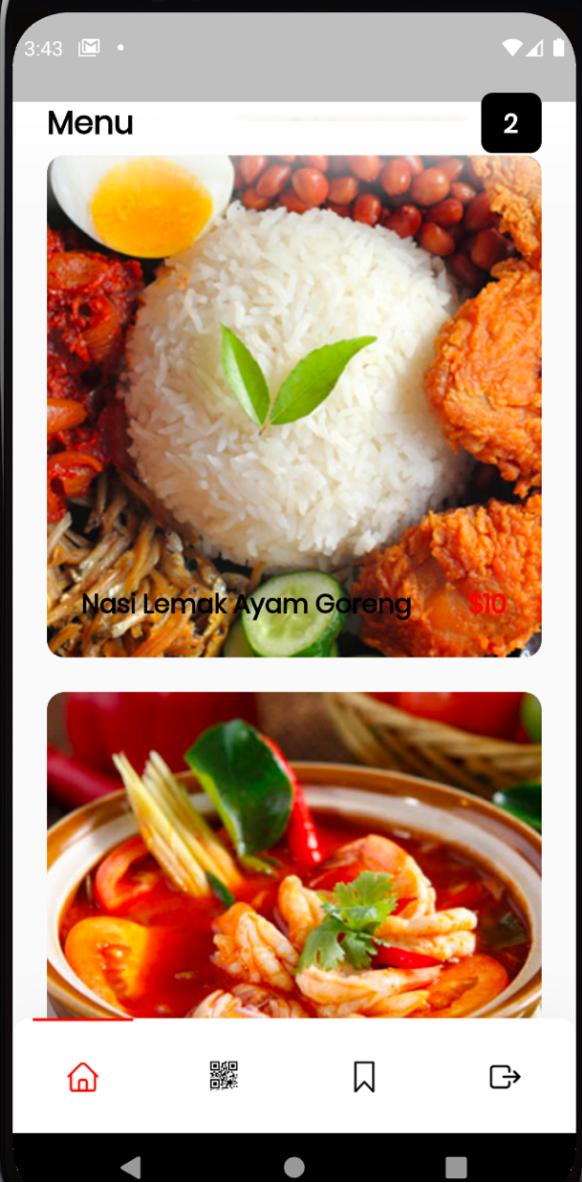
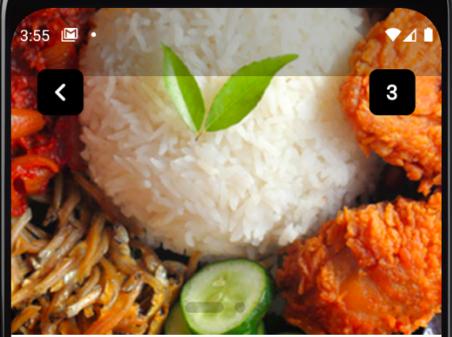
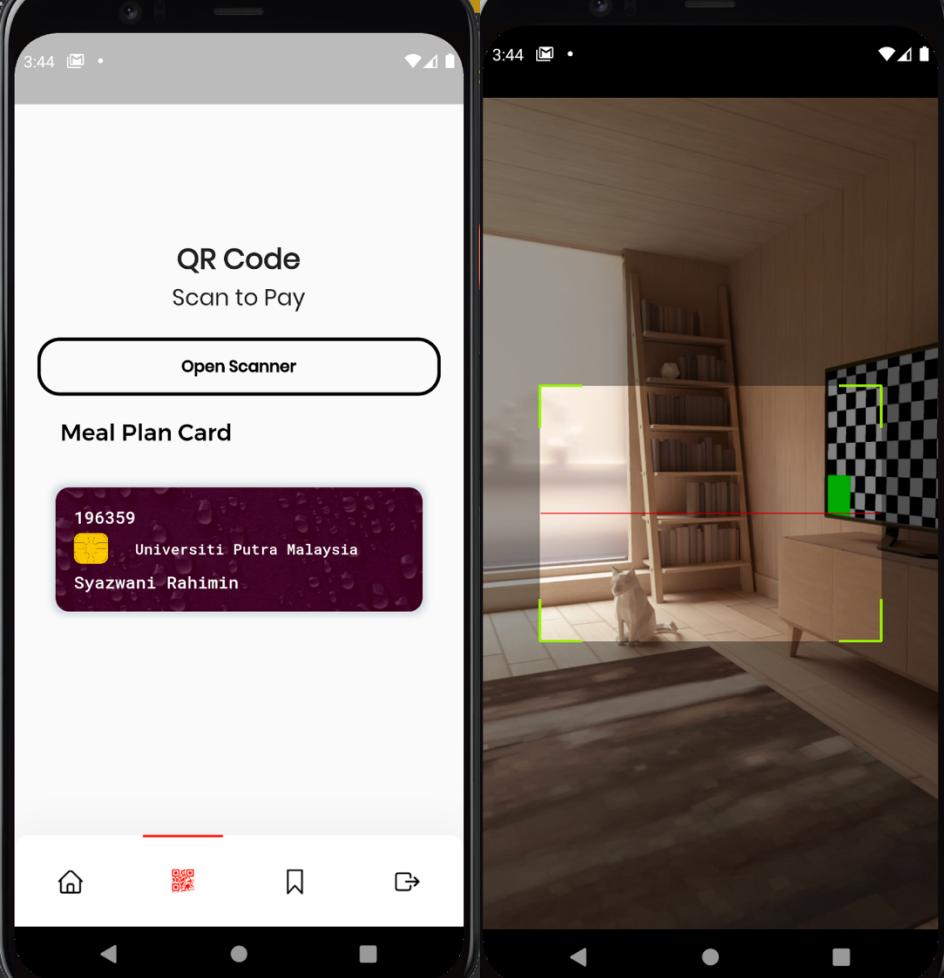
Unique identifier	U3
Objective	User can select meal that available in the university campus café/stall.
Priority	High
Actor	Student
Pre-Condition(s)	User has register in the system
Flow of events	1. User clicks the image of menu to see the meal details.
Alternative flow	Not applicable
Post condition(s)	Not applicable
Prototype	 <p>The image shows a smartphone displaying a mobile application menu. The screen is titled 'Menu' at the top left. At the top right, there is a notification badge with the number '2'. Below the title, there is a large image of a meal consisting of white rice, fried chicken, and various accompaniments. Overlaid on this image is the text 'Nasi Lemak Ayam Goreng' and a price of '\$10'. Below this image is another smaller image of a bowl of Tom Yum Goong soup. At the bottom of the screen, there is a navigation bar with four icons: a house (Home), a QR code (QR), a bookmark (Bookmark), and a share symbol (Share). The bottom of the phone screen shows standard Android navigation buttons for back, home, and recent apps.</p>

Figure above shows the menu page.

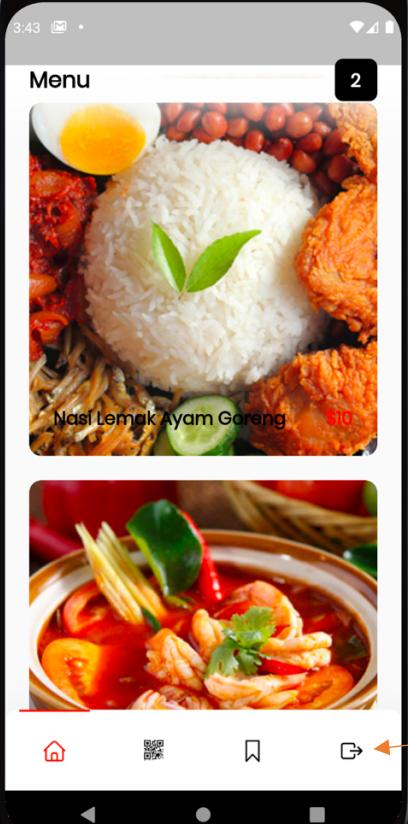
3.4 Add to Cart

Unique identifier	U4
Objective	User can pay for the meal he/she wants.
Priority	High
Actor	Student
Pre-Condition(s)	User has register in the system.
Flow of events	<ol style="list-style-type: none"> 1. User selects the quantity that offer. 2. User clicks the 'Add To Cart' button.
Alternative flow	Not Applicable
Post condition(s)	Not Applicable
Prototype	 <p>The prototype screenshot shows a mobile application interface for a meal detail page. At the top, there is a large image of a dish labeled "Nasi Lemak Ayam Goreng". Below the image, the dish name is displayed in bold black text. Underneath the name, the price "\$10" is shown in red. A detailed description of the dish follows, mentioning coconut milk rice, sambal, fried crispy anchovies, toasted peanuts, and cucumber, along with additional crispy fried chicken. Below the description, there is a section titled "Select Quantity" with three buttons labeled 1, 2, and 3. The button labeled "1" is highlighted with a red background. At the bottom of the screen, there is a "Add To Cart" button with a bookmark icon to its left. The entire interface is framed by a black border, and the top of the phone screen shows a status bar with icons for signal strength, battery level, and time (3:55).</p> <p>Figure above shows the menu detail page prototype.</p>

3.5 Scan QR

Unique identifier	U5
Objective	User can pay for the meal he/she wants.
Priority	High
Actor	Student
Pre-Condition(s)	User has register in the system.
Flow of events	1. User clicks the 'Open Scanner' button to scan QR code in the counter.
Alternative flow	Not Applicable
Post condition(s)	Not Applicable
Prototype	 <p>Figure above shows the scan page prototype.</p>

3.6 Logout

Unique identifier	U6
Objective	Only authenticated user can logout to the system.
Priority	High
Actor	Student
Pre-Condition(s)	User has register in the system.
Flow of events	1. User clicks the logout tab on the bottom navigation tab.
Alternative flow	Not Applicable
Post condition(s)	Not Applicable
Prototype	 <p>The figure shows a screenshot of a mobile application interface. At the top, there is a header with the word "Menu". Below the header, there are two large images of food: "Nasi Lemak Ayam Goreng" and "Tom Yum Goong". Each food item has its name written below it. At the bottom of the screen, there is a navigation bar with four icons: a house (Home), a grid (Categories), a bookmark (Favorites), and a square with a double arrow (Logout). An orange arrow points to the logout icon. The status bar at the very top shows the time as 3:43.</p>
Figure above shows bottom navigation tab.	

4.0 Conclusion

As a conclusion, we propose this application with the hope of helping student to be at ease while eating at the outside during this pandemic crisis. This simple yet full of functional application will surely be helpful for student to view the menu list and placing order at the university campus café/stall not just during this crisis but also in the future.