

**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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Table of Contents

[1.0 Introduction 2](#_Toc62656839)

[1.1 Purpose 2](#_Toc62656840)

[1.2 Problem Statement 2](#_Toc62656841)

[2.0 Overall Description 2](#_Toc62656842)

[2.1 User classes and Characteristics 2](#_Toc62656843)

[2.1.1 Student 2](#_Toc62656844)

[2.1.2 University Campus Café/Stall 3](#_Toc62656845)

[2.2 Backend 3](#_Toc62656846)

[2.3 Monetization Mechanism 3](#_Toc62656847)

[2.4 Comparison with Existing App 4](#_Toc62656848)

[2.5 Commercialize Value 4](#_Toc62656849)

[3.0 System Use Cases 4](#_Toc62656850)

[3.1 Login 5](#_Toc62656851)

[3.2 Register 6](#_Toc62656852)

[3.3 Choose Meal 7](#_Toc62656853)

[3.4 Add to Cart 8](#_Toc62656854)

[3.5 Scan QR 9](#_Toc62656855)

[3.6 Logout 10](#_Toc62656856)

[4.0 Conclusion 11](#_Toc62656857)

# 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.

## 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.

## 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.

# Overall Description

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

## 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:

### 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.

### University Campus Café/Stall

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

## 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.

## 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 Adverting

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

## Comparison with Existing App

Graphical user interface, application

Description automatically generated

|  |  |
| --- | --- |
| 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. |

## Commercialize Value

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

# System Use Cases

Below is the system use case for Menuyo mobile application.

Diagram

Description automatically generated

|  |  |  |
| --- | --- | --- |
| **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 scar QR to pay for the meal in counter. |
| U6 | Logout | User logout from app. |

## 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 | Graphical user interface, application  Description automatically generated  Figure above shows the login prototype. Users are requested to enter email and password to login the system. |

## 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 | Graphical user interface, application  Description automatically generated  Figure above shows the register prototype. Users are requested to enter email and password to register to the system. |

## 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 | A screenshot of a cell phone  Description automatically generated with medium confidence  Figure above shows the menu page. |

## 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 | 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 | Graphical user interface, text, application  Description automatically generated  Figure above shows the menu detail page prototype. |

## 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 | Graphical user interface, text, application, chat or text message  Description automatically generatedA picture containing text, indoor, floor, wall  Description automatically generated  Figure above shows the scan page prototype. |

## 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 | A screenshot of a cell phone  Description automatically generated with medium confidence  Figure above shows bottom navigation tab. |

# 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.