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DEPARTMENT OF INFORMATION AND COMMUNICATION TECHNOLOGY

DFT 50114: INTEGRATED PROJECT

KELAPA GREENWOOD APP

DDT4B

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SESSION II: SHORT SEM 2022/2023

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1.0 ABSTRACT

Kelapa Greenwood is an application that allows customers to place orders for food items, which are then delivered or picked up by the customer. This system can be used by Kelapa Greenwood restaurant to streamline their ordering and delivery processes, as well as to enhance the customer experience. Next, the problem statement is this Kelapa Greenwood restaurant lacks a user-friendly interface for customers to browse menus, place orders, and make payments. This results in a poor customer experience, leading to frustration, order errors, and abandoned orders. Customers may also be afraid to use the system in the future, leading to a loss of revenue for the restaurant. Even though that this is rarely happened, Kelapa Greenwood restaurant was once struggle with inefficient and error-prone ordering processes, leading to delays, mistakes, and dissatisfied customers. Traditional ordering methods, such as phone orders and paper-based systems, may lead to errors and can be time-consuming to process. This can lead to increased wait times for customers, order mistakes, and lost revenue for the restaurant.

Our objectives on developing this application are, 1) To provide customers with a user-friendly interface for browsing menus, placing orders, and making payment. 2) To streamline the ordering process for food establishments, reducing errors and delays, and enhance efficiency. 3) To provide food establishments with a strong and reliable system that enables them to manage orders and track food stocks. My team has chosen Agile as the development approach for our project due to its focus on software development rather than excessive design and documentation, resulting in a shorter development time. When the requirements are clearly specified and unlikely to change drastically throughout the course of the project, the application works very well. As a result, a customer are able to login the application, place order, and modify order such as add, edit or remove order, and print receipts. Admin also able to modify menu such as add menu, remove menu and update menu. As a conclusion, we were hoping that the final product will provide a user-friendly and efficient solution for food ordering, which will benefit both customers and food establishments. The project will also provide valuable experience in software development, database management, and project management, making it an excellent opportunity for Kelapa Greenwood restaurant to enhance their business in that area.

2.0 PROJECT PLAN

2.1 PROBLEM STATEMENT

1) This Kelapa Greenwood Restaurant lacks a user-friendly interface for customers to browse menus, place orders, and make payments. This results in a poor customer experience, leading to frustration, order errors, and abandoned orders. Customers may also be afraid to use the system in the future, leading to a loss of revenue for the restaurant.

2) Even though that this is rarely happened, Kelapa Greenwood Restaurant was once struggle with inefficient and error-prone ordering processes, leading to delays, mistakes, and dissatisfied customers. Traditional ordering methods, such as phone orders and paper-based systems, may lead to errors and can be time-consuming to process. This can lead to increased wait times for customers, order mistakes, and lost revenue for the restaurant.

3) Inconsistent Menu Information: Kelapa Greenwood fails to maintain accurate and up-to-date menu information, leading to discrepancies between the menu and the actual availability of items, causing frustration for customers and delays in order processing.

2.2 OBJECTIVE

1. To provide customers with a user-friendly interface for browsing menus, placing orders, modifying orders and printing receipts.

2. To make 100% all orders is made using this application.

3. To make the consistent and accurate up-to-date menu.

2.3 SCOPE

System Scope :

Kelapa Greenwood is an application that allows customers to order food from a restaurant. It includes features such as user registration, and login, menu management, receipt processing, order tracking.

This system helps restaurant owner to manage their operations efficiently, track inventory, and generate report on sales and revenue, It also provides customers with convenient and easy way to place orders.

Overall, Kelapa Greenwood food ordering system application can improve the customer experience, increase efficiency, and boost revenue for restaurant.

User Scope:

1) Admin
- Menu Management: The admin user can manage the menu of the restaurants that are registered in the system. This includes adding, editing, removing items from the menu, setting prices, and managing availability.

2) Customer
- Menu browsing and ordering: The customer can browse the menus of the restaurants registered in the system, select items, and place and order.

- Print receipts and checkout: The customer can print receipts through the system and checkout.

- Order history: The customer can view their purchase history in the system.

3) Staff
- Order management: The staff user can manage orders placed by customers, including accepting, processing, and completing orders.

- Customer service: The staff can interact with customers through the system to provide support and address issues or complains.

2.4 LITERATURE REVIEW

LOGO			
Name of Application Website	FoodPanda	GrabFood	ShopeeFood
Programming Language	HTML/JavaScript	JavaScript/HTML/CSS	Java, Python, JavaScript
Advantages	1) Wide coverage area 2) Convenient ordering process. 3) Flexible payment options. 4) Loyalty Program: Foodpanda offers a loyalty program called "PandaPoints" that allows you to earn points for every order you place. These points can be redeemed for discounts on future orders.	1) Integration with Grab app 2) Large selection of restaurants 3) Fast delivery times 4) Rewards Program: GrabFood offers a rewards program called "GrabRewards" that allows you to earn points for every order you place.	1) Daily deals and promotions. 2)Customer service 3) Cheaper than other platform

Disadvantages	**1) The delivery fee is very high depending on customer's location**	**1) Lack of Customer Support**	**3 Refund Issue**
Platform	**Android, iOS**	**Android, iOS**	**Android, iOS**
Requirement	**6.0 and up**	**5.0 and up**	**5.0 and up**
Owned By	**Ralf Wenzel**	**Antony Tan**	**Chris Feng**
Content rating	**Everyone**	**Everyone**	**Everyone**
Download	**1,000,000+ downloads**	**520,000+ downloads**	**681,000+ downloads**
Ratings	**4.6/5.0**	**4.7/5.0**	**4.6/5.0**
Features	1) Wide Restaurant Selection - Foodpanda offers a diverse range of restaurants and food options to choose from. Users can explore various cuisines, menus, and price ranges, making it convenient to find something suitable for their preferences. 2) User-Friendly Mobile App and	1) Extensive Restaurant Selection - GrabFood provides users with access to a wide range of restaurants and food establishments. Users can browse through various cuisines and menus to order their favorite dishes from both local eateries and popular restaurant chains.	1) Integration with Shopee App - ShopeeFood is seamlessly integrated into the Shopee e-commerce app. This means users can access food delivery services directly from the same app they use for online shopping. It offers a convenient way for Shopee users to order food without having to switch between multiple

	Website - Foodpanda provides a user-friendly mobile app and website that allows customers to browse restaurants, place orders, track deliveries in real-time, and make payments easily. The intuitive interface and smooth navigation enhance the overall user experience. 3) Promotions and Deals - Foodpanda often offers discounts, promotions, and deals to attract and retain customers. These can include discount codes, cashback offers, free delivery, and special bundles, allowing users to enjoy their favorite meals at more affordable prices.	2) Real-Time Order Tracking - Similar to other food delivery platforms, GrabFood offers real-time order tracking. Users can track the status of their food delivery, from the moment the order is placed until it reaches their doorstep. This feature provides transparency and allows customers to plan accordingly. 3) GrabRewards and Promotions - GrabFood is integrated with the GrabRewards loyalty program. Users can earn points for every food order they make, which can later be redeemed for various rewards or discounts on future orders. Additionally, GrabFood frequently runs promotions and offers special deals, such as discounts, free delivery, or combo offers, to attract and retain customers.	apps. 2) Vast Restaurant Options - ShopeeFood provides users with a wide variety of restaurant options. Users can explore various cuisines and dining establishments, ranging from local eateries to popular restaurant chains. This extensive selection allows customers to find and order their favorite dishes easily. 3) ShopeeFood Vouchers and Discounts - ShopeeFood regularly offers vouchers, discounts, and promotions to its users. These can include exclusive discounts, free delivery, cashback, and other deals to incentivize customers to order through the platform. The vouchers and discounts can be applied during the checkout process, making food delivery more affordable for users.

2.5 METHODOLOGY

My team has chosen Agile as the development approach for our project due to its focus on software development rather than excessive design and documentation, resulting in a shorter development time. Agile methodology allows for adaptability in planning through its gradual delivery approach, which is particularly beneficial for applications where system requirements tend to shift throughout the development process. By involving clients at every stage of the project, Agile promotes greater customer satisfaction. The Agile process involves planning and goal-setting, breaking the system into manageable tasks, and prioritizing them based on importance. Continuous collaboration within the team helps monitor progress and address any issues that arise. Regular testing ensures that the system functions as intended, and feedback from users and stakeholders is sought to make improvements. The Agile approach emphasizes continuous change and improvement, responding to user feedback and evolving requirements. This iterative process is repeated in subsequent sprints until the system meets all requirements.

Phases	Activities
1.Project Initiation	• Determine the issue. • Determine goals. • Establish project objectives. • Determine who will pay for the project.
2.Planning	• Work with the clients of the project. • Recognize what the client needs for the venture.

3.Analyze Data	**• Find out what people think about the project from the public.** **• Find out what the public thinks about the changes and how familiar they are with the project.** **• During the process of planning project work, each member of the team discusses progress or any obstacles or challenges they face.** **• Before meeting with clients, analyze pertinent data.**
4.Iterative Development	**• Plan the project based on the client's decision.** **• Meet with clients to discuss project enhancements.** **• Create and test software to ensure ongoing functionality.**
5.Continuous Integration and Testing	**• To ensure that the software continues to function, teams must collaborate.** **• Test products to ensure their functionality, find flaws or bugs, and make necessary adjustments.**
6.Iteration Review	**• Present the completed work to stakeholders for their approval and feedback.** **• Gather feedback for upcoming enhancements.**

2.5 GANTT CHART

WEEKLY GANTT CHART TEMPLATE

KELAPA GREENWOOD	Muhammad Fauzi bin Abdullah (Supervisor)	21/6/2023	6/8/2023
PROJECT NAME	OWNER	START DATE	END DATE

Project Description

An online food ordering system is a digital platform that allows customers to browse, select, and order food items from various restaurants or food establishments through the internet. It provides a convenient and efficient way for customers to order food from the comfort of their homes or offices, eliminating the need for physical menus, phone calls, or in-person visits.

Remarks

Task ID	Task Name	Start Week	End Week	WK01	WK02	WK03	WK04	WK05	WK06	WK07
01	**PROJECT PROPOSAL**	WK01	WK01							
02	Prepare Project Plan and Project Design	WK01	WK01							
03	Proposal Presentation	WK02	WK02							
04	**PROJECT DEVELOPMENT**	WK02	WK02							
05	Plan requirement and design specipication	WK02	WK02							
06	Manage the hardware and software configuration	WK02	WK02							
07	Develop problem specipication	WK03	WK03							
08	Demonstration 1	WK03	WK03							
09	**PROJECT DEVELOPMENT**	WK03	WK03							
10	Plan requirement and design specipication	WK03	WK03							
11	Manage the hardware and software configuration	WK04	WK04							
12	Develop problem specipications	WK04	WK04							
13	Demostration 2	WK04	WK04							
14	**DELIVERABLES**	WK04	WK04							
15	Present Deliverables	WK05	WK05							
16	Prepare Project Documentation	WK05	WK05							
17	Present Final Project	WK06	WK06							
18	Demostation 3	WK06	WK06							
19	Final Presantation	WK07	WK07							

3.0 REQUIREMENT SPECIFICATION

3.1 FUNCTIONAL REQUIREMENT

a) **User Registration and Login:**
The app should allow users to register and set up accounts.
They should be able to access their accounts by securely logging in.

b) **List of Menu:**

Admin should be able to list the menu for customer to order on the app.
Customers should be able to order menu that they like.

c) **Menu Management:**

The app should notify admin for any menu issues involving order.
Admin should get notified about any order issues with their menu.

3.2 NON FUNCTIONAL REQUIREMENT

a) Performance:

There should be no unpleasant delays and the app should be quick and responsive.
It should handle lots of users without slowing down.

b) Security:

The app should keep user data and payments safe using strong protection methods.
It should prevent unauthorized access and keep information private.

c) Reliability:

The app should work well all the time, without crashing.
It should have backups if the app crashed or accidentally shut down.

d) Compatibility:

The app should work on different devices like phones and tablets.
It should be compatible with various operating systems.

3.3 HARDWARE & SOFTWARE SPECIFICATION

Table 3.1 :

No	Specification	
1	Laptop HP Pavilion 15	• Processcor : 12th Gen Intel(R) Core(TM) i5-1240P 1.70 GHz • RAM : 8.00 GB (7.68 GB usable) • Graphic Card: Intel ® Iris ® Xe Graphics • Hard Disk : 500 GB HDD
2	Laptop AcerAspire 5 (A515-51G-55 A5)	• Processcor : Intel(R) Core(TM) i5-7200U CPU @ 2.50GHz 2.71 GHz • RAM : 4.00 GB DDR Memory • Graphic Card: Intel HD Graphics 620 • Hard Disk : 1 TB HDD
No	**Software**	**Specification**
1	Android Studio	Developing app using java language
2	Microsoft Word	Writing proposal and report
3	Canva	Creating and designing image

3.4 SECURITY REQUIREMENT

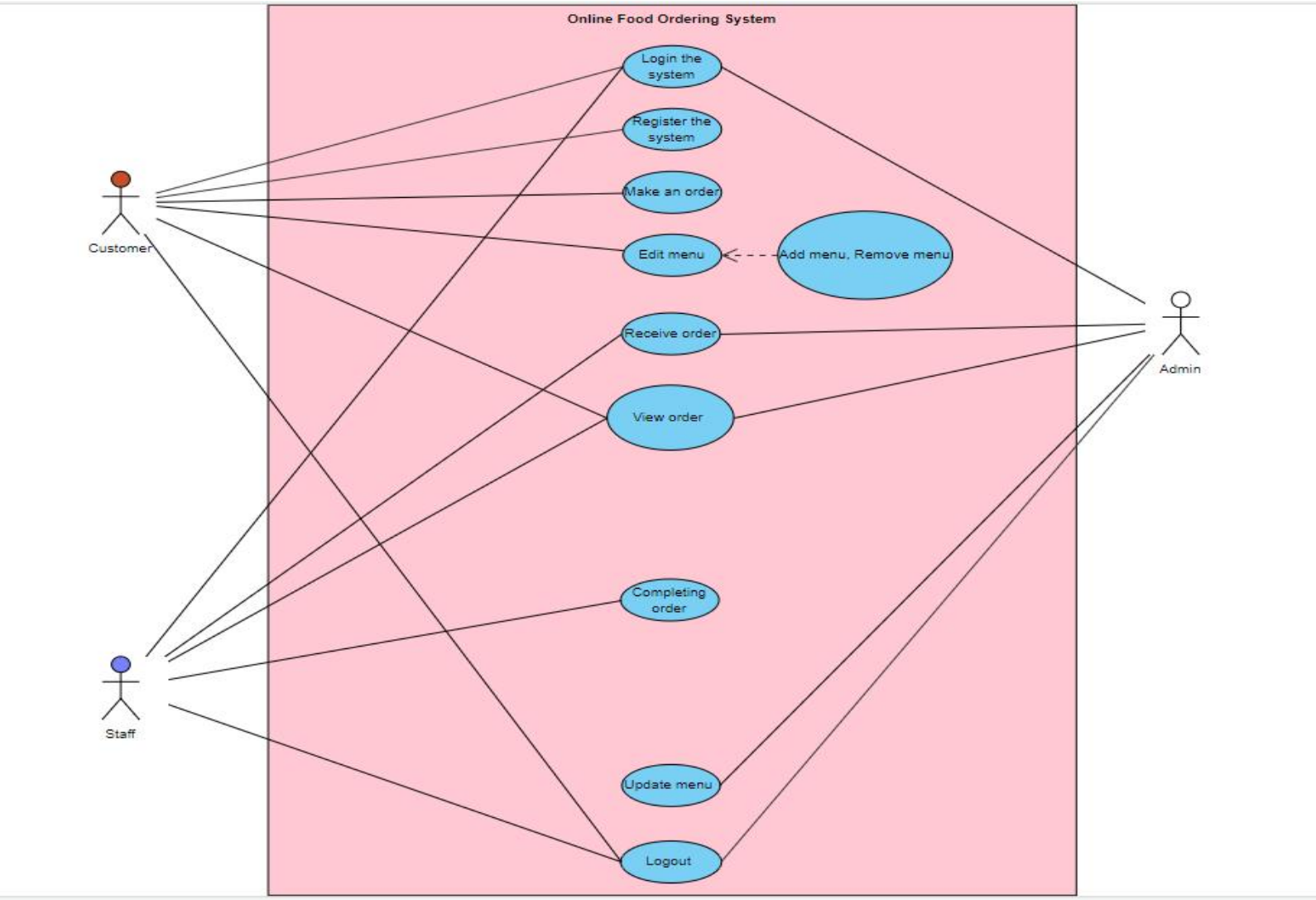
1) **User Authentication:** Making sure that the app can only be accessed by authorised users. Ensure your security by using strong passwords and other safeguards like verification codes.

2) **Secure Database Management:** Prevent unauthorised access to and modification of app databases. Maintain a frequent data backup and maintain it secure.

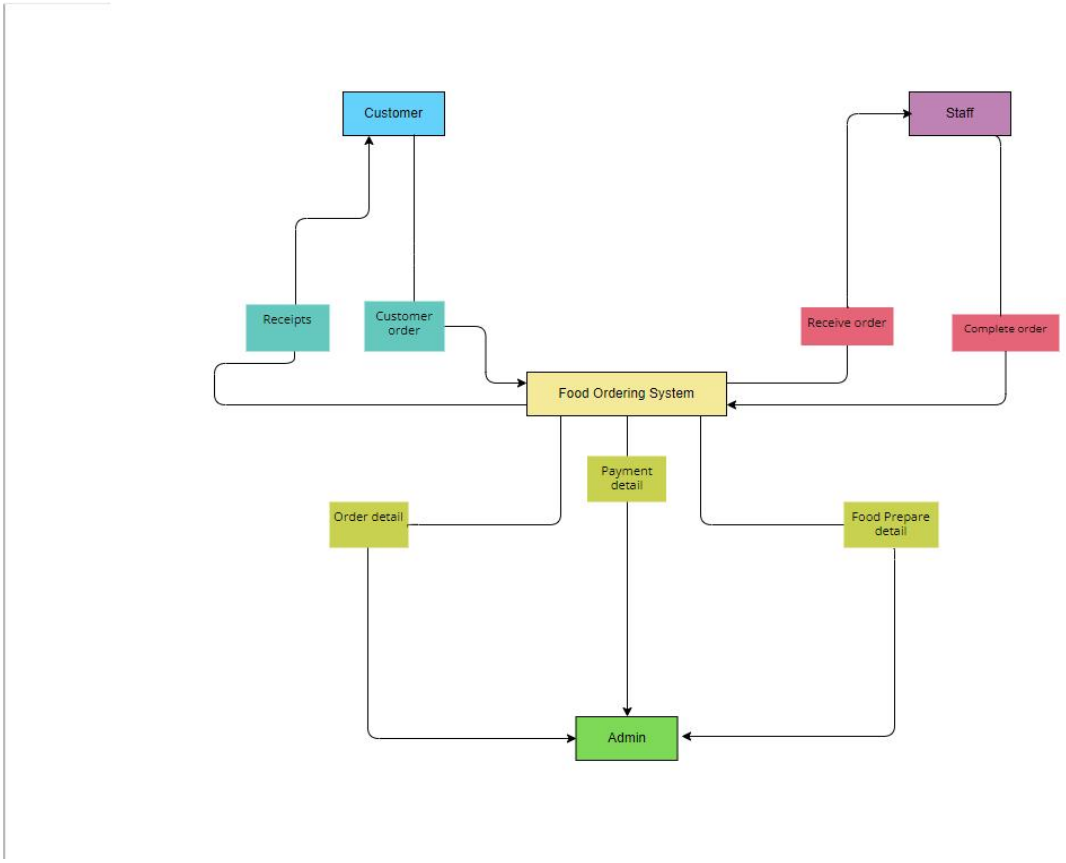
3) **Error Handling:** Gratefully handle problems and mistakes without disclosing private information to the user. Error messages ought to be general and should not disclose specific system or database information.

4.0 FINAL DESIGN

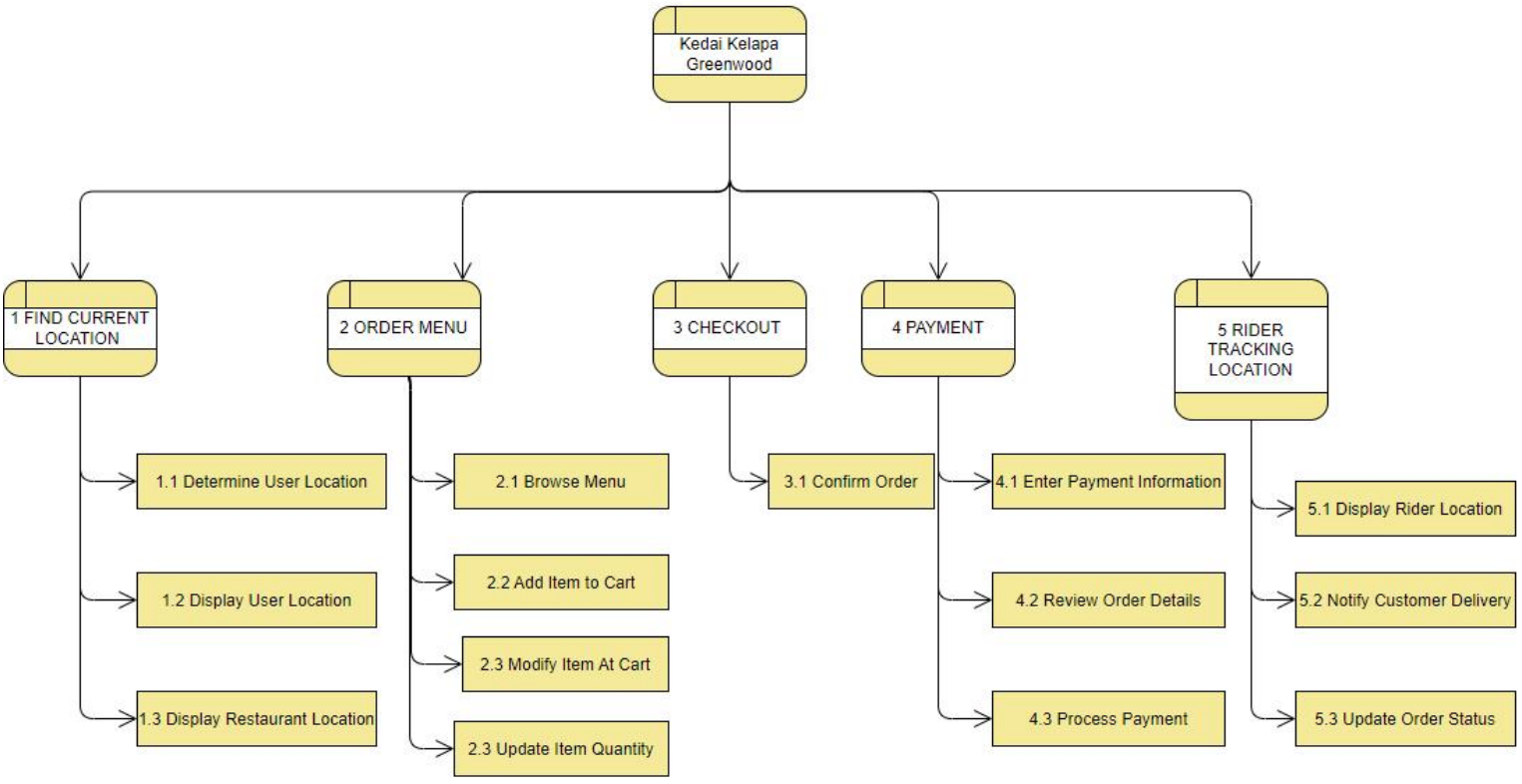
4.1 LOGICAL DESIGN



Use Case Diagram Kelapa Greenwood

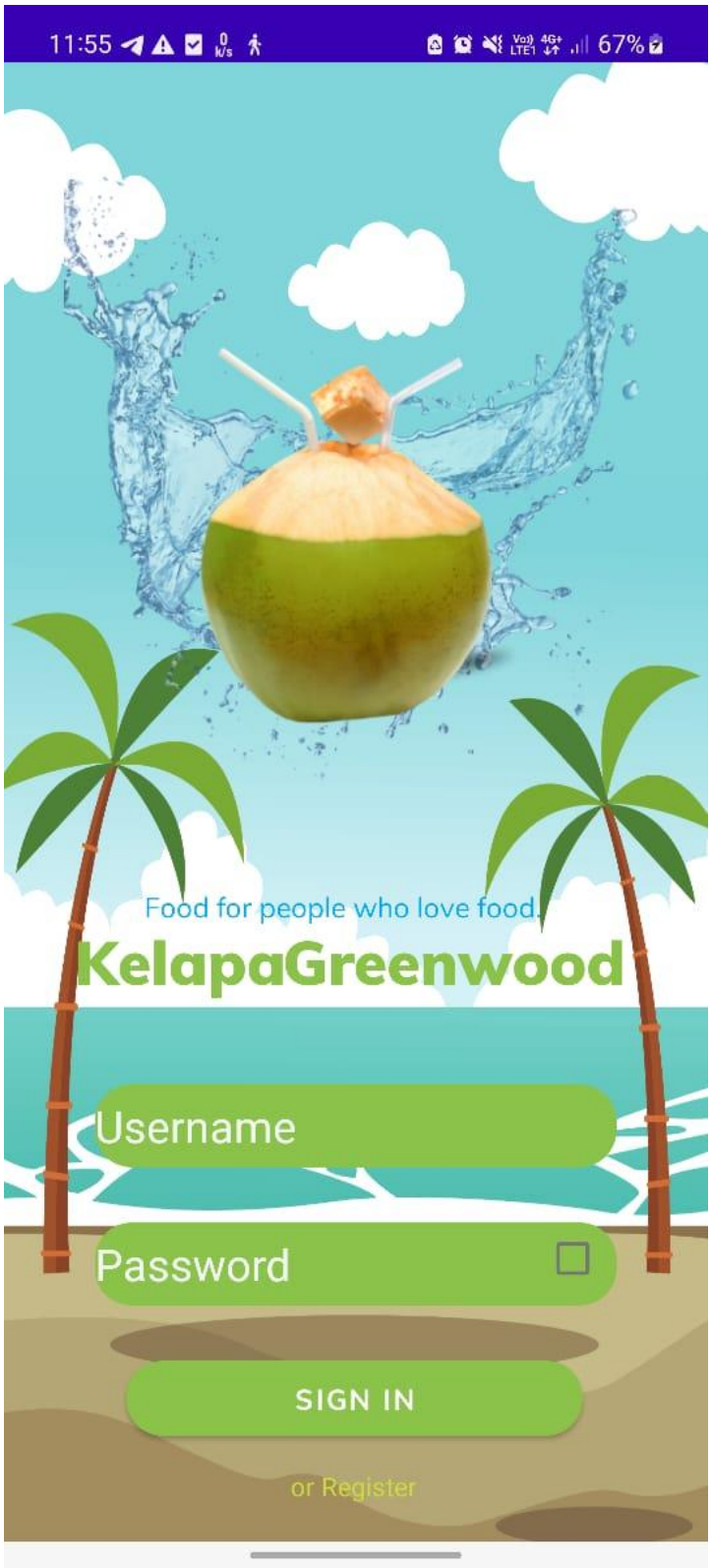


DFD Kelapa Greenwood

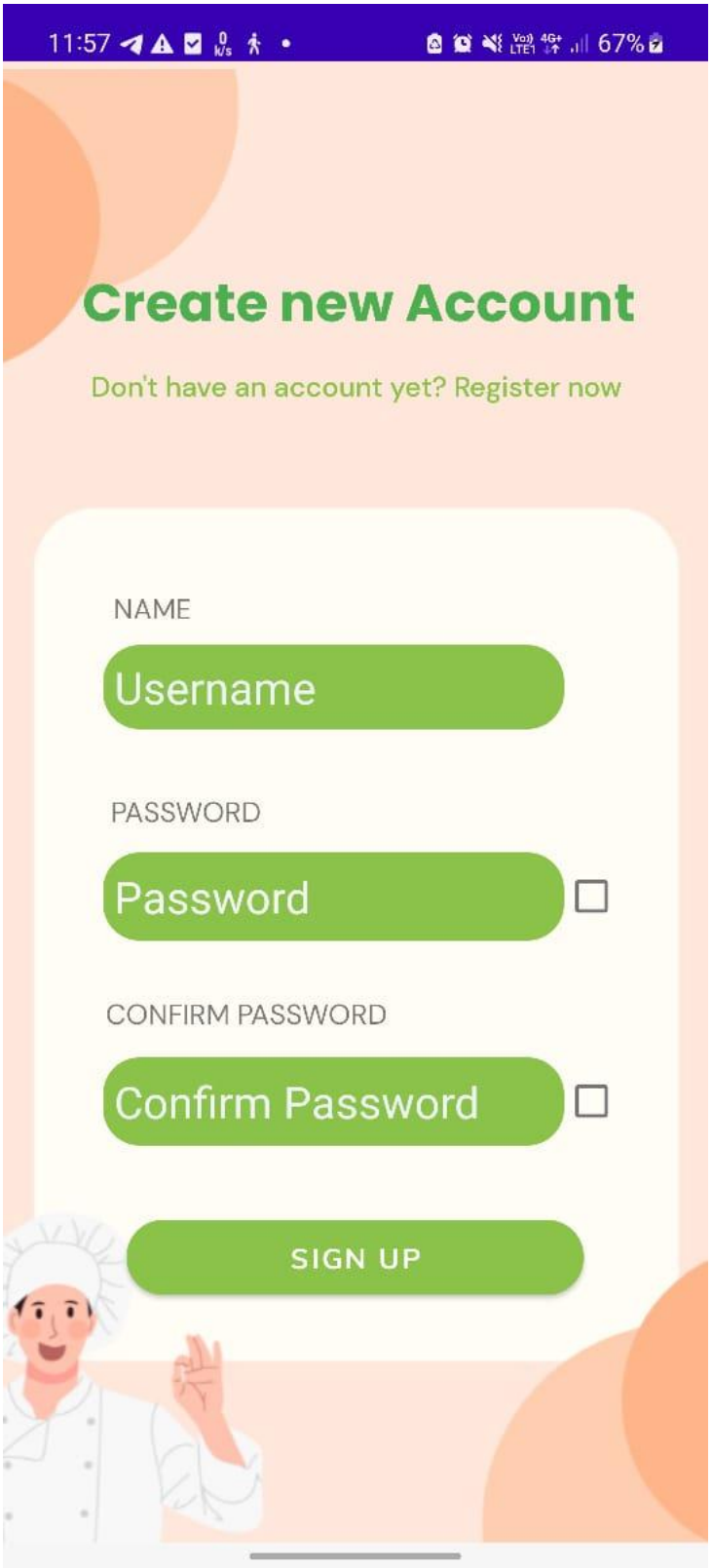


FUNCTIONAL DECOMPOSITION DIAGRAM (FDD)

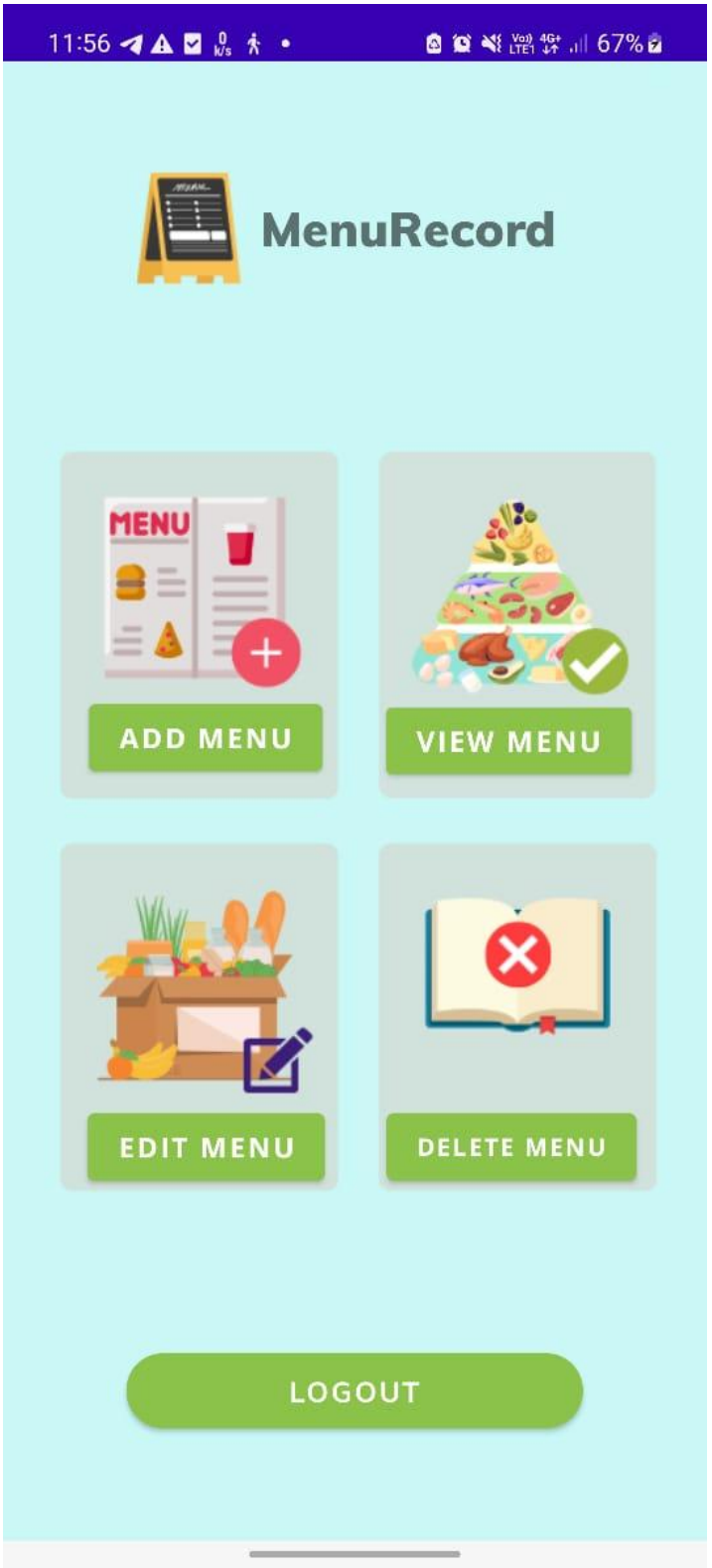
4.2 PHYSICAL DESIGN



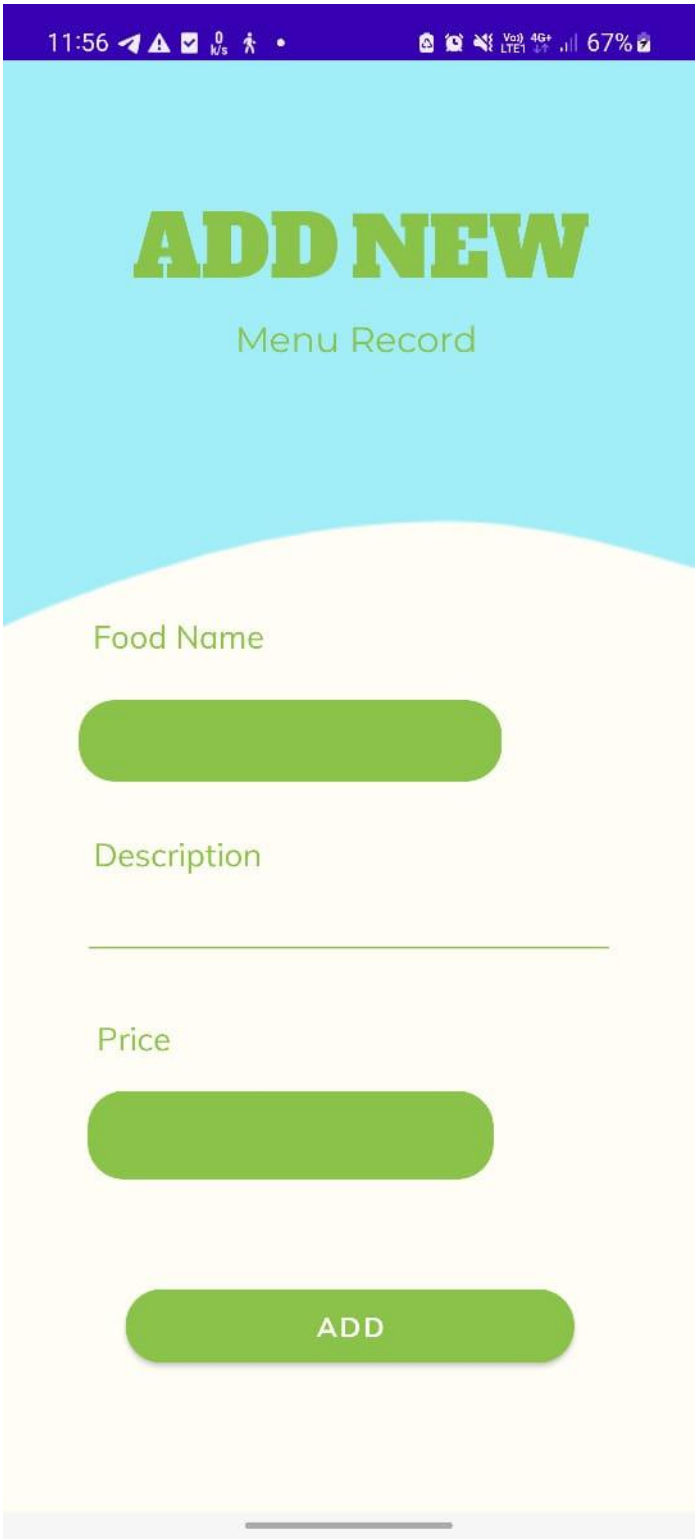
Login Kelapa Greenwood



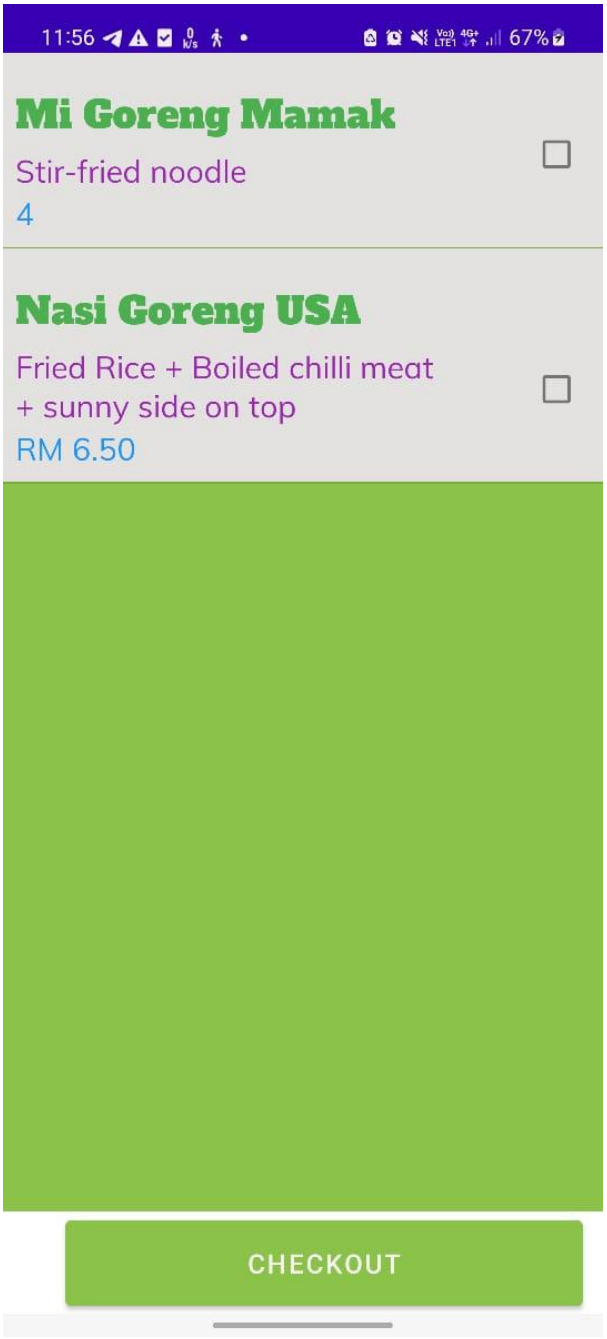
Create Account Kelapa Greenwood



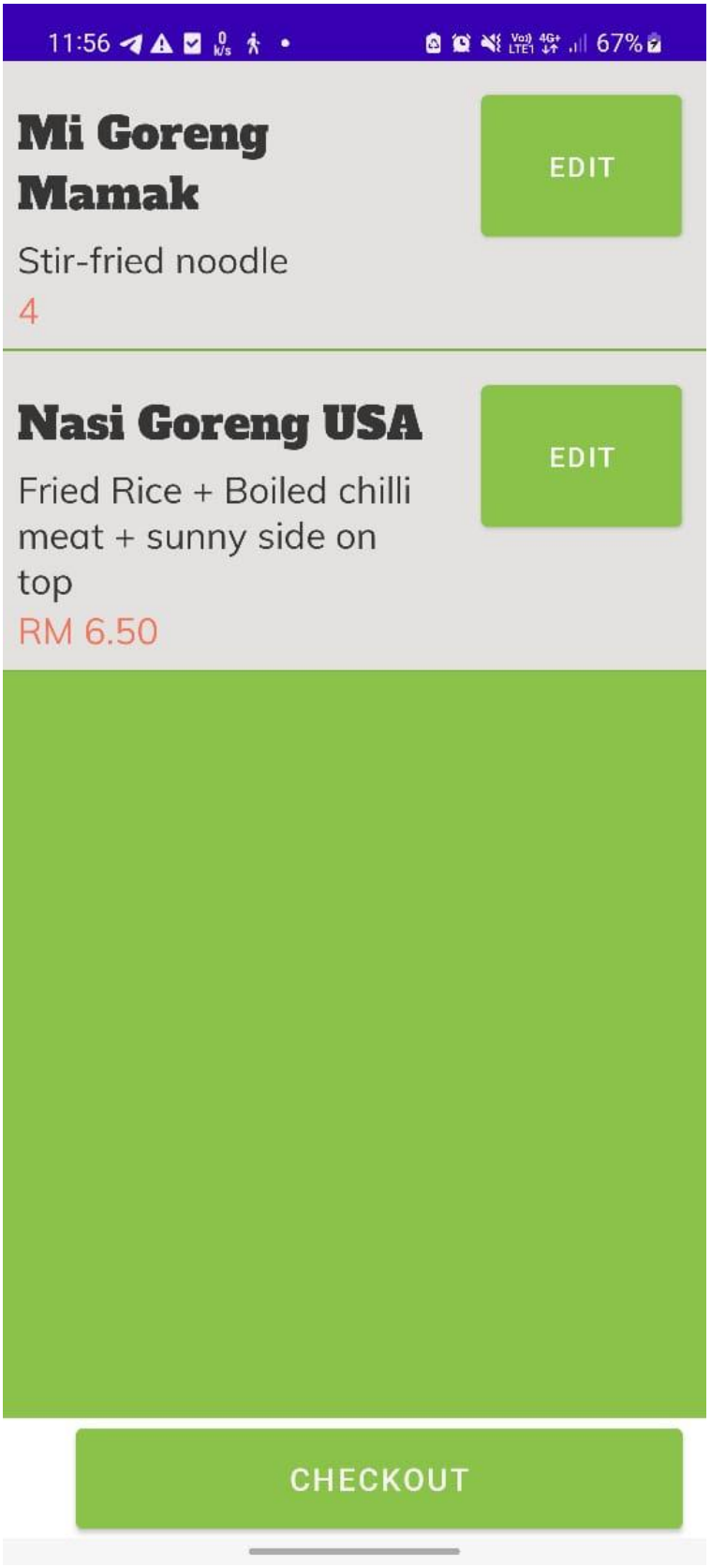
Admin Page Kelapa Greenwood



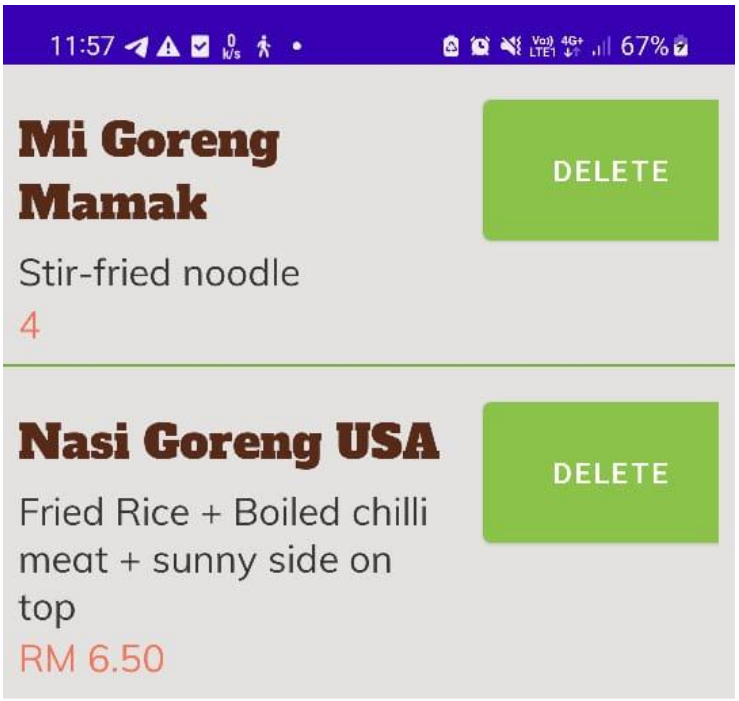
Add Menu Kelapa Greenwood



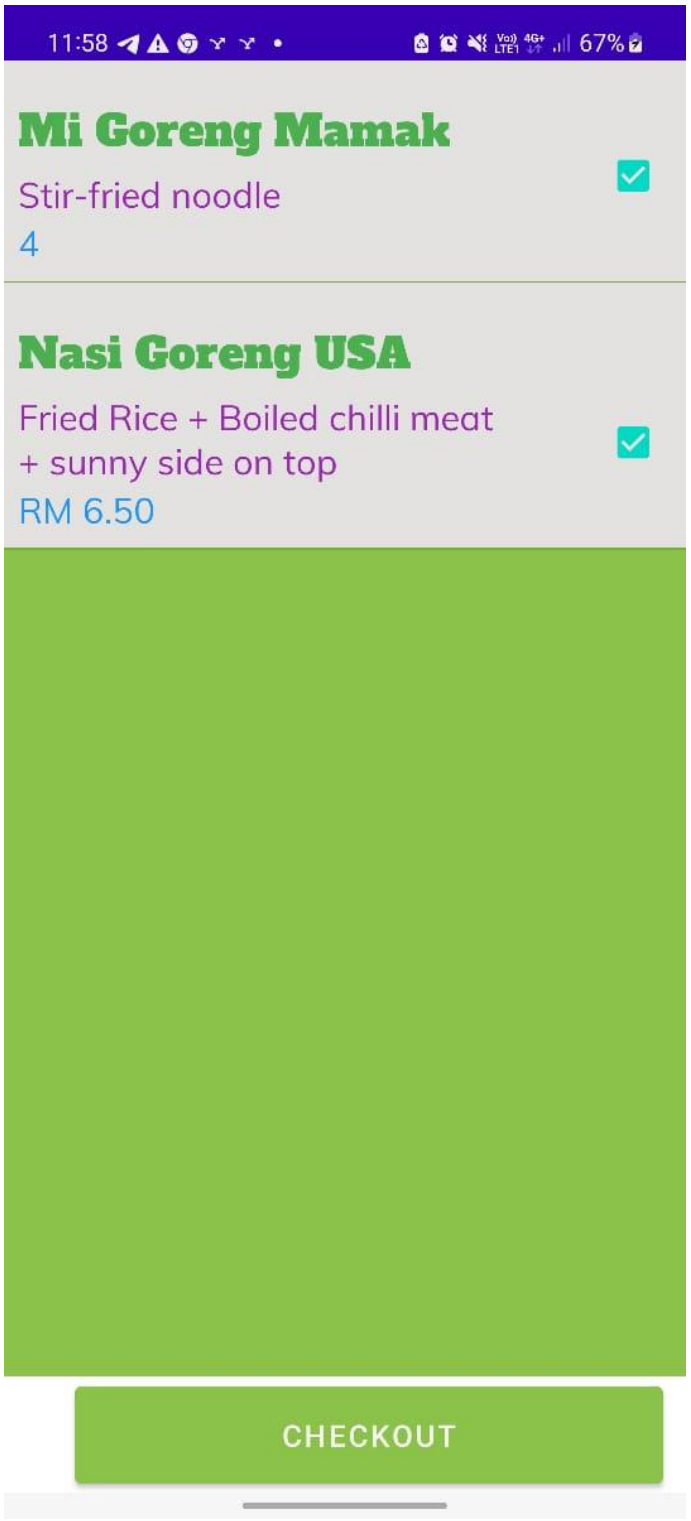
View Menu Kelapa Greenwood



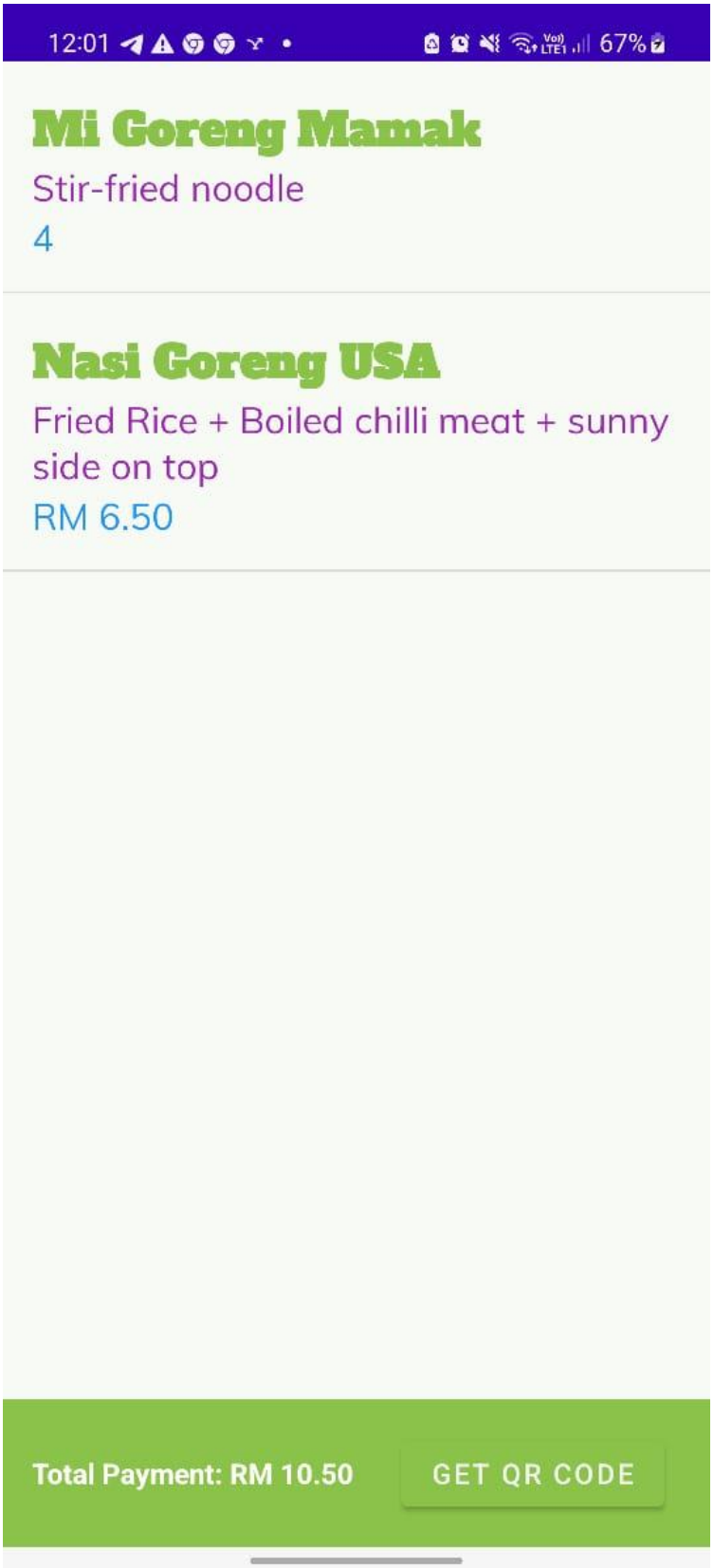
Edit Menu Kelapa Greenwood



Delete Menu Kelapa Greenwood



Menu List Kelapa Greenwood



Cart Menu Kelapa Greenwood

QR Code Kelapa Greenwood

5.0 TEST DESCRIPTION RESULT

Unit Testing						
No	**Test Case Name**	**Test Procedure**	**Pre-conditional**	**Expected Result**	**Tester**	**Result (Pass / Failure)**
1	Login	User is required to fill the username and password field before access the system	Users need to register or sign up before login	Prompt notification successful login	Muhammad Aliff Hazran	Pass
2	Sign Up	User is required to fill all the data field before login the system	Users need to register or sign up before login	The new user account is successfully created, and the user's data, including username, and password is stored in the database.	Muhammad Aliff Hazran	Pass
User Page						
3	Menu Listing and Checkout	User browse the menu details of the foods and drinks, including description and price.	The menu is accessible to customer for ordering.	The menu details should be correctly displayed on the app after listing.	Muhammad Aliff Hazran	Pass

Admin Page						
4	Add Menu	Admin add the menu by inserting foods or drinks name, description and price after clicking add menu button.	Admin need to click the add menu button to add menu.	The menu should be displayed at View Menu page and customers' menu list.	Muhammad Adam	Pass
5	View Menu	Admin should be able to view the menu that has been added by clicking on the View Menu button.	Admin need to click the View Menu button to add menu.	The menu should be displayed at View Menu page.	Muhammad Adam	Pass
6	Edit Menu	Admin edit the menu by clicking on the Edit button and edit the Menu name, description and price.	Admin need to make sure that the menu is already added, then Admin can edit the menu by clicking the Edit button.	The edited menu should be displayed correctly at View Menu page and customers' menu list.	Muhammad Adam	Pass
7	Delete Menu	Admin delete the menu by clicking on the Delete button and delete the wanted menu.	Admin need to make sure that the menu is already added, then Admin can delete the menu by clicking the Delete button.	The deleted menu should be deleted and not displayed at View Menu page and customers' menu list.	Muhammad Adam	Pass

Integration Testing						
No	**Test Case Name**	**Test Procedure**	**Pre-Conditional**	**Expected Result**	**Tester**	**Result (Pass / Failure)**
1	User Registration and Menu Listing	Check if new users can easily register account and Admin can list their menu for order.	The app should be accessible for customers' account registration and the Admin should be able to access the menu listing function.	New customers should be able to register their account without any problems, and Admin should successfully list the menu.	Ahmad Danish Zaafarani	Pass
2	Menu ordering Documents	Make sure the customer can order the menu and access the necessary ordering documents.	The app should be running and the menu listing with the relevant ordering documents should be available.	Customers should be able to order a menu without any problems and they should have access to the necessary ordering documents.	Ahmad Danish Zaafarani	Pass
3	Available stock of menu	Customer order a menu, and the menu stock will be reduced and soon will be run out of stock.	The application should not display available menu in menu list.	Customer won't confuse if the menu is still in stock or out of stock.	Ahmad Danish Zaafarani	Pass

6.0 MAJOR INTEGRATION

6.1 ADVANTAGE OF KELAPA GREENWOOD

Efficient Ordering Management: Kelapa Greenwood enhances the menu process by automating record keeping, eliminating paperwork. This effectiveness saves time and effort for both the admin and the customer.

Accurate Menu Tracking: The app's real-time menu tracking system helps identify the party responsible for any traffic violation involving menu ordering. This protects Admin from ordering trouble and making sure customer having a good time.

Wide Menu Selection: For customers, Kelapa Greeenwood provides access to a variety of menu listed by Admin, offering more diversity selection than other food ordering application.

6.2 DISADVANTAGE OF KELAPA GREENWOOD

Admin Reliability: Since Kelapa Greenwood depends on Admin to list the menu, the quality of the food and beverages may change. To have a positive experience ordering from the menu, customers should read reviews from other customers.

Possibility of Price Variation: The total cost effectiveness is impacted because when the admin sets the menu pricing, they may differ and some may not be as cheap or costly as other meal ordering applications.

App Performance: Kelapa Greenwood must be able to manage a high number of users without stuttering or crashing in order to offer a seamless user experience. It's crucial to guarantee reliable performance at busy times.

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7.0 RECOMMENDATION & CONCLUSION

Recommendation

1) **Link Banking on the App Kelapa Greenwood:** This technique is more user-friendly than using cash or a QR code at the payment counter.

2) **User Authentication and Verification:** Describe the procedures utilised for customers and admin authentication and identity verification. This makes sure that the app and all of its features are only accessible to authorised users.

3) **Communication System:** This software needs a chat feature that allows for quicker communication than using other social media platforms like Whatsapp, which requires requesting the admin's phone number.

Conclusion

The "KELAPA GREENWOOD" online food ordering system has many advantages for food businesses. Restaurants can improve supply chain efficiency, reduce errors, and increase efficiency by streamlining operations and automating order management procedures. The framework likewise gives an open door to more modest, neighborhood food foundations to acquire openness, grow their client base, and contend in the computerized commercial center. Entrepreneurship is encouraged, employment opportunities are created, and the community's economic development is aided by this support for local businesses.

In conclusion, the online food ordering system known as "KELAPA GREENWOOD" has a significant impact on the food industry because it places an emphasis on customer satisfaction, accessibility, efficiency, and convenience. This project aims to create a thriving ecosystem that benefits consumers, restaurants, and the community as a whole by providing a user-friendly interface, personalized choices, and support for local businesses.

8.0 REFERENCE

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