

**EATSEASY: A CROSS-PLATFORM FOOD ORDERING SYSTEM
FOR FOOD COMBINATIONS AND CUSTOMIZATION**

A Thesis
Presented to the Faculty of the
Information and Communications Technology Program
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In Partial Fulfillment
of the Requirements for the Degree
Bachelor of Science in Computer Science

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ABSTRACT

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This thesis presents the development and evaluation of EatsEasy, a cross-platform food ordering application designed to cater to small food vendors and customers seeking customizable meal options. The primary objectives of EatsEasy are to provide an accessible, affordable, and user-friendly platform with low commission fees for vendors and flexible customization features for customers. Using convenience sampling, data was gathered from vendors and customers through a structured survey, assessing areas such as ease of use, functionality, and customization capabilities. Results indicate high satisfaction levels among both user groups, with 92-96% of respondents rating EatsEasy as user-friendly and expressing positive experiences with the app's ease of ordering, flexibility, and affordability. Specifically, 100% of vendor respondents were pleased with the lower commission costs, underscoring the app's potential to support small businesses by enhancing their online presence and marketability. The findings demonstrate that EatsEasy successfully delivers on its promises, providing a customizable and efficient food ordering experience. Recommendations for future development include the addition of promotional features, analytics for vendors to aid business growth, and expanded compatibility with local payment systems. These improvements aim to further enhance user engagement and accessibility, positioning EatsEasy as a valuable tool within the food delivery industry.

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INTRODUCTION

In these current times where efficiency is highly valued due to the rapid improvements of technology, people rely on the ease and efficiency of ordering food online because it is convenient due to easy internet access. Many prominent food businesses even provide a full process that even encompasses transaction related to booking, reservations, and delivery. Some offer a website or app where customers can place orders and communicate with the restaurant. The advancement of technology has revolutionized meal delivery, encouraging people to place online food orders. A survey conducted by the researchers revealed that convenience, variety of options and doorstep delivery are the main motivations for using an OFODS. Focusing on these factors is critical for the success of OFODS.

EatsEasy is an Android and web-based automated food ordering application. The system will incorporate all the user preferences mentioned above. While being a convenient platform for customers to order food online, it also features a food combo matching and customization UI to suit an individual's dietary preferences to create a personalized and tailored food combos that satisfy the customer; The system then finds the best food business based on the customization; and with the addition of a chat system, customers can easily inquire and order from the said restaurant enhancing convenience for both the vendor and customer.

Through the development of the system, the developers would focus both on the side of the customer and the vendor to make a convenient online food ordering and delivery platform. Made-to-order, catering services and food stalls are also open to register as a vendor in this application. The system intends to enhance the business exposure of small businesses by not limiting vendors to fast-food restaurants that are dominating the market.

Background of the problem

Online food ordering has become a popular and convenient way for people to enjoy a variety of food options without leaving their homes or workplaces. However, behind this straightforward process lies a complex network of challenges and opportunities for both customers and food vendors. Customers face issues such as long queuing times during peak hour and seasons, long delivery times, food quality, payment security, and communication barriers, while food vendors struggle with high commission costs, limited exposure, order management, and customer retention. This part explores the factors that influence customer and vendor preferences for online food ordering, the benefits, and drawbacks of using online platforms, and the potential solutions to improve the online food ordering experience for both parties.

The developers of this thesis have conducted a survey of 20 respondents from various backgrounds who often purchase both food online and traditional. A variety of choices in existing food ordering is preferred as a feature in online food ordering. The emergence of GrabFood and FoodPanda has revolutionized online food ordering by integrating a customization feature on a customer's order and in fact, 85% of the respondents prefer having customized orders when using online food ordering platforms. However, there are issues that are present with the platform as the customized order of a customer when using GrabFood and FoodPanda platforms would come from different restaurants in a branch that is chosen by the customer. This can affect variety of choices as the meal being craved by the costumer might not be present in the branch. Waiting times might also be affected as the more an order is customized, the more likely the rider will need to order from another restaurant in the branch to complete the customized order list. Additionally, it is revealed that only 15% of respondents have never experienced a delivery delay when ordering food online. Delivering and order on-time is a crucial factor in the success of the said system as revealed in the survey revealed that having an order delivered on time positively impacts customer satisfaction with 95% of the respondents supporting the claim.

Based on the developer's survey, consumers who chose to order online instead of traditional walk-in have three main motivations: convenience, variety of options and doorstep delivery. Issues that might be a reason with this revealed data is the lengthy lines especially in holidays and busy times of the year as a common complaint of our

respondents is the lengthy times on special days made the consumers more likely to give up in line and cancel the order.

The developers also conducted a survey of 10 vendors who seek exposure to the public. The data shows the difficulties of promoting the vendor's business in the current market; 60% of food vendors have limited budget for marketing efforts, 50% complained about limitations in reaching a broader audience, and lack of effective marketing strategies are the common challenges faced by food vendors in increasing public exposure which is claimed by 50% of the respondents. The vendor respondents operate mostly as made-to-order enterprises (70%). Furthermore, 80% of them find it difficult to go outside their local areas and mostly rely on word-of-mouth and social media to gain visibility. Despite these challenges, 90% of respondents express openness to modern technology like using an online platform the business and see the trends as tools for increasing awareness and growing their businesses. The majority (80%) have been in business for one to three years, suggesting that they are comparatively new to the industry.

When it comes to using e-commerce platforms 60% of vendors use Grabfood, and 70% of merchants choose commission rates higher than 30%. Remarkably, 90% of individuals thinking about a transition express anxiety about these high commission prices and are contemplating a migration to more affordable platforms. Low commission costs (100%), user-friendly interfaces (80%), and customizable menus (80%) are the three main qualities that new platforms should have. Eighty percent of vendors feel high commission rates negatively influence profitability, which drives 90% of them to look for ways to switch platforms to save money.

The synthesis of survey data highlights recurring themes and issues that both consumers and food suppliers have with the present online meal ordering platforms. Notably, clients occasionally experience long delivery durations, which negatively affects their satisfaction and indicates that delivery procedures need to be more efficiently run. Food merchants also deal with hefty commission expenses, which reduces profitability and call for more affordable online ordering systems. Small and new businesses face difficulties in

terms of visibility and reaching out to audiences, which makes it necessary for platforms to enable more widespread market access. Furthermore, a gap in the current

offerings of online food platforms is indicated by customers' need for customization. The problem statement for the capstone project is based on these combined findings. In response to these challenges, the developers seek to address these shared challenges by providing an OFODS platform aligning with customer desires for customization and streamlined ordering, supporting new and small vendors in overcoming exposure limitations, and offering a more financially viable solution for online platform users. By addressing these identified hurdles, the developers aim to elevate the online food ordering experience, benefiting both customers and vendors alike.

General Problem:

The development of a cross-platform online food ordering and delivery system requires optimizing customization, ensuring timely delivery, offering a wide variety of choices, and providing a cost-effective platform that enhances the visibility and growth of small and new food vendors.

Specific Problems:

- The lack of a more diverse menu selection tailored to the customers' preference while ensuring an efficient food ordering process.**

Customers encounter challenges when using online food ordering and delivery services due to the complexity of customizing orders and receiving them promptly. It is frustrating when they cannot tailor their orders as desired and have to wait longer for delivery, especially when orders are fulfilled by multiple restaurants. This not only extends the delivery time but also limits the menu options available. Inconsistent delivery, especially during busy times, adds to the inconvenience and affects customer satisfaction. To improve this experience, customers need systems that make order customization easier and ensure deliveries arrive on time, with a wide range of menu choices. This will ultimately enhance the overall satisfaction of customers using online food ordering and delivery services.

- The disadvantage of food vendors not having a dedicated and accessible online food selling app that can boost public exposure of small food businesses.**

A common problem for vendors is figuring out what is needed for them to overcome the obstacles of low visibility and insufficient exposure in the online

food ordering and delivery ecosystem. It means battling marketing constraints brought on by a lack of marketing plan, inadequate word-of-mouth or social media reach, and accessibility issues preventing merchants from expanding outside local markets. Addressing this challenge requires the development of a platform that promotes broader visibility, overcomes marketing limitations by providing promotional opportunities, diversifies outreach channels to engage a larger audience, and improves accessibility for vendors, particularly small businesses, in the highly competitive online food market.

- **The high commission rates of popular food selling apps make the platforms unsustainable and inaccessible for small food businesses.**

Steep commission costs in online food ordering and delivery systems present a serious obstacle to food vendors' capacity to remain financially stable, competitive, and to seize expansion opportunities. These fees reduce revenue, which hurts smaller suppliers more than larger rivals and puts them at a competitive disadvantage. Furthermore, it makes it more difficult for vendors to fund expansion projects and creative approaches. To overcome this obstacle, vendors urge platforms to establish more equitable price schemes that benefit vendors, particularly smaller ones, allowing vendors to thrive financially and competitively. This strategy will not only promote growth but will also generate a more equitable and competitive environment in the online food sector.

Overview of the Current State of Technology

Ordering at the counter

Traditional ordering at the counter refers to the classic method of placing an order in person at a restaurant or food service establishment.

Ordering over the counter in a traditional setting typically involves these steps:

1. Approaching the Counter: Customers are advised to approach the designated counter or service area where the staff is ready to take their orders.
2. Reviewing the Menu: They can peruse the displayed menu behind or on the counter. Printed menus, if available, can also assist in deciding what to order.
3. Deciding on the Order: Customers are encouraged to take their time to decide on their order. If they need more information or have queries about menu items, seeking assistance from the staff is recommended.
4. Placing the Order: Upon deciding, customers should step up to the counter and communicate their order clearly to the attending staff member, ensuring accuracy.
5. Providing Customizations: Any specific requests or customizations, such as modifications to the order, should be clearly communicated at this stage.
6. Confirming and Paying: After confirming the order details, the staff usually provides the total cost. Payment can be made using cash, card, or other accepted methods.
7. Receiving the Order: Once the order is placed and paid for, the staff begins preparing it. Depending on the establishment, customers may receive a number or ticket for order collection when it is ready.
8. Collecting the Order: When the order is ready, customers are either handed their order over the counter or called by name/number for pickup.

Enjoying the Meal: Customers find a suitable spot, either within the establishment or for takeaway, to savor their meal.

Foodpanda

Foodpanda is an online food delivery platform that connects users to a wide range of restaurants, allowing them to order food for delivery to their location. This includes the following interfaces:

Foodpanda Food Rider's Application

Riders rely on dedicated delivery apps equipped with GPS navigation, allowing them to find optimal routes, avoid traffic, and reach destinations efficiently. These apps also feature real-time order tracking, enabling both riders and customers to monitor the delivery progress. Communication tools within the apps aid riders in confirming orders, providing updates, and clarifying delivery details with customers. Some platforms experiment with wearable devices like smartwatches to streamline notifications and navigation for riders. Additionally, delivery optimization algorithms help enhance efficiency by optimizing delivery routes based on factors like traffic and distance. These technological integrations prioritize safety, efficiency, and a seamless delivery process for both riders and customers.

Foodpanda Vendor's Application

Vendors (restaurants) partnering with Foodpanda access a dedicated platform or app tailored for managing menus, processing orders, and monitoring sales. This platform offers functionalities such as menu updates, order notifications, and integration within the Foodpanda system to ensure seamless operations for vendors. Users engage with Foodpanda through an intuitive mobile app or website, enabling restaurant exploration, menu browsing, order placement, delivery selection, payment methods, and order tracking. Both vendors and users benefit from advanced features like real-time order tracking, personalized recommendations based on previous orders, various payment options, and customer support integration for swift assistance. Additionally, Foodpanda incorporates analytics tools for vendors to analyze sales data, comprehend customer preferences, and optimize their offerings. This data-driven approach empowers vendors to make informed decisions regarding their menu, pricing strategies, and marketing efforts.

Foodpanda Customer's Application

The step-by-step on how a customer can order food through Foodpanda:

Create an Account or Log In: Customers need to download the Foodpanda app or visit

the website. They can create an account or log in if they already have one.

1. Entering Location: Users are prompted to input the delivery address to access the list of available restaurants in the designated area, ensuring the display of restaurants capable of delivering to the specified location.
2. Browsing Restaurants: Customers can explore the array of restaurants listed on Foodpanda, employing filters by cuisine type, ratings, or specific dishes of interest.
3. Selecting Items: By clicking on a restaurant, users gain access to its menu. They can peruse the menu, select desired dishes, and add them to their cart.
4. Reviewing Order: It is recommended to double-check the cart to ensure the accuracy of selected items in terms of quantity and any specific requests.
5. Checkout: Upon confirming the cart, users proceed to checkout. They confirm the delivery address, select their preferred payment method (e.g., credit/debit card, cash on delivery), and place the order.
6. Order Tracking: Foodpanda typically offers a tracking feature once the order is confirmed. This allows users to track the order's status, from preparation to delivery, within the app.
7. Receiving Delivery: A delivery rider retrieves the order from the restaurant and transports it to the specified location. Customers receive notifications or updates regarding the progress of the delivery.
8. Rating and Reviewing: Post-receipt of the order, customers may have the option to rate the delivery experience and provide a review for both the restaurant and the delivery service.

GrabFood

GrabFood is an on-demand food delivery service offered by Grab, a super app that provides diverse services including ride-hailing, and payments. This includes the following;

GrabFood Rider's Application

Riders utilize dedicated apps provided by Grab, equipped with GPS navigation that aids in finding optimal routes to restaurants and customers' locations. Real-time navigation tools assist in route optimization, reducing delivery times by avoiding traffic congestion. These apps also offer delivery tracking, enabling both riders and customers to monitor order progress in real time. In-app communication tools facilitate seamless interactions between riders and customers for order confirmation, updates, and clarifications. Safety features such as panic buttons provide riders with a means to signal emergencies or seek support. Additionally, advanced algorithms optimize delivery routes considering numerous factors to improve efficiency, and some platforms explore wearable devices like smartwatches to streamline notifications and navigation for riders. These technological integrations prioritize safety, efficiency, and a smooth delivery process for both riders and customers.

GrabFood Vendor's Application

GrabFood, an on-demand food delivery service within the Grab super app, facilitates food orders from an extensive array of restaurants to users' locations. Vendors (restaurants) access a dedicated app or platform provided by GrabFood to manage their menus, handle incoming orders, and track their sales. This platform integrates tools for inventory management, order processing, and seamless interaction within the Grab system. For users, the GrabFood mobile app offers an intuitive interface enabling geolocation-based restaurant discovery, menu browsing, order placement, real-time order tracking, payment method selection, and feedback provision. The app's features encompass advanced functionalities like personalized recommendations, secure payment gateways, and integrated customer support. Additionally, GrabFood incorporates data analytics tools for vendors to analyze sales trends, dish popularity, and customer preferences, aiding vendors in optimizing their offerings and strategies.

GrabFood Customer's Application

This step-by-step on how a customer can order food through GrabFood:

1. Accessing Grab App: Users are required to download the Grab app or access it if already installed on their device.
2. Logging In or Signing Up: Customers can log in to their existing Grab account or create a new one if they are new to the platform.
3. Setting Up Location: Inputting the delivery address allows users to access the list of available restaurants capable of delivering to that specific location.
4. Browsing Restaurants: Users can explore the assortment of restaurants listed on GrabFood, employing filters by cuisine type, ratings, or specific dishes of interest.
5. Selecting Items: Clicking on a restaurant enables users to view its menu. They can browse the menu, select desired dishes, and add them to their cart.
6. Reviewing and Checkout: Before proceeding, users are advised to review the cart for accuracy in selected items and any special requests. Subsequently, they proceed to checkout.
7. Payment and Order Placement: Users confirm the delivery address, select their preferred payment method (e.g., cash, card, digital wallets), and finalize the order.
8. Order Tracking: Post-confirmation, GrabFood typically offers real-time tracking. Customers can monitor the order's status from preparation to delivery within the Grab app.
9. Delivery and Receipt: A delivery rider collects the order from the restaurant and transports it to the specified location. Users receive notifications or updates about the delivery status.
10. Rating and Reviewing: Post-receipt of the order, customers may have the option to rate the delivery experience and provide a review for both the restaurant and the delivery service.

Objectives of the study

General Objective

To design and develop a cross-platform application that aims to revolutionize online food ordering by offering a customizable, timely delivery service with a diverse range of options, all while supporting the exposure and growth of small vendors through a cost-effective platform.

Specific Objectives:

- To design and develop a user-friendly and cross-platform Application that effectively streamlines order customization while ensuring timely deliveries and a diverse menu selection**

The developers' focus lies in a streamlined user experience for order customization and timely deliveries. Their strategy involves a robust backend system efficiently managing customized orders across multiple restaurants, aiming to reduce delivery times. They plan to use algorithms to match customer preferences with available menu items, minimizing the need for orders from multiple sources. A user-friendly interface will guide customers through customization without delays. Real-time tracking will enable order monitoring and optimized delivery routes, enhancing the overall online food ordering experience.

- To design and develop a cross-platform application tailored for food business owners to boost their public exposure**

The developers will focus on enhancing vendor exposure within the online food ordering landscape by creating a cross-platform application tailored specifically for food business owners. The approach centers on providing accessible marketing avenues to boost visibility. The platform will offer a suite of promotional tools empowering vendors to highlight their offerings beyond local boundaries. Leveraging diverse outreach channels and collaboration opportunities, the developers aim to expand vendor reach to a broader audience. Additionally, the user-friendly interface will facilitate easy registration and profile setup, ensuring seamless accessibility for smaller businesses that often face barriers to entry. By addressing these challenges, our platform aims to empower food business owners with the exposure and

marketing resources necessary to thrive in the competitive online food market, amplifying their visibility and growth potential.

- **To design and develop a cost-effective, and cross-platform application for food business**

The developers are committed to achieving the primary goal of creating a cost-effective and cross-platform application tailored specifically for small food businesses. The developers' approach involves redefining the fee structure within online food ordering and delivery systems to ensure fair and manageable costs for vendors. By establishing a transparent pricing model with much lower commission rates, the developers' goal is to financially empower small businesses while also encouraging a fairer playing field in a competitive industry. Furthermore, the platform will focus on providing tools and resources that aid in optimizing operational efficiency and lowering overhead expenses, thereby boosting the financial stability of these enterprises. The developers hope to achieve their goal of creating an environment in which smaller food vendors may survive, invest in expansion, and compete more effectively in the online food sector without having to pay expensive commission costs.

Scope and Limitations of the study

Scope

- Web-based Administrator configuration and monitoring interface:

Developers can configure the system through the web-based administrator interface. This allows the developers to activate and deactivate the User/Food vendor owner account, real-time monitoring of food vendor total income, creating announcements and issue detection. Also, logging, customization, and maintenance.

- Activate and Deactivate Account

The web-based admin interface has features of deactivating and activating an account. This allows the developers to control the vendors and users who are engaging in suspicious activities like fraud, faking an identity, and spamming by deactivating their accounts to stop the activities. If the user or vendor proves that they did not do anything suspicious to get deactivated, the developers will lift the suspension by activating their accounts. The developers will know the issues by the reporting features of the vendor and user applications.

- Promotion announcement

This allows the developers to inform the users and vendors about the discounts and promotions.

- Labeled metrics

It allows the developers to see how the food businesses are doing. Monitoring provides general metrics like total income of vendors; this comes with the total commission of the developers displayed in every listed vendor and the total income of developers.

- Logs

This allows the developers to monitor the current flow of the system by logging the daily transactions, the time when the transaction happened, what was ordered, order number, who registers in new vendor and user accounts, and configuration history in the administrator interface.

- Food Rider's Mobile Application Interface:

The Food Rider's Mobile App Interface offers a user-friendly platform tailored for delivery riders. It includes Profile Management, Order Tracking, Navigation with GPS integration, Real-Time Tracking for transparency, In-App Chat for communication, Earnings and Performance Tracking, Delivery History, and instant Alerts and Notifications for seamless and informed deliveries.

- Profile Management

Riders can create and manage their profiles, including personal information, contact details, and vehicle details if applicable.

- Forgot Password

Vendors and Users can reset their password in the "Forgot Password" option on the log in page. Vendors must first verify their identity via OTP sent to their provided contact number, once they are verified, vendor will provide their new password.

- Order Management

The order management feature in a food rider app provides real-time updates to delivery riders about the progress of their assigned orders. It includes information on new orders, order preparation, pickup status from the restaurant, ongoing delivery, and completion. This feature helps riders stay informed, ensuring smooth coordination and timely deliveries throughout the process.

- Navigation and GPS

Integration of Google Maps and GPS helps riders find the fastest routes to the restaurant and the delivery destination.

- Real-Time Tracking

Riders and customers can track the delivery progress in real-time, ensuring transparency and estimated arrival times.

- Chat Feature

In-app messaging and calling features facilitate communication between riders, customers, and support teams for any clarifications or

updates.

- Rider e-Wallet

Riders have an e-Wallet on their account. Riders can load the e-Wallet through the use of Stripe payment. This allows them to accept COD orders. The e-Wallet would primarily be used to pay vendors for COD orders by users.

- Earnings and Performance Tracking

Riders can track their earnings, view completed deliveries, ratings, and feedback from customers. It also shows data and analytics related to their performance, such as ratings and customer feedback.

- Delivery History

Access to past delivery history, enabling riders to keep track of completed orders.

- Alerts and Notifications

Instant notifications for new orders, changes in order status, or any important updates related to their deliveries.

- Customer's Customized Food Order Mobile Application Interface:

A main cross-platform application interface for users to customize their food orders. The application interface includes a food page where users may input their desired combination manually or selecting from multiple choice, checkboxes, and allowing them to create a custom meal combination. This system will provide customers with the convenience of personalizing their orders to their specific food preferences. The interface also includes.

- Profile Management

Customers can create and manage their profiles, including personal information, contact details, address, and profile picture.

- Food stall locator

Users can see the food stall vendors around their vicinity that offer their specific menus and preferences with integration of Google Maps and GPS locator in their mobile device.

- User Registration and Verification:

Users can create an account by providing their identity with a valid ID. Users can include payment methods for transaction processing, and securely save their personal and payment information through the EatsEasy app. For users who will use the customer app for ordering food, the account must first be validated by the admin achieved by providing the listed requirements.

- Forgot Password

Users can reset their password by clicking the Forget password button on the log in page. Users must verify firstly their identity via OTP sent to their provided contact number, once they are verified, user can set a new password.

- Search and Filters:

Users can search for specific cuisines, dishes, or food stalls and apply filters to find what they are looking for more easily. The users can also search for the type of order (e.g.) made to order, fast food, catering etc.

- Notification:

Users receive notifications about their orders and food stall updates.

- Order History

Access previous orders for quick reordering or reviewing past transactions.

- Saved Addresses

Users have the option to save multiple delivery addresses for convenience in placing orders.

- Real-time tracking

Track the status of orders in real-time from preparation to delivery, with estimated arrival times.

- e-Wallet

Users have an e-Wallet on their account. Users can load the e-Wallet

through the use of Stripe payment. The e-Wallet would primarily be used to pay vendors for COD orders by users.

- Cashless and COD Payment Integration

Integration with the Stripe API for secure and efficient payment processing for non-COD orders, Orders can also be placed using the COD payment method.

- Food stall Listings:

The application provides information about various food stalls, including their menus, prices, operating hours, locations and customer reviews.

- Order Placement:

The customer places an order through the EatsEasy app. Users can browse through a list of food stalls and their menus, select items they want to order, and customize their orders. Additionally, the users will have an option to choose delivery or pick up.

- Chat feature:

The research includes the implementation of a chat feature within EatsEasy, which can facilitate communication between customers and restaurant staff.

- Pick-up or Delivery Options:

Users have the flexibility to choose between picking up their orders in person or having them delivered by a courier. This option enhances convenience for a wider range of customers.

- Review and Rating:

Users can leave reviews and ratings for the restaurants and dishes they have ordered, helping other users make informed decisions.

- Report module

The report feature allows users to submit reports about the food stalls involved in suspicious activities such as fraud or faking a legitimate food stall. The developers will act on that matter. Also, the users can

submit a report to the developers about bugs and issues of the system and allows the developers to address the possible fixes to the issues. The reports will be stored in the developer's inbox.

- Feedback and Suggestions

Provide feedback on the app's usability, restaurant experiences, or delivery service.

- About us

This page introduces the developers of this project and provides their respective contact information.

- Food vendor owner's Management Mobile Application Interface:

A separate Cross-platform management application where owners and operators of food vendors can add their customizable menu, availability, and price. Also, it allows the owners to manage their customers' order demands, they receive a notification to start preparing the order, monitor their earnings so they can keep track of their revenue and performance, and set operating hours.

- Food vendor owner Registration and Verification module:

Food vendor owners can create an account and register their food business through the EatsEasy partner app dedicated to vendor owners.

Vendors who want to use the application for business purposes must provide their credentials, such as business name, contacts, complete address, business permit to register along with two government issued IDs to prove their credentials. The vendor account is verified by the admins after 1-2 business days if all the requirements are met.

- Forget Password

Vendors and Users can reset their password in the "Forgot Password" option on the log in page. Vendors must verify firstly their identity via OTP sent to their provided contact number, once they are verified, vendor will provide their new password.

- Profile Management

Vendors can create and manage their business profiles, including

business information, contact details, and profile picture of their business.

- Menu management

A content management feature allows vendors to edit all information concerning their food stall, menu items, and prices. Content management functionality allows for adding new menu items and changing descriptions, adding customizable questions, and photos.

- Commission

A 10% commission will be the profit of the developers for every order accomplished by the vendor. Order Price x 0.10 = Commission to be the system. The commission amount is not subtracted automatically by the system to allow COD options but listed as debt that must be settled by the vendor within 3 business days after successfully completing an order. Failure to return the commission within 3 business days would result in the Vendor's account not being able to accept new orders until the debt is settled.

- Order History

The order history list provides vendors with essential information about each completed order and the number of successful deliveries and cancellations.

- Order processing

After an order is placed, vendors can book a courier using a button that they will redirect to a third-party software to deliver the order to the customer and fill up the necessary info such as address and contact number of the customer from food vendor's app. The vendors dashboard can always show the status and progress of orders.

- Analytics

This feature allows business owners to monitor the performance of their business. Analytics can provide general metrics like their total revenue

- Receiving payments

The admin panel enables vendor to view all incoming payments for their orders and manage their revenue flow. Stripe will be the payment processor for the system.

- Report module

The report feature allows users to submit reports about the stalls engaging in suspicious activities such as fraud or faking a legitimate food stall. The developers will act on that matter. Also, the users can submit a report to the developers about bugs and issues of the system and allows the developers to address the possible fixes to the issues. The reports will be stored in the developer's inbox.

- Chat feature:

The research includes the implementation of a chat feature within EatsEasy, which can facilitate communication between customers and the restaurant staff.

- About Us

This page introduces the developers behind this project and provides their respective contact information.

Limitations

- Third-party Integrations:

The application depends on third-party services such as Stripe for payment processing, Google Maps for location services, and reviews, which can introduce dependencies and potential issues.

- Competitive Market:

The app faces competition from numerous other food delivery apps, which may limit its market share and profitability.

- Platform Dependency:

The application is developed only for android and web platforms, limiting its usability for users on using other platforms particularly IOS. Users would have to depend on using an android device or use the web version to use the EatsEasy application

- Network Connection Dependency:

EatsEasy requires a stable internet connection to effectively function since it relies on real-time data exchanges between different interfaces for order placement, tracking, and updates. Unstable internet connectivity can result in delays, incomplete transactions, or failures in receiving order status updates along with other potential issues.

LITERATURE REVIEW

Review of Related Literature and Studies

Foreign

Implementing Customizable Online Food Ordering System using Web-Based Application

The study covered in the article published in 2015 aims to create and put into use a digital restaurant system that enables customers to browse and order products from the menu using smartphones or tablets. Additionally, the system has tools for report generating, customer feedback, and menu recommendation. Real-time updates and payment alternatives are offered, and the ordering process is intended to be made simpler for both customers and eateries.

The relevance of this study to the specific issue in the research is that it focuses on the implementation of a digital restaurant and inter-restaurant navigation system with smartphones. This system allows customers to view and order menus, provide feedback, and generate reports. It also enables restaurant owners to manage orders and improve business management and service delivery. This study provides insights into the use of wireless communication and smartphone technology to enhance the performance of restaurants and simplify the ordering process for both customers and restaurant staff.

The study's findings suggest that due to the trends of ordering food on online platforms, the young generation would generate even more demand in the online food ordering industry. It allows customers to place orders online and make payments electronically, providing convenience and efficiency. The use of wireless technology and mobile applications also enables real-time updates and communication between customers and restaurants. The convenience and time-saving aspect of ordering food online strongly relates to customer satisfaction and intention of using the online food platform. A faster and more efficient process of ordering food can revolutionize the market.

Customizable of Food menu options

According to Nandita Loomba (2019) In today's world, food customization has become a buzzword in the restaurant industry. Restaurants are finding ways to cater to the customer's needs and preferences. Technomic estimates 46% of restaurants and foodservice chains understand the increasing customers need to customize the order, 72% of costumers expect customization. Furthermore, these findings also indicate that only 61% of quick-service restaurants and 52% of full-service restaurant operators are open to adapting plates to meet individual tastes. So, as a restaurateur, you need to work on this trend and give ways to your customers to customize their meal. You need to figure out what types of food can be customized. For instance, things like salads, pizzas, sandwiches, burgers, burritos, and tacos can be easily customized by changing a few ingredients. So, give your customers options like the "design- your- own pizza or make your burger," etc. These "build-your-own" concepts offer more variety, and the same ingredients can be used for multiple menu items.

The blog post discusses by the author highlights the benefits of offering food customization options to customers in the restaurant industry. The author emphasized that food customization can boost revenue, attract more customers, enhance customer loyalty, and reduce food waste. The author also provides some tips on how to implement food customization options, such as using the right equipment, setting up an assembly line, and using online ordering systems.

Menu Availability

According to Leong Wai Hong (2018) The traditional method of food ordering raises the possibility of human error taking place as the staff deal with a lot of customers while simultaneously doing the tasks. Thus, having a food ordering system that can make the process smoother, like being able to update food menu information real time and take orders through user inputs can have a positive impact in terms of the restaurant's profitability.

The app being developed aims to provide convenience, integrity and real-time availability of the restaurants to deal with food orders especially during crowded situations as a verbal base food ordering method has higher margin for errors on

the employee's part since A customer might have a lot of orders leading to the employee not being able to memorize all the food order which can lead to giving the wrong order and thus, greatly affecting the customer experience.

Local

Android application in food ordering system

According to Ann Janeth Garcia, et al., (2018) To achieve the convenience of customers in ordering food, the device A is designed to be interactive with the user because this displays the set of menus identically patterned to what the cafeteria is offering, hence the application considered organizing the menu by sub-categorizing the list of dishes that user can effortlessly select their choice of meal afterwards, the customer can adjust the quantity to purchase. Another feature of this application is to generate a barcode which is on the packaging process.

The application aims to reduce the time and effort spent n ordering and waiting for food, as well as the workforce needed by the cafeteria. The application can be enhanced by connecting to the school server's database, using a real barcode scanner device, adding more modes of payment, and expanding the application to other fields that involve queuing and ordering that provides a user-friendly and flexible interface for the customers.

Accuracy of Orders

The research study that Ribeiro, C. conducted in 2018 showed that order accuracy was one of the most important attributes for the consumers of a delivery app. The study also mentioned that consumers are concerned with both service quality and the result of a particular service while shopping online. Consumers want assurance that their order will be correct and fulfilled within the specified time frame. Furthermore, the study derived the following hypothesis that will describe order accuracy as the attribute that consumers value the most regarding food delivery apps. According to (Tribhuvan, 2020), as the world is continuously evolving, people are becoming more confident in using

food delivery applications rather than traditional ordering. The consumer's perspective is becoming more open in accepting the technology of ordering. One of the main reasons to use it is because of its convenience and user-friendly interfaces

Factors that lead to choosing the best Food Delivery application

According to Maria Bare, et al., (2021) The heaviest weighing factor that affects what Online food delivery system to use is the delivery times, followed by security and privacy of the customer's information. The third factor is food availability and restaurant choices. Prioritizing these factors can make an Online food delivery platform standout among its competitors which in turn, would lead to customers prioritize using the said Online Food Delivery platform. Another suggestion made by the study is Food Order accuracy can make or break a customer experience. Negligence of the customer's order remarks leads to disappointment in the customer's experience that in turn can lead to lower ratings on the application which would lead to the user finding alternative Food delivery platform that has higher ratings.

Family perception and their buying behavior for home-delivered food

According to Mary Delia G. Tomacruz, et al., (2018) Food delivery in the Philippines is considered a major alternative to dining out and preparing meals at home for families who want a respite from home-cooked meals and cannot endure the inconveniences of dining out. It investigates the frequency of purchasing, usual places for buying food, and reasons behind choosing this method of acquiring meals instead of dining out or cooking at home. Additionally, the study aims to establish any correlations or connections between these buying habits and certain demographic factors within the families, such as predominant age, sex, and household size of the respondents. Overall, it seems to explore how families in the Philippines utilize food delivery as an alternative to traditional home-cooked meals or dining out and how their buying behaviors relate to demographic characteristics.

Synthesis

In the articles above, This Review of Related Literature and Studies/or system illustrates the specific and general task of the food ordering system, as well as the system could prioritize a user-friendly interface, real-time menu updates, and categorized options for swift and convenient selections. Customization emerges as a pivotal feature, aligning with the growing demand for personalized orders across various food items. Implementing a "build-your-own" concept and enabling easy modifications can significantly enhance user satisfaction and attract a broader customer base.

Order efficiency and accuracy stand out as essential elements that have a strong emotional connection with customers. A system that reduces errors, whether by barcode creation or app-based ordering, could significantly enhance user experiences and encourage recurring business. In a competitive market, knowing the important aspects that influence consumer decisions—such as order accuracy, security, availability of food, and delivery times—offers a road map for standing out from the competition.

Moreover, acknowledging demographic trends, particularly the younger generation's affinity for online food ordering, is crucial. Addressing their preferences and habits ensures the system remains relevant and appealing, potentially unlocking sustained success. By incorporating these insights into the project, a robust and competitive food ordering system can emerge—one that champions technological advancements, prioritizes user experience, and aligns seamlessly with evolving consumer preferences in the dynamic landscape of online food delivery.

METHODOLOGY

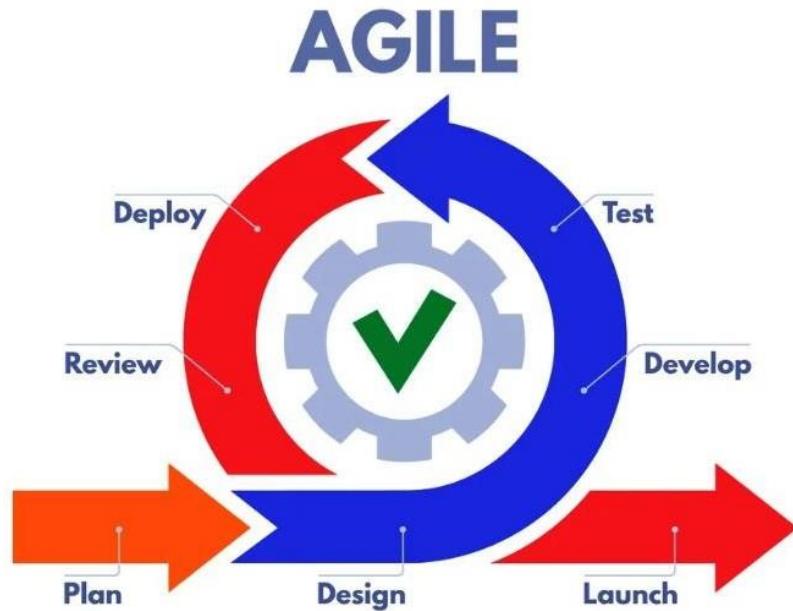


Figure 1. Agile Methodology

Methodology

According to Elizabeth Perry (2022), “Agile methodology is an iterative approach to project management and software development that emphasizes collaboration, adaptability to change, and self-organizing teams.”

The developers will utilize the Agile methodology. It is based on the idea of breaking down a large project into smaller and more manageable tasks, called sprints which can be completed in a brief period, usually two to four weeks. The agile team works closely with the customer or the end-user to deliver a working product or a feature at the end of each sprint, and then incorporates their feedback into the next sprint. The reason for choosing agile methodology is to deliver value to the customer faster and more frequently, and to adapt to changing requirements and expectations. Agile methodology includes different development phases, namely, Requirement Gathering, Design of the Requirement, Development and Iteration, Testing, Deployment, and lastly, Review and Feedback

Requirement Gathering

The requirements are specified, commercial prospects are presented, and the time and effort required to finish the project are estimated during this phase of software development.

The developers gathered concepts for the general operation of the application during this phase and thoroughly outlined each feature. To obtain information and data regarding the issues that need to be resolved and the prerequisites that must be satisfied, the developers conducted a survey questionnaire for customers, vendors, and riders. The developers also tested and reviewed existing Online food ordering apps to analyze the basic workflow of such apps, which can give an idea of the features that can be improved and integrated on the developer's app.

Design of the Requirement

This is the second phase of software development, in which stakeholders establish requirements and utilize a user flow diagram or a high-end UML diagram to explain how new features work and fit into the existing system.

The project's developers create the application's general framework at this phase, which will act as the system's blueprint. The project's developers will need to produce high-end schematics that will be used. Such applications used for producing the basic design and workflow include Figma and Canva. The said applications are used to create the design prototype, diagrams, and database- schema.

Development and Iteration

In the third phase of agile, designers and developers start working on respective projects with the goal of creating a functional product. Before being released, the product will go through multiple rounds of development, thus will have minimal, primitive capabilities.

During this phase, the developers attempt to construct an iteration of one aspect of the project. This may or may not be the definitive version or iteration, depending on how well it integrates with the other components or features. This phase includes the development of the main parts of our system; Customer's

App, Vendor's App, Rider's App and Admin interface. This is the most time-consuming step in software development and may necessitate numerous phases of development.

Testing

The quality assurance team checks the product's performance and looks for faults or flaws inside the project during this phase of software development.

This stage involves testing the iteration for quality issues and bugs, which will be fixed as the project progresses. At this stage, after the developers test the system and its functionalities, the developers will now test the system with actual users such as the Vendors who sell the food using the EatsEasy partner's app, the Customers who buys or picks-up the food using EatsEasy customer's app, Riders who deliver the food using EatsEasy Rider's app, and the admin interface that oversees the whole system used by the developers. In this approach, the users will test the system to see if it is working according to its functionality, to know if the features are suitable for their needs and find bugs or other issues, after which the developers must fix. In addition, this will help ensure that the system that must be installed is high quality.

Deployment

This is the fifth phase, in which the team develops a product for the user's workplace.

The EatsEasy App's Customer, Vendor and Rider's app are ready to be deployed in this phase. A working version of the application has already been tested to be compatible with the target execution environment, that is, the device and specifications of the target market.

Review and Feedback

This is the initial phase, during which the team receives and works through product feedback.

During this phase, the developers will collect and answer customer input. Because this is the final phase, the developers must maintain the software at this time. The developers of the proposal need to draft a survey question that inquiries about users' experiences with the system. The developers expect the

results to align with the EatsEasy's main objectives that include a more diverse food selection, efficient ordering process along with a cost-effective business platform for small food business owners.

Conceptual Framework

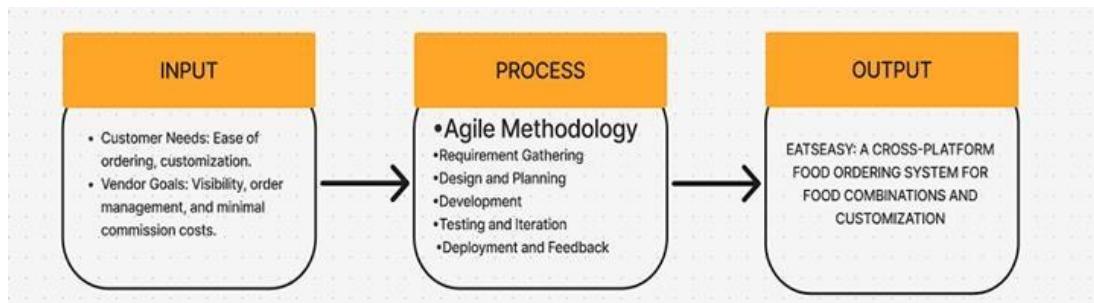


Figure 2. Conceptual Framework

This conceptual framework illustrates the flow and relationship of primary elements of the EatsEasy project: **Input**, **Process**, and **Output**. It provides a guideline to achieve the study's objectives. The need for an affordable online selling platform for small food businesses, vendor visibility and a diverse and flexible menu customization. The proponents of this study will follow Agile methodology throughout the development phase of the EatsEasy: A Cross-Platform Food Ordering System for Food Combinations and customization.

Overview of the Project

The online food ordering industry is a great way for vendors to promote and grow their business as it provides public exposure to attract more clients and customers but such systems that are prominent in the market are giving high commission fees that could not be afforded by small food vendors, especially newbies. Prominent food ordering industries like Grab and FoodPanda also lack a flexible and dynamic customization interface limiting the ability of customers to order a specific food based on their cravings.

EatsEasy's objective is to develop a user-friendly and cross-platform application designed with a dynamic customization interface for ordering food giving a more diverse menu selection to freely tailor an individual's cravings. The project also focuses on developing an easy to use, accessible and cost-efficient online food selling platform

for small businesses.

The outcome of this project is aimed at achieving the stated objective to promote small business owners and increase their visibility. The customization feature of EatsEasy also provides a more diverse food selection and expression for both the vendor and the customer. The proponents of this project would also be implementing these goals without compromising the app's user friendliness.

System Design Specification

Functional Requirements

1. User/Customer App

- **User Registration and Authentication:** Allows users to create accounts, log in, and manage profiles along with uploading a valid ID for new account registration and validation.
- **Menu Display and Customization:** Enables users to view and customize food menus from verified vendors.
- **Ordering and Checkout Process:** Users can add items to the cart, confirm orders, and proceed to secure payment for the checkout process.
- **Cashless and COD Payment Integration:** Integration with the Stripe API for secure and efficient payment processing for non-COD orders, Orders can also be placed using the COD payment method.
- **Order Tracking:** Allows users to see the order status from preparation to delivery. They can also track their order via Google Maps while using the order tracker.
- **Rating and Feedback:** Users can rate orders, leave feedback, and review vendor quality.
- **Notifications:** Users receive real-time updates on order status.
- **Search and Filter:** Users can search for items; filter menus based on categories and browse food vendors via their business names/restaurant name.

2. Vendor App

- **Vendor Registration and Authentication:** Allows vendors to create and manage their accounts and business information. Vendors must upload a valid ID before being registered as an official food vendor of EatsEasy.
- **Menu Management:** Vendors can add, edit, or remove menu items and set prices. Vendors can also freely add customization options on their menus-based on their inputs on the menu additives form.
- **Order Management:** Vendors will receive incoming orders and will be notified by the EatsEasy Vendor App. This also allows order management like processing and preparing for pick-up.
- **Sales and Earnings Dashboard:** Vendors can track daily sales, earnings, and transaction history.
- **Customer Feedback Access:** Vendors can view feedback and ratings left by customers.
- **Notifications:** Vendors receive notifications about new orders, order status and other app alerts.
- **Commission Management:** Clear overview of commission fees charged per order.

3. Rider App

- **Rider Registration and Authentication:** Riders can create profiles, log in, and manage availability. The registration process for riders would require uploading their driver's license and other valid IDs.
- **Order Pickup and Delivery Assignment:** Riders receive assigned orders for pickup and delivery.
- **GPS and Navigation:** Integration of Google Map services for efficient route navigation.
- **Order Status Management:** Riders can update the order status (e.g., picked up, en route, delivered).
- **Earnings Dashboard:** Riders can track their earnings per delivery and view payment summaries.
- **Rider e-Wallet:** Riders have an e-Wallet on their account. Riders can load the

e-Wallet through the use of Stripe payment. This allows them to accept COD orders. The e-Wallet would primarily be used to pay vendors for COD orders by users.

- **Order History:** Riders can view past delivery history for reference.
- **Notifications:** Riders receive notifications about new delivery assignments and order status.

4. Admin App

- **User Management:** Admins can manage and monitor customer, vendor, and rider accounts. This allows account verification, activity and transactions tracking.
- **Order Monitoring:** Real-time monitoring of all orders across the platform.
- **Metrics and Analytics:** Generate reports on sales, user activity and earnings.
- **Vendor and Rider Performance Tracking:** Admins can monitor ratings, feedback, and performance of vendors and riders.
- **Support and Issue Resolution:** Ability to manage customer support inquiries, resolve issues and receive general user feedback.

Non-Functional Requirements (For All Apps)

1. **Usability:** Each app should have a clean, user-friendly interface tailored to its audience (e.g., customer vs. vendor).
2. **Performance:** The system must handle multiple users across apps without delays, especially during peak hours.
3. **Reliability:** Ensures stable operation with minimal downtime, supporting all four apps continuously.
4. **Security:** Protects sensitive data like payment information and personal details; secure authentication and authorization for each app.
5. **Compatibility:** The apps should function seamlessly with Android and web platforms.
6. **Compliance:** Compliance with regulations related to payment processing, data privacy, and digital marketplaces.
7. **System Requirements**

Component	Desktop	Android
CPU	Intel Core i3 (2.5 GHz) or AMD A- 7000 series	MediaTek Helio G99
RAM	4 GB	4 GB
OS	Windows 7	Android 6
INTERNET	Broadband internet connection	Broadband internet connection

Table 1. System Requirements

Entity Relationship Diagram

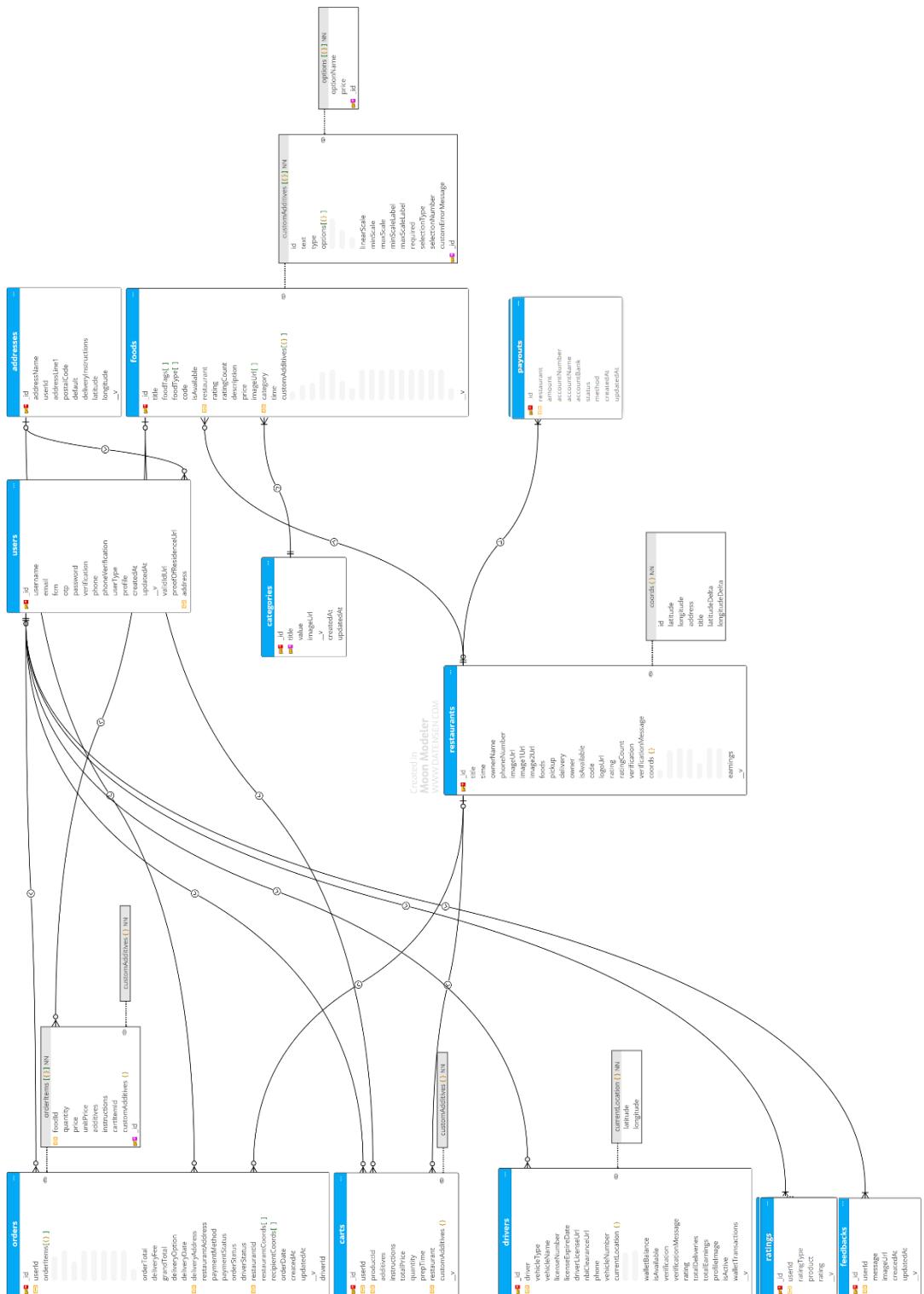


Figure 3. Entity Relationship Diagram

Diagrams

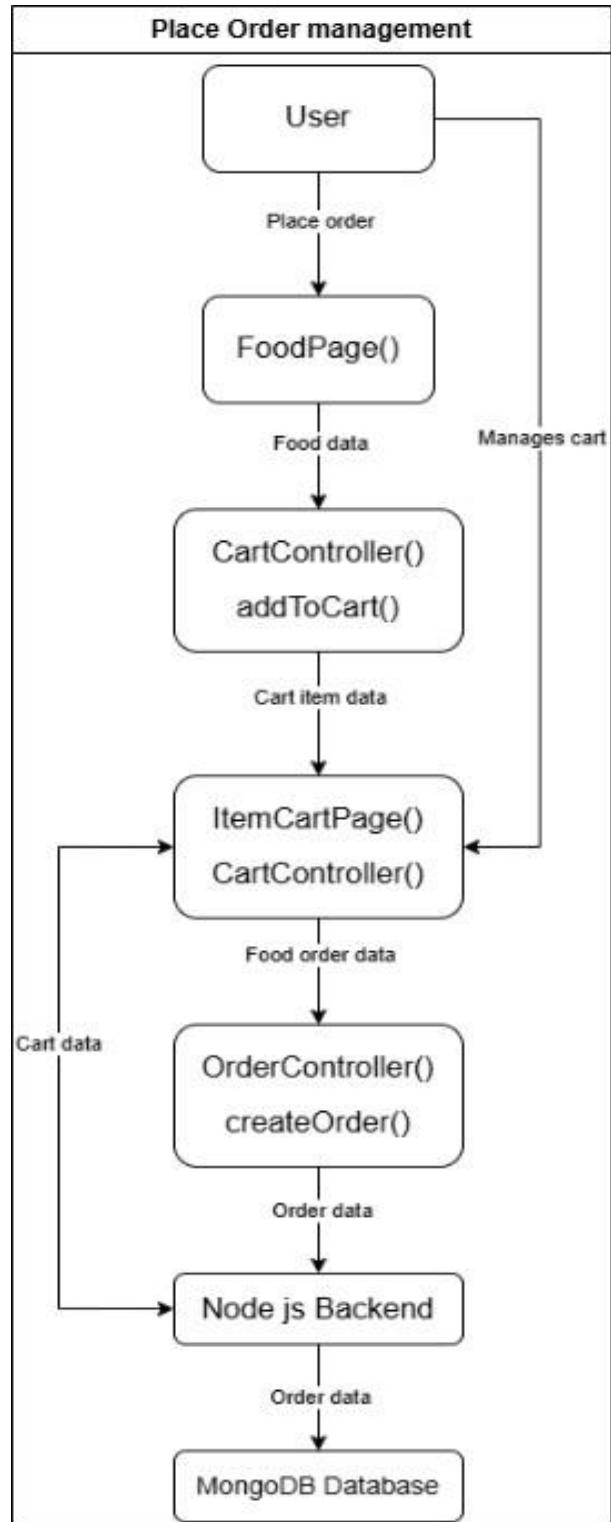


Figure 4. Dataflow Diagram for Order Placement Module

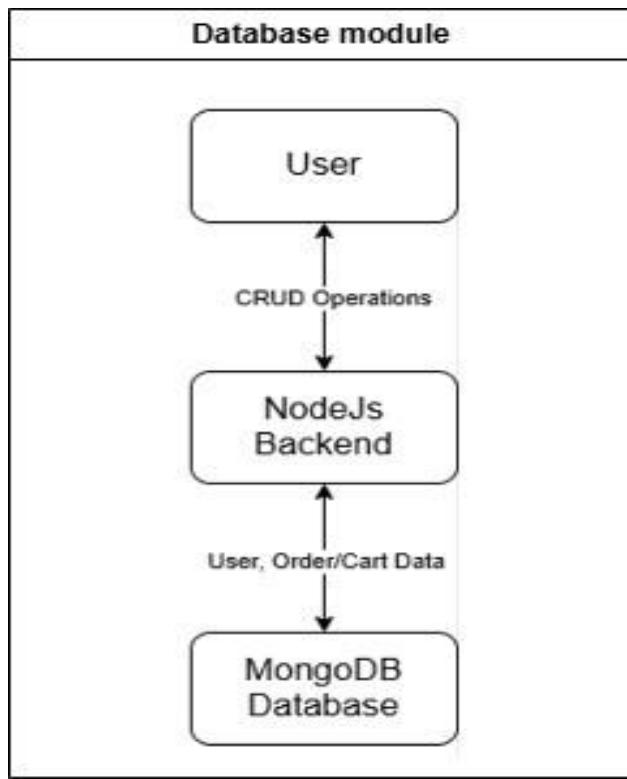


Figure 5. Dataflow Diagram for Database Operations

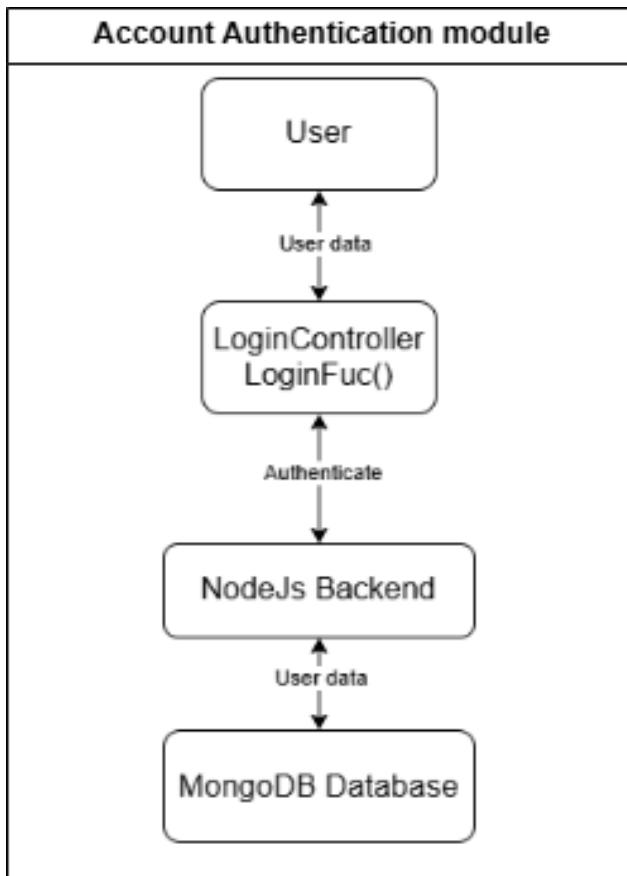


Figure 6. Dataflow Diagram for Account Authentication Module

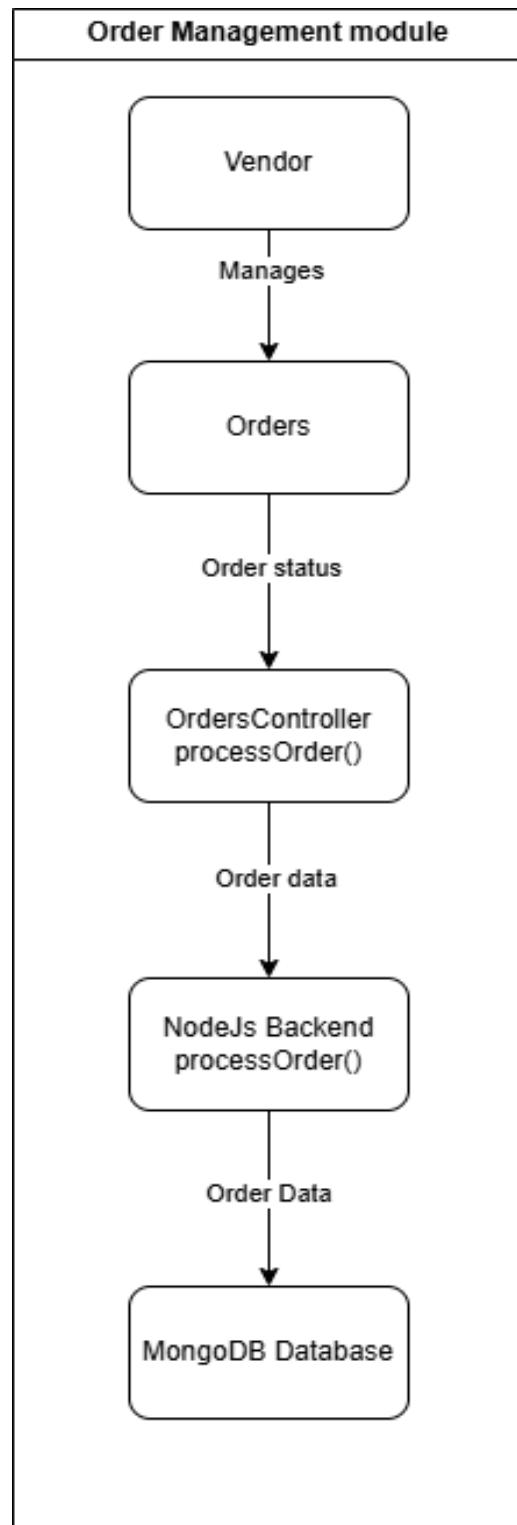


Figure 7. Dataflow Diagram for Vendor Order Management Module

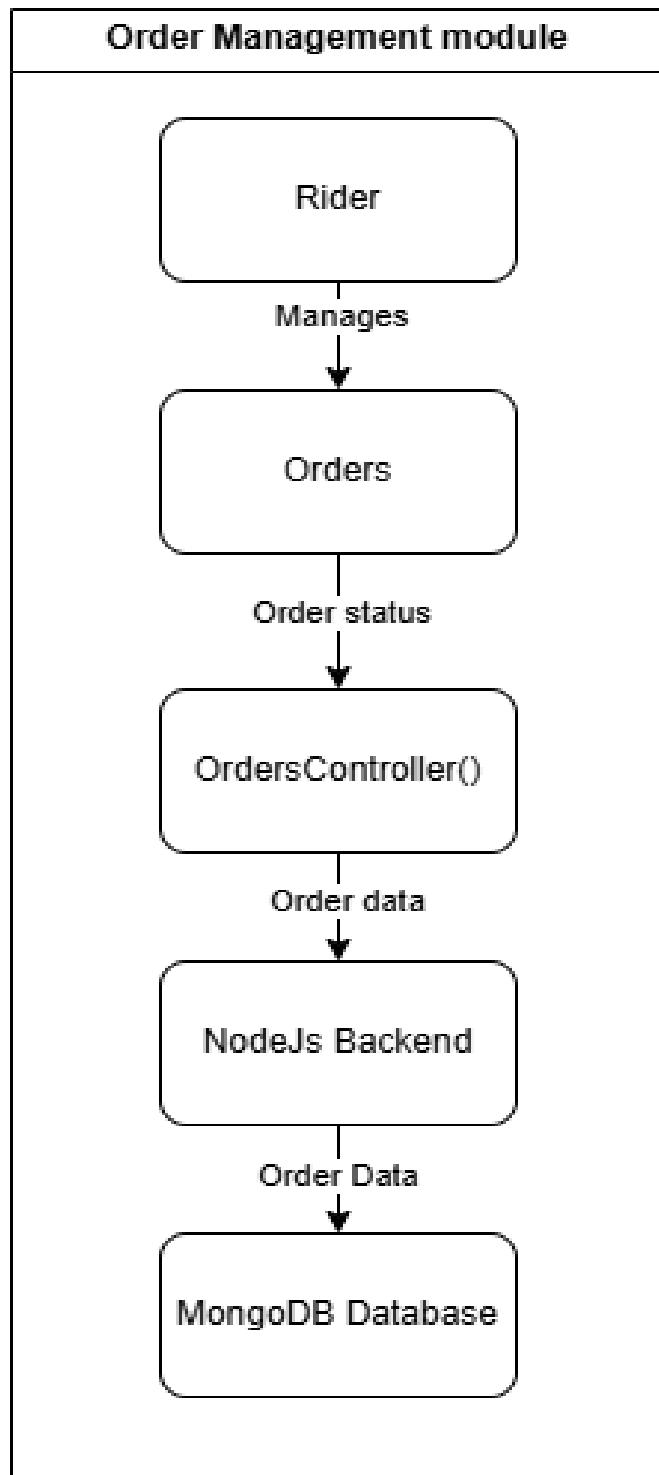


Figure 8. Dataflow Diagram for Rider Order Management Module

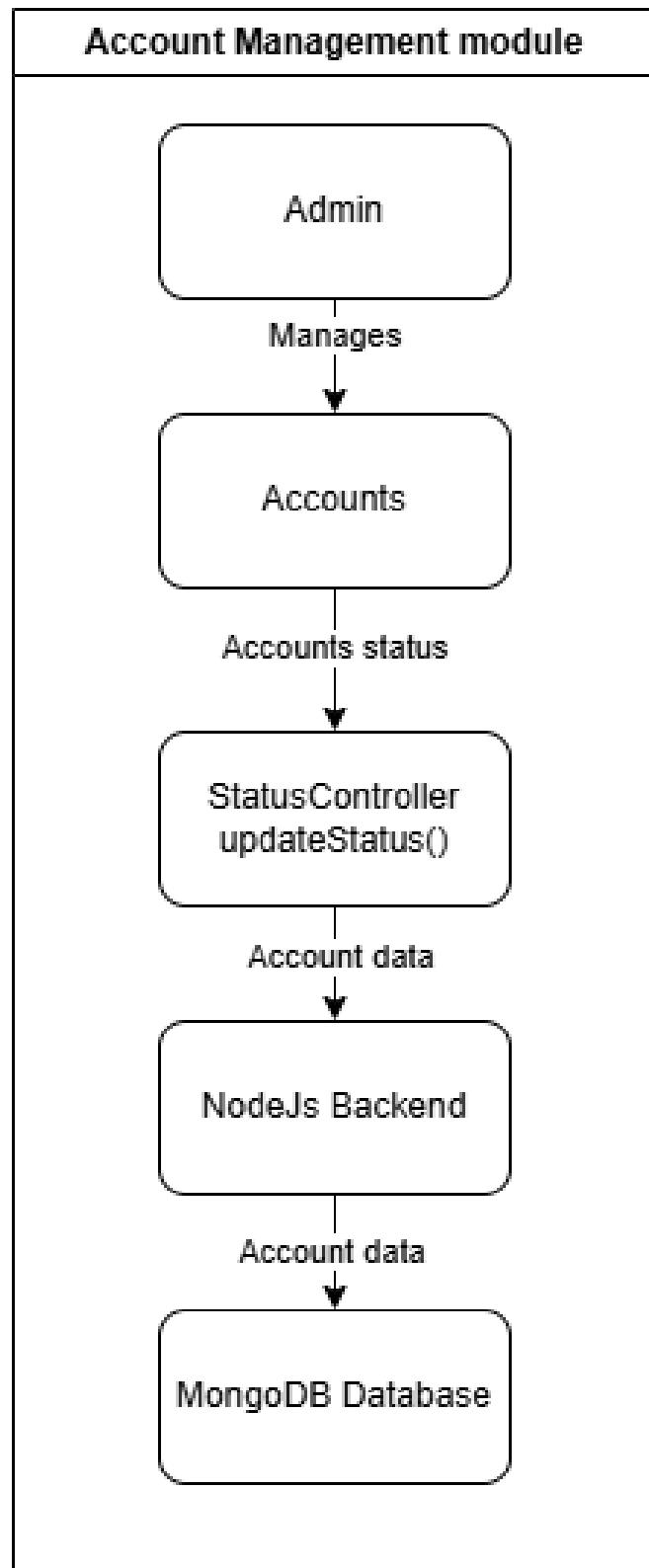


Figure 9. Dataflow Diagram for Admin Account Management

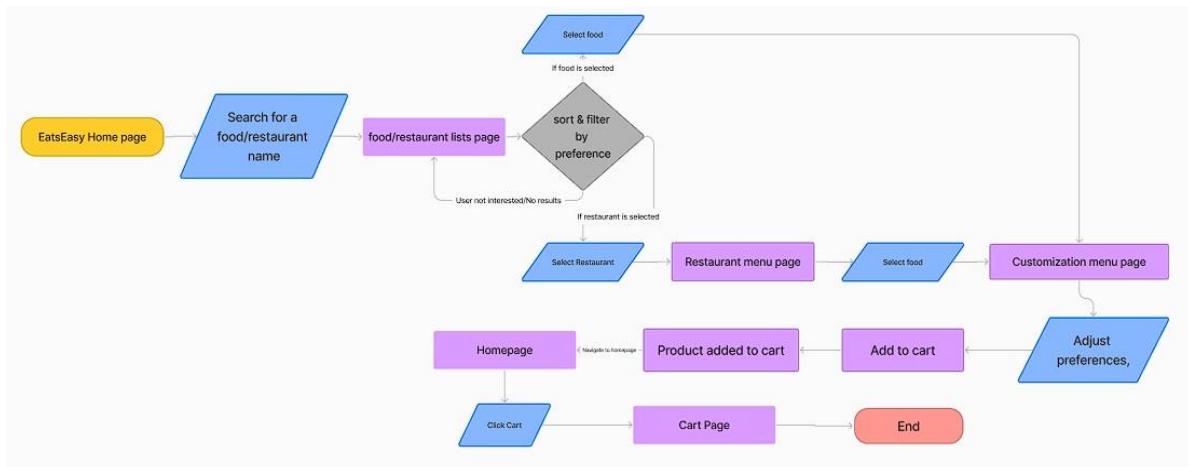


Figure 10. Flowchart for Adding Menu to cart

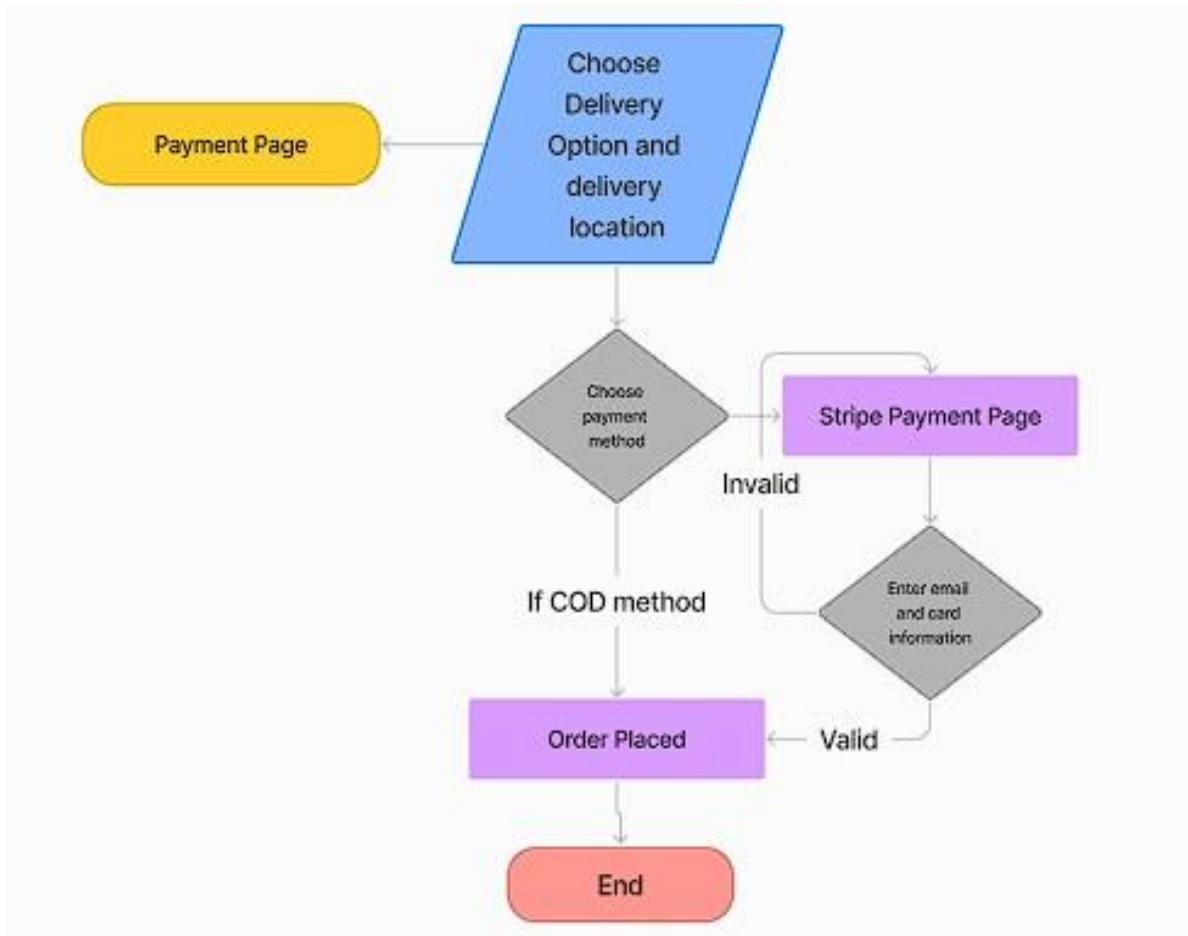
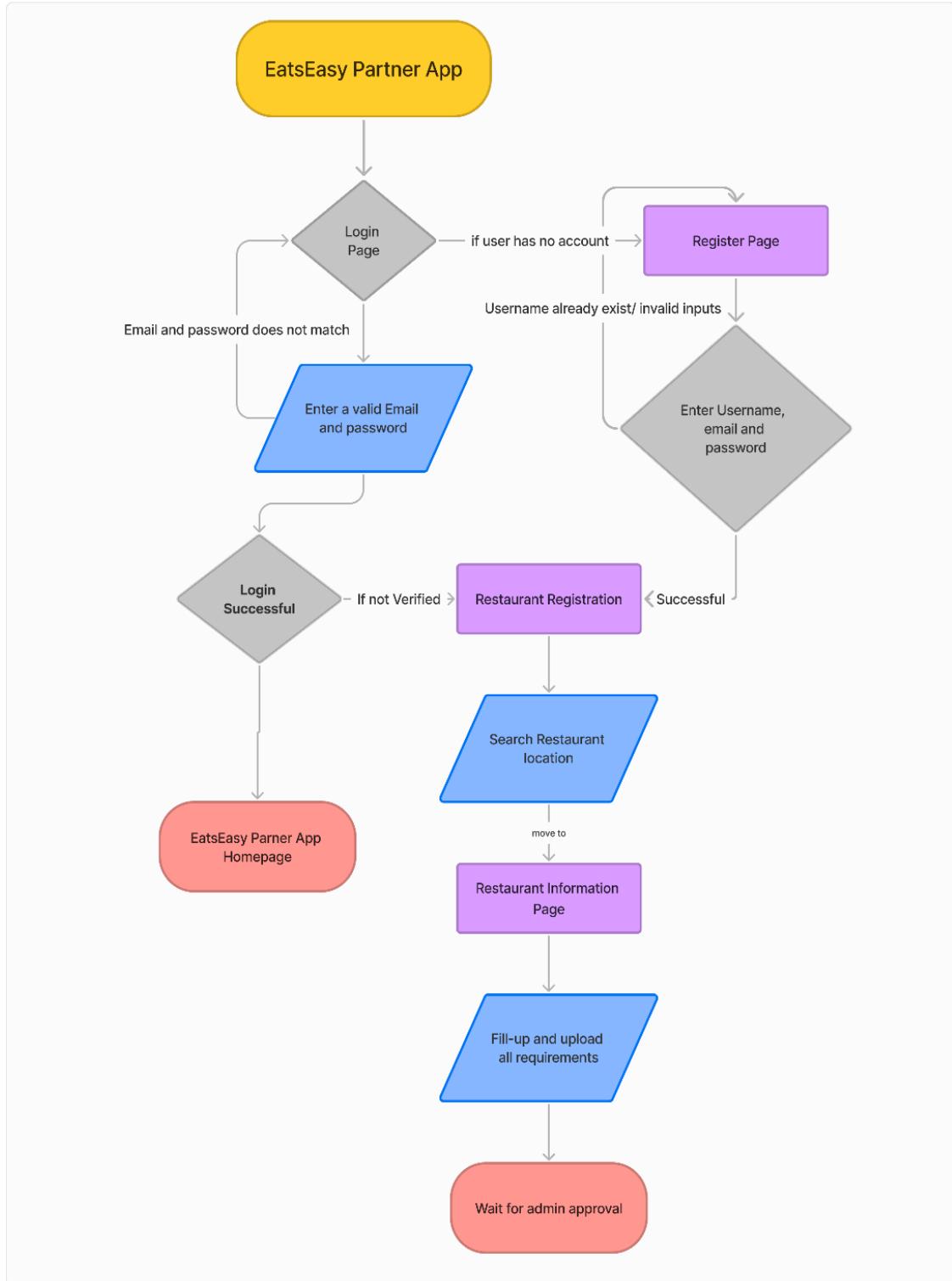


Figure 11. Flowchart for Order Payment

**Figure 12. Flowchart for Restaurant Login and Registration**

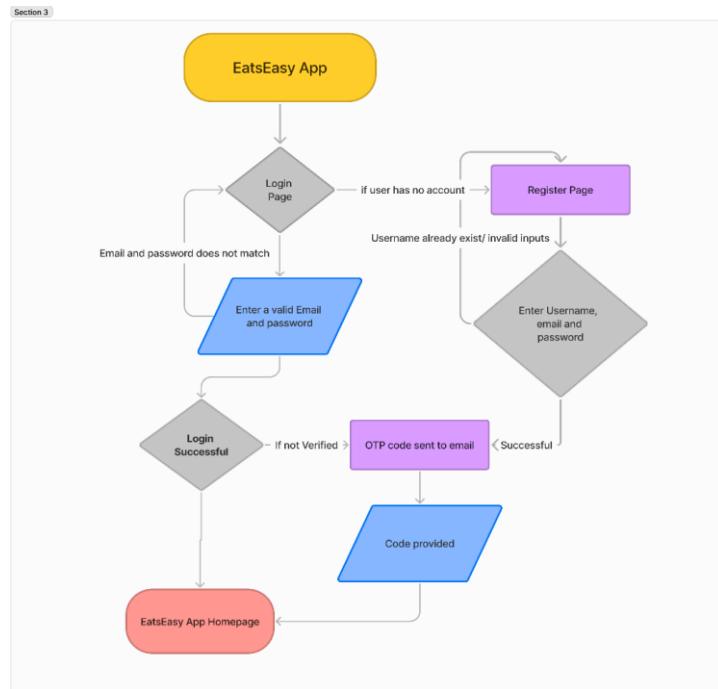


Figure 13. Flowchart for Customer Login Registration

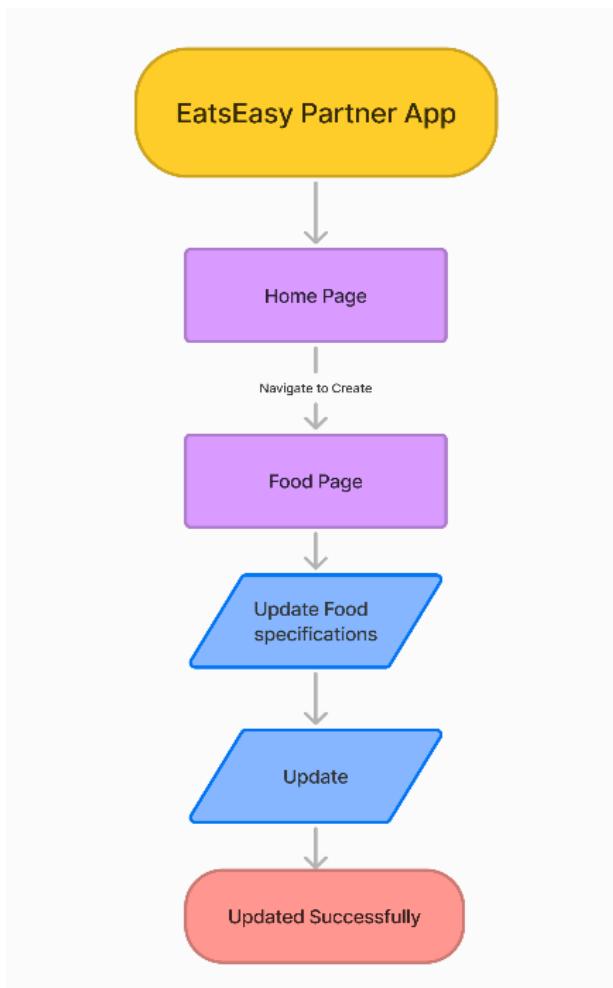


Figure 14. Flowchart for Updating Vendor Menu

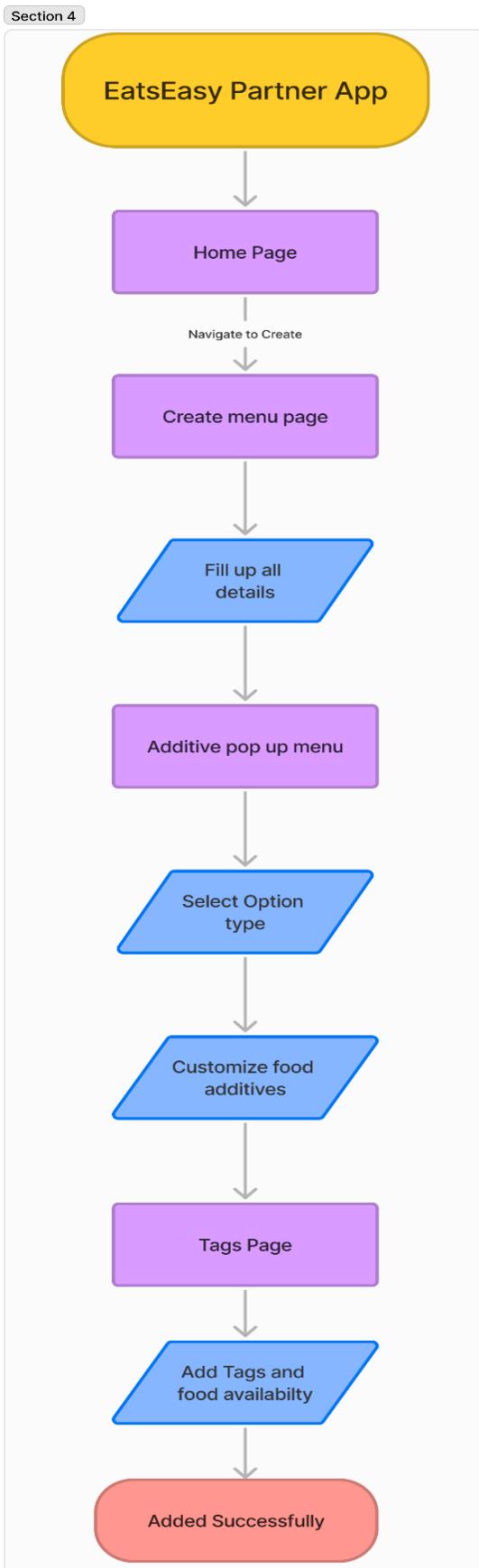


Figure 15. Flowchart for Creating Vendor Menu

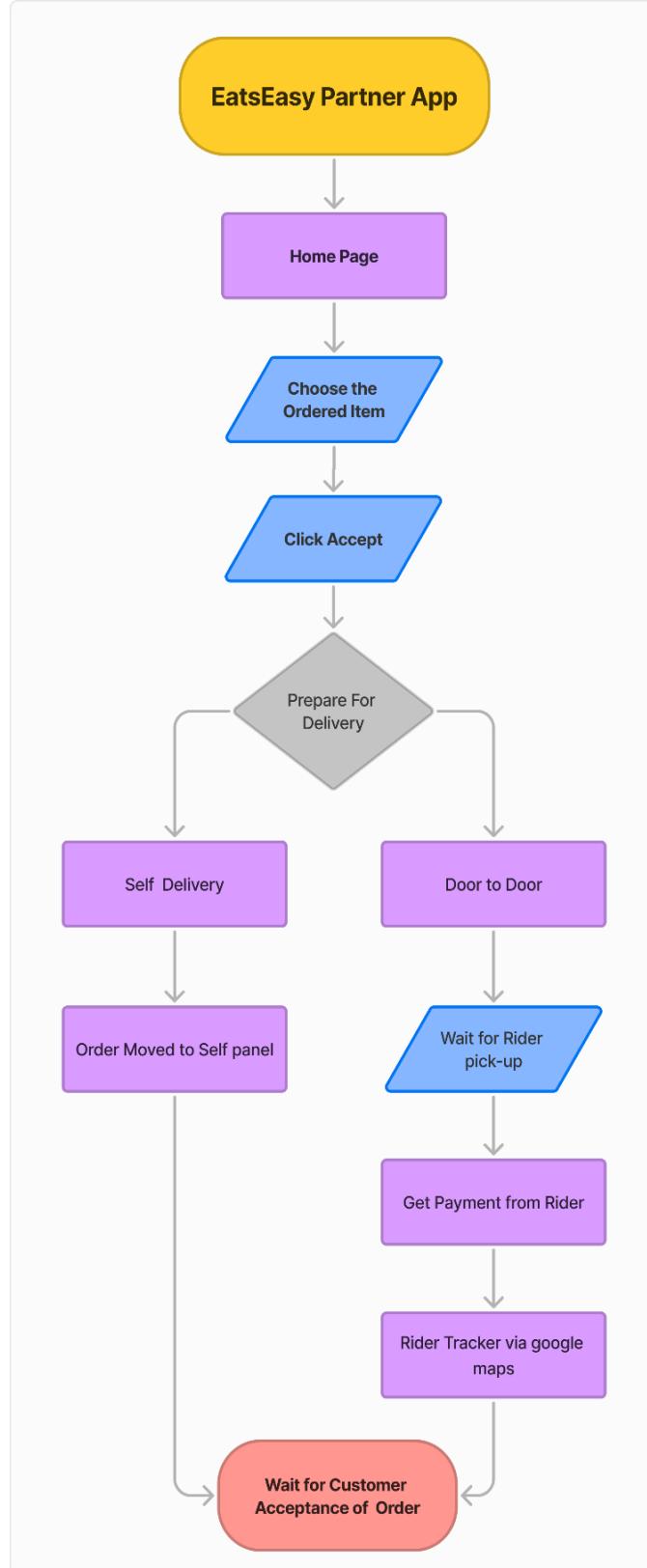


Figure 16. Flowchart for Vendor Order Management

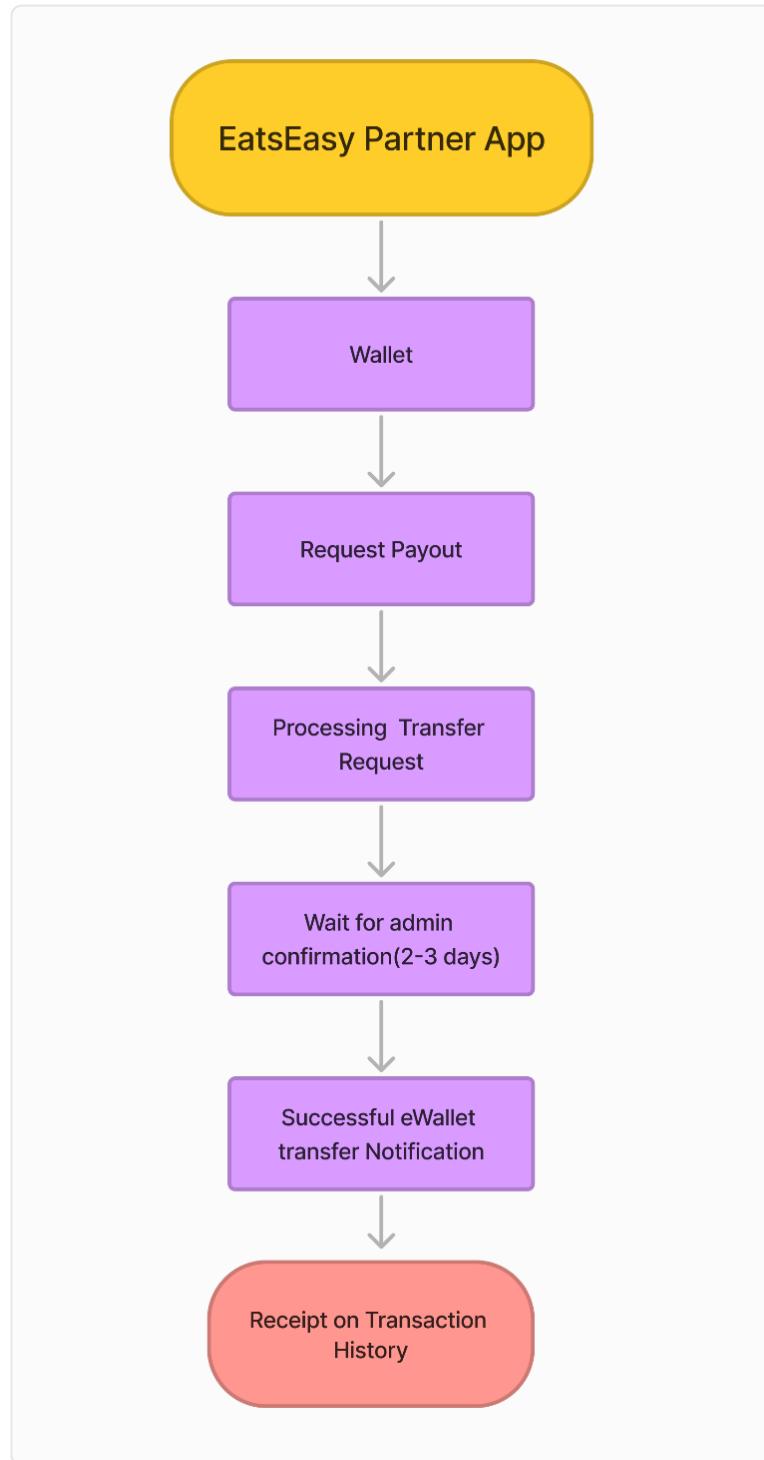


Figure 17. Flowchart for Vendor Pay-out Request

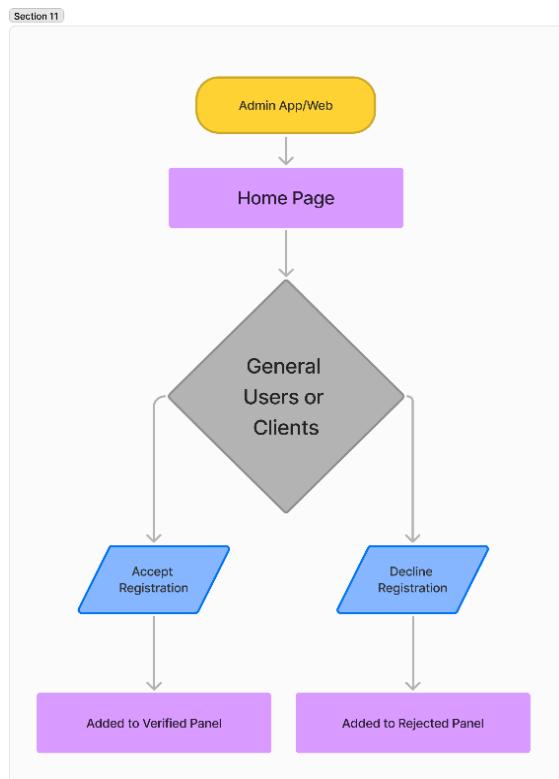


Figure 18. Flowchart for General User management

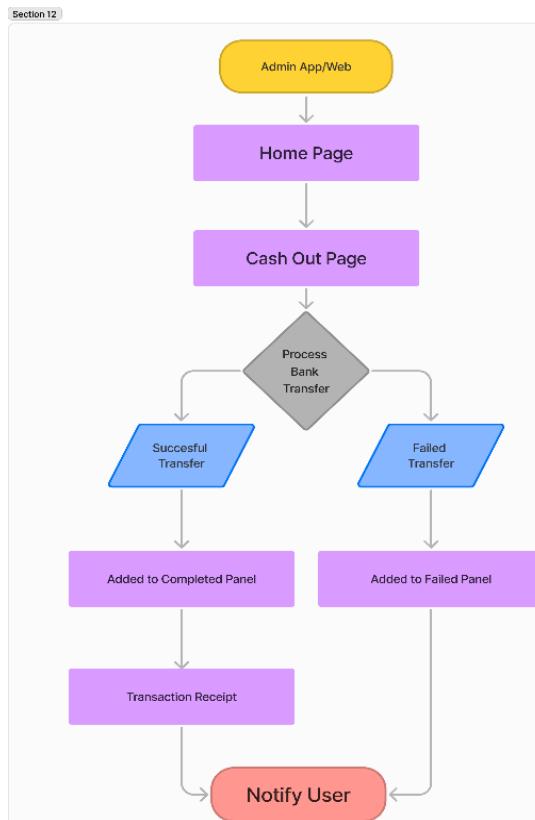
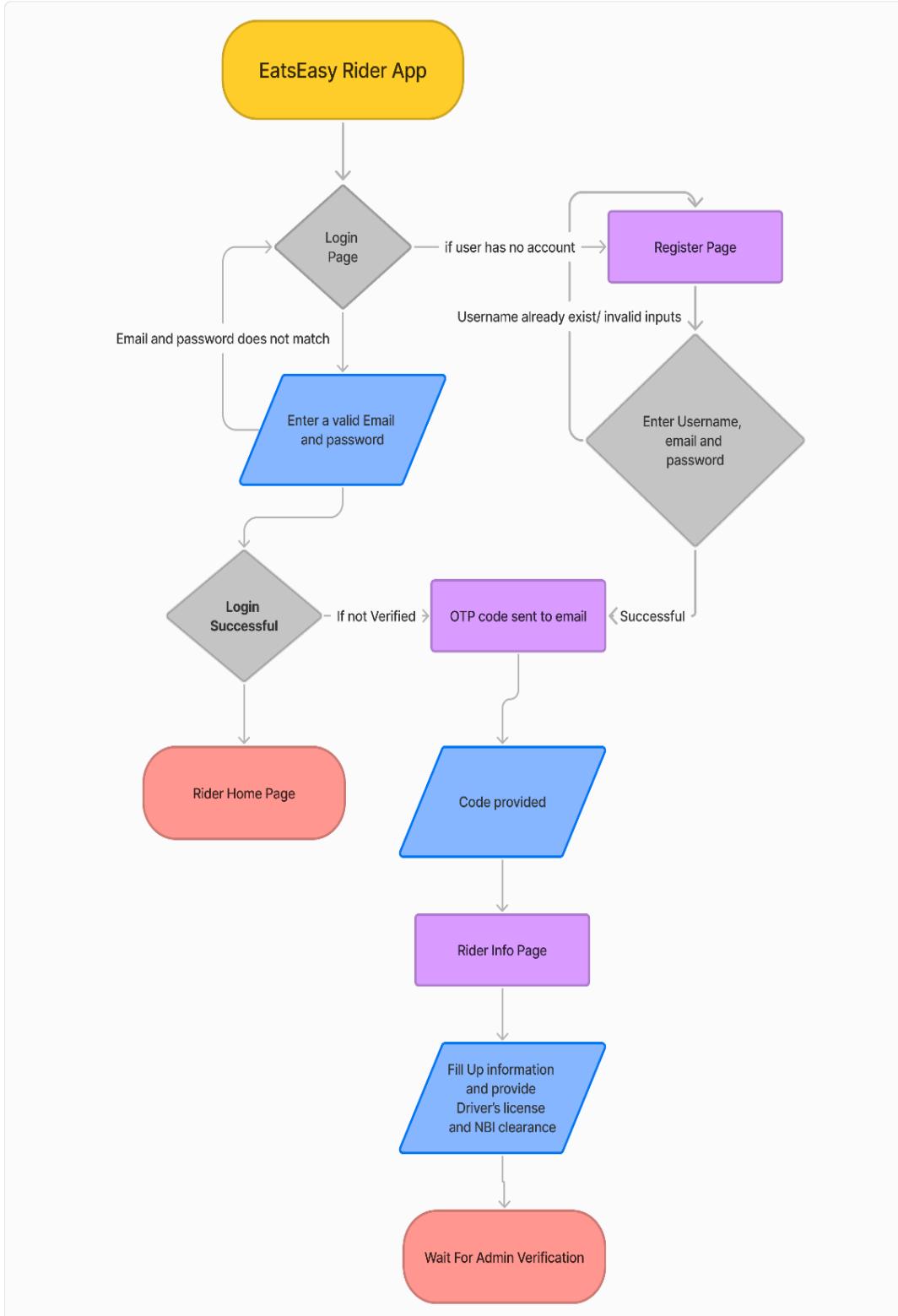


Figure 19. Flowchart for Cash-out Request Processing

**Figure 20. Flowchart for Rider Login and Registration**

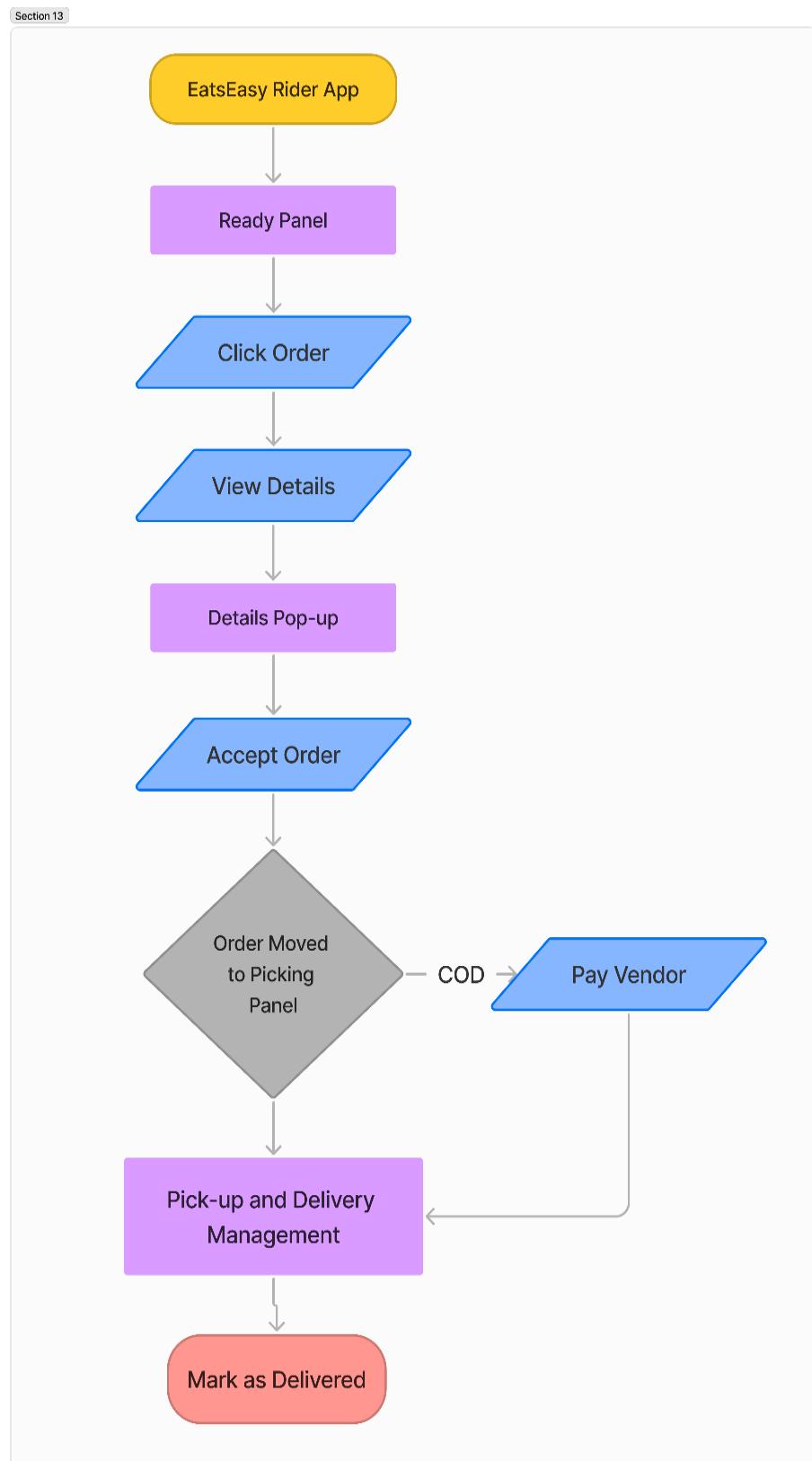


Figure 21. Flowchart for Rider Delivery Management

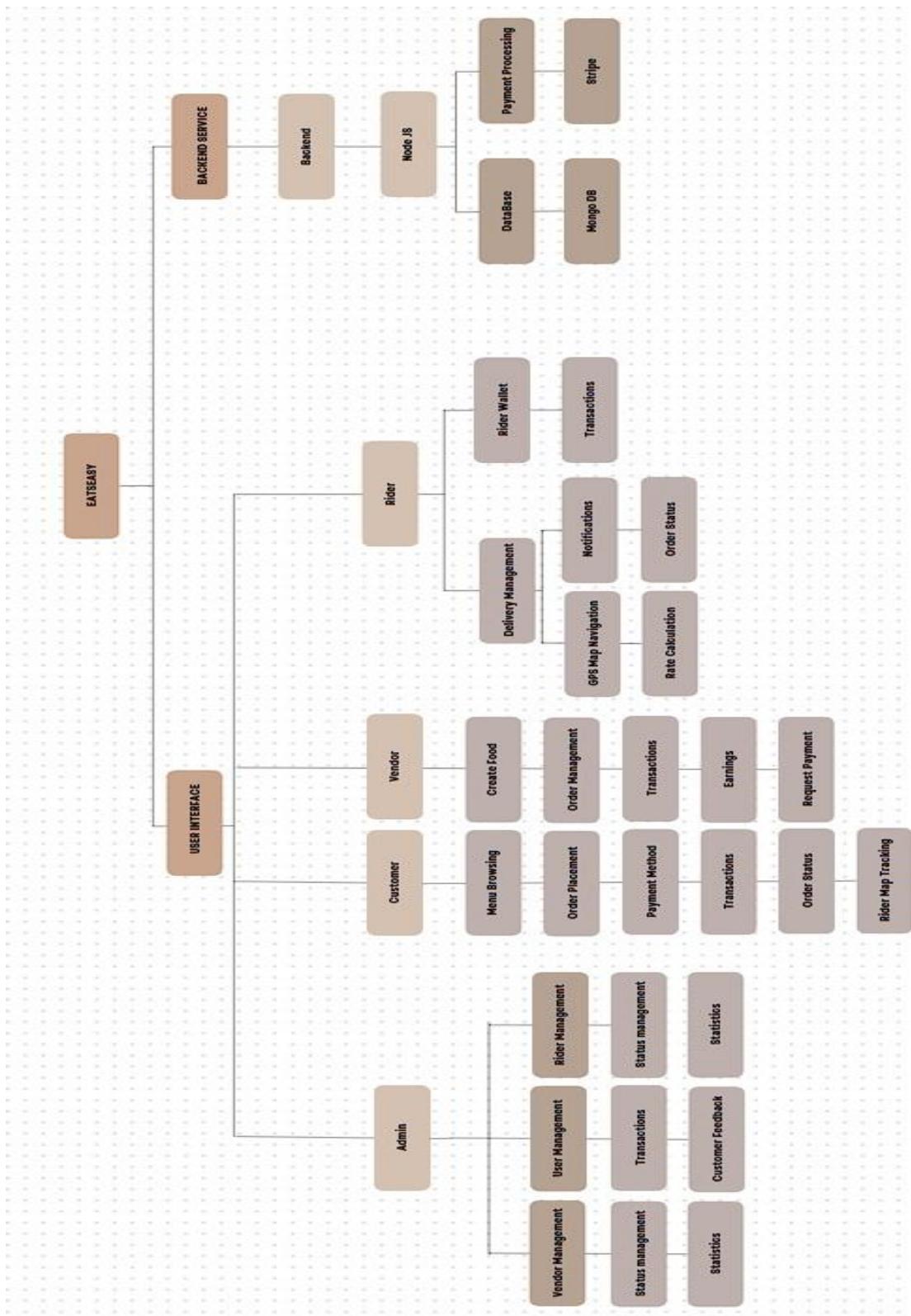


Figure 22. Hierarchical Diagram of EatsEasy

Hardware/Software

Table 2. Software Requirements

Software	Description
Android Studio	Android Studio is the primary integrated development environment (IDE) used for making this application, with its crafting powerful Android applications capabilities. It offers a comprehensive suite of tools tailored specifically for Android development, allowing to create, debug, and deploy applications efficiently.
Visual Studio Code	Is another code editor used in this application. With its streamlined code editor which support for development operations like debugging, task running, and version control. It aims to provide just the tools a developer needs for a quick code-build-debug cycle and leaves more complex workflows to fuller featured IDEs, such as Visual Studio IDE.
Flutter	It is a versatile and dynamic framework for building natively compiled applications across various platforms that are used in this application, including iOS, Android, web, and desktop, using a single codebase. It employs a reactive programming paradigm, allowing developers to create stunning and high-performance applications with a visually appealing user interface.
Dart	Is used in this application with the framework Flutter for building modern, high-performance applications. Known for its versatility, Dart is both object-oriented and optionally typed, offering developers flexibility in writing clean, scalable code.

Firebase	Is used for this application for its Google-powered platform offerings with various tools like authentication, real-time database, cloud storage, and analytics. It simplifies app development by providing scalable backend services, enabling developers to focus on creating engaging user experiences without managing complex infrastructure.
Google Chrome	The main browser used for this application. It is a free web browser used for accessing the internet and running web-based applications. The Google Chrome browser is based on the open-source Chromium web browser project.
Canva	Canva is used for graphic visualization in this application. It is an online graphic design platform used to create social media graphics and presentations.
Figma	It is a collaborative interface design tool that is used in this application that developers use to create, prototype, and iterate on designs in real-time. It operates entirely in the browser, enabling seamless collaboration among designers and stakeholders regardless of their location.

Table 3. Hardware Requirements

Laptop	
Unit/Component	Specs
CPU	7th Gen Intel(R) Core (TM) i5-7500H, 3100 Mhz, 4 Core(s), 6 Logical Processor(s)
RAM	8GB DDR4 3200MHz
STORAGE	Micron 3400 (512GB)
GPU	NVIDIA GeForce GTX 1050
Android device	
Unit/Component	Specs
ANDROID VERSION	Android 12
CPU	Exynos 9820 2.73 GHz
RAM	8GB
STORAGE	128GB

Calendar of Activities

Requirement Gathering

Conducting thesis research, documenting the thesis, and conducting surveys are all part of the requirements gathering process.

In the first week of September 2023, preliminary research for the thesis title, which has to be submitted and presented to the thesis coordinator and thesis adviser began.

The developers began by searching the campus library and internet for similar studies on any societal issues that they may address.

After the panelists approved the proposed title, the paperwork officially began in the last week of September 2023. As a result, the authors undertook extensive study for the chapters and subchapters. The first chapter was completed in the last week of October, commencing the second chapter, which was completed together with the third and last chapter of the documentation in the third week of November.

Design of the Requirement

In the second week of January 2024, the developers plan to have the blueprint, basic and high-end diagrams for the functioning and features of the system completed.

Development and Iteration

The developers anticipate producing and creating a series of iterations during the development process, which is scheduled to begin immediately once the developers have finalized the designs for the requirement. This is projected to occur beginning in the last week of February and lasting until the last week of June.

Testing

The system is expected to be tested for bugs and issues after the final iterations are completed. The testing phase is expected to begin concurrently with the development and iteration phases. As previously stated, this is scheduled to occur beginning in the first week of March and lasting until the second week of June.

Deployment

The system's target device and machine version is planned to be implemented in the second week of June.

Review and Feedback

The developers anticipate receiving user input and making required improvements in the weeks after the system's deployment. The developers will then address any faults or difficulties that were not discovered during the development cycle's testing phase.

Data Gathering Procedure

The developers of this project used Convenience Sampling as its sampling method for data gathering. Convenience Sampling is a non-probability sampling procedure where respondents are selected based on their ease of access and proximity to the researchers. This method involves surveying readily available individuals. All respondents should also meet these criteria; For the customer survey, those who already used the EatsEasy app and used similar applications like Grab and FoodPanda, while for the Vendor Survey, they must be a Food Vendor who have already used the EatsEasy Vendor App.

Statistical Treatment of Data

The researchers used the weighted average formula to process the gathered data and to reach an objective conclusion. The weighted average formula is as follows:

$$\text{Weighted Average} = \frac{\sum wx}{\sum w}$$

Where:

- x = is the frequency (number of responses) for each rating.
- w = is the weight of each rating (1, 2, 3, 4, 5).

$$\text{Percentage} = \frac{x}{n} \cdot 100$$

Where:

- x = the frequency (number of responses) for each rating.
- n = the total number of respondents.

$$\text{Slovin's Formula} = \frac{N}{1 + Ne^2}$$

Where:

- N = is the population size.
- e = margin of error

RESULTS AND DISCUSSIONS

Overview of the results

The proponents of this study conducted a survey to analyze the functionalities of the EatsEasy app. This includes 50 participants divided into 2 groups, 25 general users of EatsEasy food ordering system and 25 vendors of the EatsEasy Vendor/Partner app. The goal of this survey is to assess whether the EatsEasy app has met its goals of being a user-friendly food ordering application, an accessible and affordable food selling platform for small vendors along with an effective customization feature for menu ordering.

Table 4. Mean Range Interpretation Legend

Mean Range	Interpretation
4.21 - 5.00	Very Satisfied/Excellent
3.41 - 4.20	Satisfied/Good
2.61 - 3.40	Neutral/Fair
1.81 - 2.60	Unsatisfied/Poor
1.00 - 1.80	Very Unsatisfied/Very Poor

Customer Feedback

Metric	Very Easy	Easy	Neutral	Difficult	Very Difficult
Percentage	56	40	4	0	0
Rank	1	2	3	4	4
Standard Deviation			0.65		
Weighted mean			4.22		

Table 5. How easy was it to navigate the EatsEasy app?

Table 5 shows that 56% of the customer respondents agree to find the app very easy to navigate while 40% respondents find it easy. Only 1 respondent has returned with neutral opinion which counts as the remaining 4%. The calculated mean score is approximately 4.22.

Metric	Very Easy	Easy	Neutral	Difficult	Very Difficult
Percentage	52	44	4	0	0
Rank	1	2	3	4	4
Standard Deviation			0.65		
Weighted mean			4.18		

Table 6. Did you find it easy to customize your food order?

Table 6 shows that 52% of the customer respondents find that it is very easy to customize menus while 44% of respondents find it easy. Only 1 respondent has returned with neutral opinion which counts as the remaining 6%. The calculated mean score is approximately 4.18.

Metric	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied
Percentage	36	64	0	0	0
Rank	2	1	3	3	3
Standard Deviation			0.58		
Weighted mean			4.31		

Table 7. How satisfied are you with the selection and presentation of menu items in the app?

Table 7 shows that 64% of the respondents are very satisfied with the presentation of menu items in the app while 36% returned with a satisfied opinion. The calculated mean score is approximately 4.31.

Metric	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied
Percentage	56	40	4	0	0
Rank	1	2	3	4	4
Standard Deviation			0.65		
Weighted mean			4.22		

Table 8. How would you rate your experience with placing an order?

Table 8 shows that 56% of the respondents are very satisfied with the process of placing an order on the platform whereas 40% are satisfied. The remaining 4% returned a neutral opinion. The calculated mean score is approximately 4.22.

Metric	Excellent	Good	Neutral	Poor	Very Poor
Percentage	44	40	16	0	0
Rank	1	2	3	4	4
Standard Deviation			0.75		
Weighted mean			4.08		

Table 9. How do you rate the overall process of ordering food in EatsEasy compared to other Online Food Ordering systems? (i.e., Grabfood, FoodPanda)

Table 9 shows that 44% of respondents find the app excellent compared to other similar platforms. 40% of respondents find it good enough while 16% returned with a neutral opinion. The calculated mean score is approximately 4.08.

Metric	Strongly Agree	Agree	Neutral	Disagree	Very Disagree
Percentage	60	40	0	0	0
Rank	1	2	3	3	3
Standard Deviation			0.49		
Weighted mean			4.6		

Table 10. Do you agree that the customization feature of EatsEasy is very flexible and can suit a more tailored meal for customers?

In this table, 60% strongly agreed that the EatsEasy customization feature is very flexible while 40% responded with agreed. This achieved a mean score of 4.6.

Metric	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Percentage	68	32	0	0	0
Rank	1	2	3	3	3
Standard Deviation			0.47		
Weighted mean			4.68		

Table 11. The EatsEasy app is very responsive and smooth when it comes to user feedback?

The table shows that, 68% strongly agreed that the EatsEasy app is smooth when it comes to user feedback, while 32% responded with agreed. This achieved a mean score of 4.68

Metric	Very Useful	Useful	Neutral	Unuseful	Very Unuseful
Percentage	60	40	0	0	0
Rank	1	2	3	3	3
Standard Deviation			0.49		
Weighted mean			4.6		

Table 12. How useful do you find the rating and review feature for making order decisions?

The result shows that 60% of the respondents find the review feature very useful while 40% find it to be useful. This scores a mean of 4.6.

Metric	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Percentage	72	24	4	0	0
Rank	1	2	3	4	4
Standard Deviation			0.56		
Weighted mean			4.56		

Table 13. The overall UI design of the EatsEasy app is very appealing.

In this table, 72% of the respondents strongly agrees that the overall UI design of the EatsEasy app appealing whereas 24% agrees. The remaining 4% returned with a neutral opinion. The mean is 4.56.

Metric	Very Likely	Likely	Neutral	Unlikely	Very Unlikely
Percentage	72	28	0	0	0
Rank	1	2	3	3	3
Standard Deviation			0.45		
Weighted mean			4.72		

Table 14. How likely are you to recommend EatsEasy to others based on your

In this table, 72% of the respondents are very likely to recommend the EatsEasy platform to others while the 28% of the remaining responded answered with a likely, the computed mean is 4.72.

Vendor Survey Results

Metric	Very Easy	Easy	Neutral	Difficult	Very Difficult
Percentage	60	32	8	0	0
Rank	1	2	3	4	4
Standard Deviation			0.64		
Weighted mean			4.44		

Table 15. How easy was it to set up your menu and business information on EatsEasy?

This table shows that 60% of the vendors find it very easy to set up their business information and menu in the platform whereas 32% find it to be easy enough. The remaining 8% returned a neutral opinion. The results scored a mean of 4.44.

Metric	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied
Percentage	52	40	8	0	0
Rank	1	2	3	4	4
Standard Deviation			0.64		
Weighted mean			4.44		

Table 16. How satisfied are you with the app's functionality for updating your menu items and prices?

This table shows that 52% of the vendor respondents are very satisfied with the menu update functionality of the vendor app. 40% of the respondents are satisfied while the remaining 8% returned with a neutral response. The mean achieved a score of 4.44.

Metric	Very Easy	Easy	Neutral	Difficult	Very Difficult
Percentage	60	32	8	0	0
Rank	1	2	3	4	4
Standard Deviation	0.56				
Weighted mean	4.48				

Table 17. Did you find it easy to customize your food menu?

This table shows that 52% of the vendor respondents find their menus very easy to customize in the platform. 44% of the respondents find it easy while the remaining 4% returned with a neutral response. The results achieved a score of 4.48.

Metric	Excellent	Good	Neutral	Poor	Very Poor
Percentage	52	48	0	0	0
Rank	1	2	3	3	3
Standard Deviation	0.62				
Weighted mean	4.88				

Table 18. How would you rate your experience with placing an order?

This table shows that 52% of the vendors had an excellent experience with the order placing process of the Vendor App while 48% responded with a good experience. The results scored a mean of 4.88

Metric	Very Accurate	Accurate	Neutral	Inaccurate	Very Inaccurate
Percentage	48	40	12	0	0
Rank	1	2	3	4	4
Standard Deviation			0.64		
Weighted mean			4.44		

Table 19. Did the order tracking feature provide a timely and accurate update on your order status?

This table shows that 48% of the vendors find the tracking feature very accurate and timely while 40% responded with accurate. The remaining 12% has a neutral opinion about the tracking feature. The results scored a mean of 4.44

Metric	Excellent	Good	Neutral	Poor	Very Poor
Percentage	48	44	8	0	0
Rank	1	2	3	4	4
Standard Deviation			0.58		
Weighted mean			4.4		

Table 20. How would you rate the visual appeal and UI design of the EatsEasy Vendors app?

This table shows that 48% of the vendors had an excellent rating with the UI design and the visual appeal of the Vendor App while 44% rate the appeal to be good whereas 8% of vendors had a neutral rating. The results scored a mean of 4.4.

Metric	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied
Percentage	60	40	0	0	0
Rank	1	2	3	3	3
Standard Deviation			0.49		
Weighted mean			4.6		

Table 21. How satisfied are you with the commission fees charged by EatsEasy compared to other food delivery platforms?

The results showed that 60% of the food vendors are very satisfied with the lower commission cost of EatsEasy compared to other similar platforms while 40% responded with satisfied. The results scored a mean of 4.6.

Metric	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Percentage	48	44	8	0	0
Rank	1	2	3	4	4
Standard Deviation			0.58		
Weighted mean			4.4		

Table 22. Is the app smooth and responsive overall?

This table shows that 48% of the vendors strongly agrees that the Vendor App is smooth and responsive while 44% responded with an agree, whereas 8% of vendors had a neutral rating. The results scored a mean of 4.4.

Metric	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Percentage	68	32	0	0	0
Rank	1	2	3	3	3
Standard Deviation			0.47		
Weighted mean			4.68		

Table 23. Do you agree that the menu customization feature of EatsEasy Vendor App is very flexible and dynamic?

This table shows that majority of the respondents (68%) strongly agrees that the customization feature of the EatsEasy vendor platform is very flexible and dynamic. The remaining 32% responded with an agree. The mean is approximately 4.68.

Metric	Very Likely	Likely	Neutral	Unlikely	Very Unlikely
Percentage	60	40	0	0	0
Rank	1	2	3	3	3
Standard Deviation			0.49		
Weighted mean			4.6		

Table 24. How Likely are you to continue using EatsEasy as a vendor and recommend it to others?

The table reveals that 60% of the vendors are very likely to continue and recommend using the Vendor app while 40% of the respondents are likely to continue and recommend this platform. The results scored a mean of 4.6

CONCLUSION

Conclusion

Based on the survey findings regarding the EatsEasy's effectiveness, design and overall functionality for both the apps (User version and Vendor Version), most of the respondents has given an above neutral ratings with regards to the customization feature, ease of use, and the overall process of food ordering on the platform. EatsEasy's goals are to provide an accessible, affordable and easy to use platform for small food vendors and a customization feature to deliver more diverse and flexible selections to tailor customers' preferences without compromising the user-friendliness of the app. The findings made it clear that EatsEasy is a great food ordering platform for small food businesses and users who prefer ordering food online.

The majority of respondents (92-96%) agree that EatsEasy platform (Vendor and User) is user-friendly. The results have consistently shown high ratings (4 and 5) with regard to its ease of use and overall functionality. The Customization Feature has proven to be a great way for vendors to tailor their menu the same way it allows customers to have more diverse food selections. 100% of the vendor respondents are pleased with the lower commission cost of the EatsEasy Vendor App, which suggests greater accessibility compared to other similar platforms.

The proponents of this study recommend the EatsEasy Vendor app to small food businesses that want a more affordable and accessible online food ordering platform to enhance their business exposure and marketability to the public. The EatsEasy Customer app is also recommended by its developers to foodies that seek a more diverse food selection.

Expert Feedback

EatsEasy was reviewed by IT experts to assess its functionality and accessibility, especially for small vendors. Feedback from a survey of vendors and customers revealed high satisfaction with the app's design and ease of use, with 96% of users finding it intuitive and easy to navigate. Small vendors praised the platform's lower commission rates, which are more affordable than major competitors, supporting their profitability while reaching new customers. The app's standout customization feature

allows customers to tailor meals effortlessly, and vendors appreciated the flexibility to adapt menu offerings. Additionally, EatsEasy's cross-platform support for Android and web access enhances user accessibility. Vendors highlighted the app's secure payment options, real-time order tracking, and order management tools as highly valuable for a streamlined and reliable experience. In conclusion, EatsEasy effectively meets user needs as an affordable and flexible solution for small food vendors, with experts recommending future additions like promotional tools and expanded payment options to strengthen its position in the competitive food delivery market.

Recommendations

For future researchers, the developers of EatsEasy recommends examining the app and similar platforms to improve its functionalities and features such as creating a promotional feature for all its general users (user, vendor, rider) like discount promotions for special occasions, rider and vendor incentives to attract more potential users of the platform. Implementing real analytics and metrics for the Vendor app is a very notable recommendation by the developers as this feature can further help and guide the business growth of the small food businesses. Increasing platform compatibility along with payment options can also enhance EatsEasy's accessibility as a prominent e-Wallet system here in these geographical settings like Gcash are not integrated into the EatsEasy platform due to feasibility issues.

REFERENCES

- Grab. (n.d.). Food delivery in the Philippines. Grab. Retrieved December 20, 2023, from <https://www.grab.com/ph/food/>
- Foodpanda. (n.d.). In Wikipedia. Retrieved December 20, 2023, from <https://en.wikipedia.org/wiki/Foodpanda>
- Josue, N. L., Borres, R. D., Yapo, C. M. P., & Canlas, K. J. B. (2021). Factors affecting the efficiency of online food deliveries: A comparative analysis among GrabFood, Foodpanda, and Zomato Ph12. Proceedings of the International Conference on Industrial Engineering and Operations Management, 1853-1863. Retrieved from <https://ieomsociety.org/proceedings/2021rome/633.pdf?fbclid=IwAR07tH8IF8ixFOfNCcl2imliqJWoFI9vB0g-moUNG8xBSqMxSEKSGSTWKis>
- Bonfanti, A., Rossato, C., Vigolo, V., & Vargas-Sánchez, A. (2023). Improving online food ordering and delivery service quality by managing customer expectations: evidence from Italy. British Food Journal, 125(13), 164-182. <https://doi.org/10.1108/BFJ-08-2022-0694>
- CHETAN PANSE, D. S. R., SHARMA, A., & DORJI, N. (2019). Understanding consumer behavior towards utilization of online food delivery Platforms. Journal of Theoretical and Applied Information Technology, 97(16).
- Loomba, N. (n.d.). Food customization has become a prevalent trend. Here is our brief guide that will help you to prepare your restaurant to meet the food customization trend. RestroApp. Retrieved from <https://restroapp.com/blog/food-customization-has-become-a-prevalent-trend-here-is-our-brief-guide-that-will-help-you-to-prepare-your-restaurant-to-meet-the-food-customization-trend/>
- Leong, W. H. (2016). Food ordering system using mobile phone (Bachelor's thesis, University Tunku Abdul Rahman). Retrieved from <http://eprints.utar.edu.my/1943/1/IA-2016-1203135-1.pdf>

Garcia, A. J., Agron, D. J., & Lim, W. (2018). Android application in food ordering system1. ARPN Journal of Engineering and Applied Sciences, 13(12), 3988-3993.
https://www.arpnjournals.org/jeas/research_papers/rp_2018/jeas_0618_7159.pdf

Bare, M. A. D., Castro, F. M. F., Dahilig, J. A. V., Quimio, J. L. G., & Borres, R. D. (2021). A comparison of food delivery applications (GrabFood, FoodPanda, and Pick.A.Roo) in the Philippines through utilization of analytical hierarchy process. School of Industrial and Engineering Management, Mapúa University. Retrieved from <http://ieomsociety.org/proceedings/2021rome/644.pdf>

Ribeiro, C. (2018). Technology at the table: An overview of Food Delivery Apps. Retrieved from https://repositorio.ucp.pt/bitstream/10400.14/26991/1/Thesis_PDFA_CatrinaJardimRibeiro.pdf

Perry, E. (2022, July 20). What is agile methodology and how does it function? BetterUp.

Retrieved from <https://www.betterup.com/blog/agile-methodology>

APPENDICES

APPENDIX A.
GANTT CHART

Gantt chart of Activities

Table 25. Gantt Chart

MONTH	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
ACTIVITY										
+System Planning										
+Preparation										
-Member Roles										
Delegation										
-Title Proposal										
-Adviser Consultations										
-Brainstorming/Meeting										
+Project Documentation										
+Chapter 1										
-Drafting										
-Revision										
-Survey										
-Final Compilation										
+Chapter 2										
-Drafting										
-Revision										
-Final Compilation										
+Chapter 3										
-Drafting										
-Revision										
-Final Compilation										

MONTH	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
ACTIVITY										
+Testing	Yellow	Yellow	Yellow	Blue						
-Bug Hunting	Yellow	Yellow	Yellow							
+Deployment										
-Code Compilation										
-System Deployment										
+Review and Feedback									Yellow	Blue
-User Feedback Collection										
-Bug Fixes								Yellow	Yellow	Blue

APPENDIX B.
ACTUAL THESIS EXPENSES

Table 26. Thesis Expense

Term	Product	Amount
1 yr	.ONLINE Domain Registration	₱900.89
	eatseasy.online ¹	
	Subtotal	₱900.89
	Taxes	₱25.10
	Fees	₱75.34
	Total (PHP)	₱1000.33

REFERENCE

Taxes	₱0.00
GoDaddy.com, LLC 2155 E GoDaddy Way, Tempe, Arizona 85284, United States	₱0.00

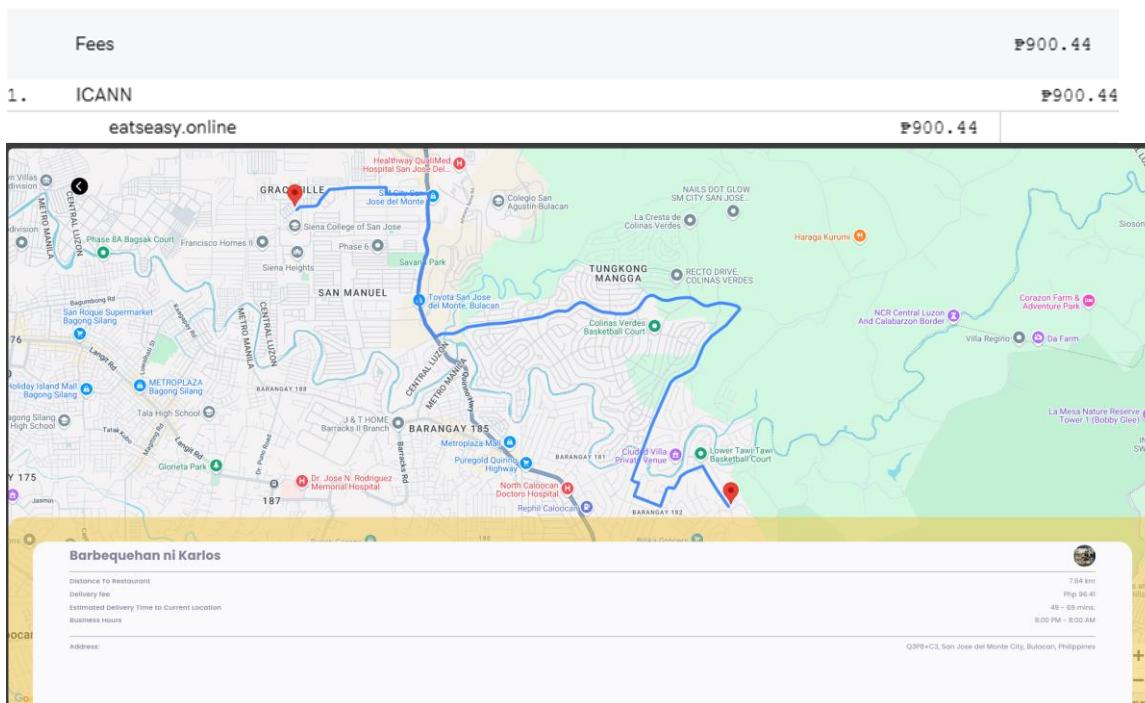


Figure 23. In-app Google Maps

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APPENDIX C.
SURVEY

Table 27. Customer Survey Questionnaires

Customer Survey Questions					
How easy was it to navigate the EatsEasy app?	Very Easy	Easy	Neutral	Difficult	Very Difficult
Did you find it easy to customize your food order?	Very Easy	Easy	Neutral	Difficult	Very Difficult
How satisfied are you with the selection and presentation of menu items in the app?	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied
How would you rate your experience with placing an order?	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied
How do you rate the overall process of ordering food in EatsEasy compared to other Online Food Ordering systems? (i.e., Grabfood, FoodPanda)	Excellent	Good	Neutral	Poor	Very Poor
Do you agree that the customization feature of EatsEasy is very flexible and can suit a more tailored meal for customers?	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The EatsEasy app is very responsive and smooth when it comes to user feedback	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
How useful do you find the rating and review feature for making ordering decisions?	Very Useful	Useful	Neutral	Unuseful	Very Unuseful
The overall UI design of the EatsEasy app is very appealing.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
How likely are you to recommend EatsEasy to others based on your experience?	Very likely	Likely	Neutral	Unlikely	Very Unlikely

Table 28. Vendor Survey Questionnaires

Vendor Survey Questions					
How easy was it to set up your menu and business information on EatsEasy?	Very Easy	Easy	Neutral	Difficult	Very Difficult
How satisfied are you with the app's functionality for updating your menu items and prices?	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied
Did you find it easy to customize your food order?	Very Easy	Easy	Neutral	Difficult	Very Difficult
How would you rate your experience with placing an order?	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied
Did the order tracking feature provide timely and accurate updates on your order status?	Very Accurate	Accurate	Neutral	Inaccurate	Very Inaccurate
How would you rate the visual appeal and user interface design of the <i>EatsEasy</i> app for vendors	Excellent	Good	Neutral	Poor	Very Poor
How satisfied are you with the commission fees charged by EatsEasy compared to other food delivery platforms?	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied
Is the app smooth and responsive overall?	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Do you agree that the menu customization feature of EatsEasy Vendor is very flexible and dynamic?	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
How likely are you to continue using EatsEasy as a vendor and recommend it to others?	Very likely	Likely	Neutral	Unlikely	Very Unlikely

APPENDIX D.
USER'S MANUAL

A large yellow chevron graphic consisting of three parallel, slightly overlapping triangles pointing to the right, centered behind the main title.

EatsEasy

Your food just made easy!

EATSEASY APP MANUAL

EatsEasy App Manual

1. Login Screen

Download EatsEasy App in Google Playstore or visit [https://foods.eatseeasy.online](https://foods.eatseasy.online) and the login screen will appear when you launch the EatsEasy App.

- **Existing Users:**

- In the provided fields, type your password and email address. To access your account, use the Login button.

- **New Users:**

- If you don't have an account yet, tap the **Register** button to create one.

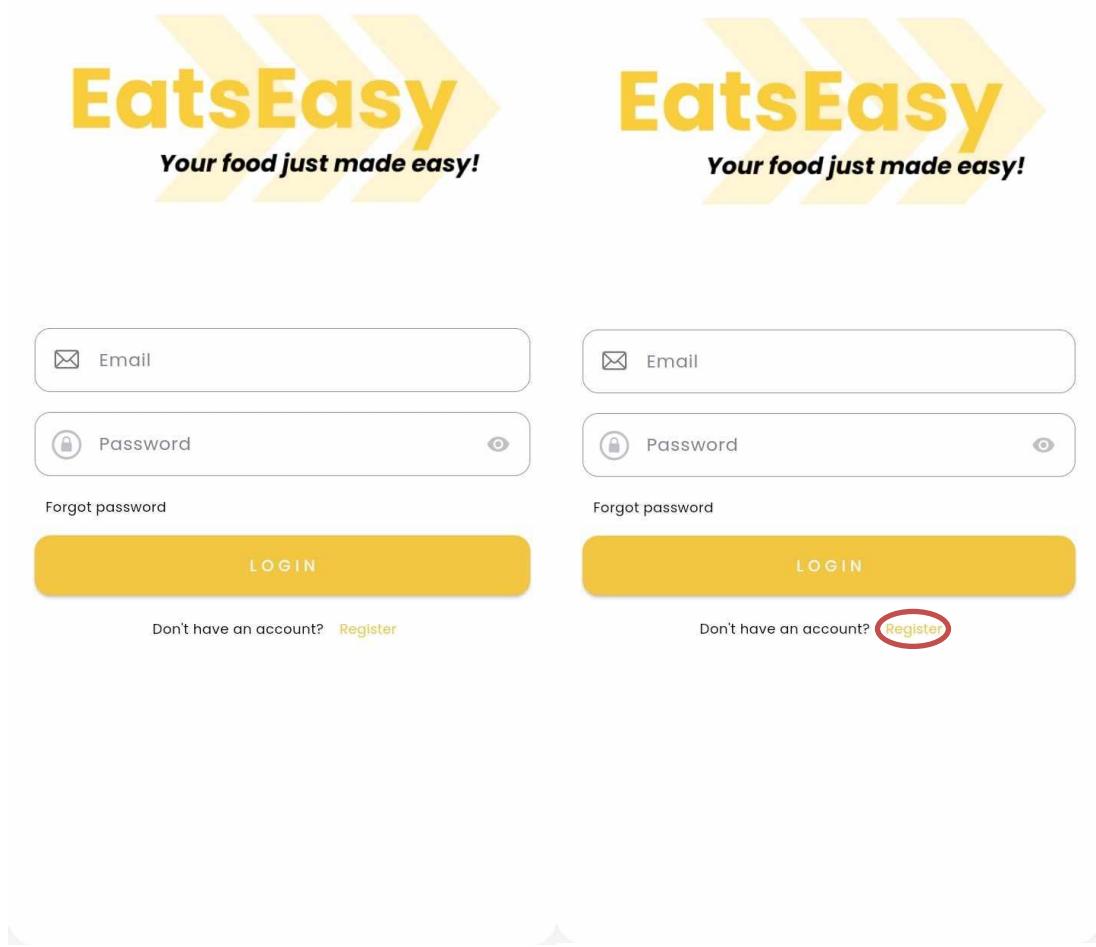


Figure 24. EatsEasy Login Page

2. Register

- The registration process is a quick one.
- You'll need to fill in the following information:
 - **First Name and Last Name**
 - **Email Address** (make sure it's valid as you'll need it for verification)
 - **Password** (choose a strong password to protect your account)
 - **Valid ID**
 - **Proof of residence**
- Once all fields are filled out, tap **Submit**.

Email Verification

- After registering, a **verification code** will be sent to your email.
- Enter this code in the app to verify your account.
- If you've entered the wrong email, you have the option to **Delete Email** and start the registration process again
- You can also choose to **Log Out** and browse the app without an account.

The figure consists of two side-by-side screenshots of the EatsEasy mobile application's registration interface. Both screenshots have a header with a back arrow and the word "Register".

Left Screenshot (Initial Form):

- Fields: First name, Last name, Phone, Email, Password, Confirm Password.
- Buttons: Verify (next to Phone field), Upload Valid ID, Photo of your house.
- Text: "Upload documents" with instructions: "You are required fill all the details fully with the correct information. You can upload your picture of your house to be able track you house by Upload proof of residence e.g., Valid IDs, Electric/Water bill".
- Bottom: A large yellow "REGISTER" button.

Right Screenshot (Filled Form):

- Fields: First name (Rowel), Last name (Alvero), Phone (+639294983165), Email (rjalvero90@gmail.com), Password (hidden), Confirm Password (hidden).
- Validation message: "Password must be more than 8 characters", "Password must contain at least 1 uppercase letter", "Password must contain at least 1 lowercase letter", "Password must contain at least 1 number".
- Text: "Upload documents" with instructions: "You are required fill all the details fully with the correct information. You can upload your picture of your house to be able track you house by Upload proof of residence e.g., Valid IDs, Electric/Water bill".
- Image: A placeholder image of a modern house.
- Bottom: A large yellow "REGISTER" button.

Figure 25. EatsEasy Registration Page

3. Home Page Overview

After logging in and being verified, you'll be directed to the **Home Page**.

- Here, different food categories are available, and several sorts of dishes can be browsed through.
- Scroll through popular categories or use the search bar to find specific items.

Selecting a Dish

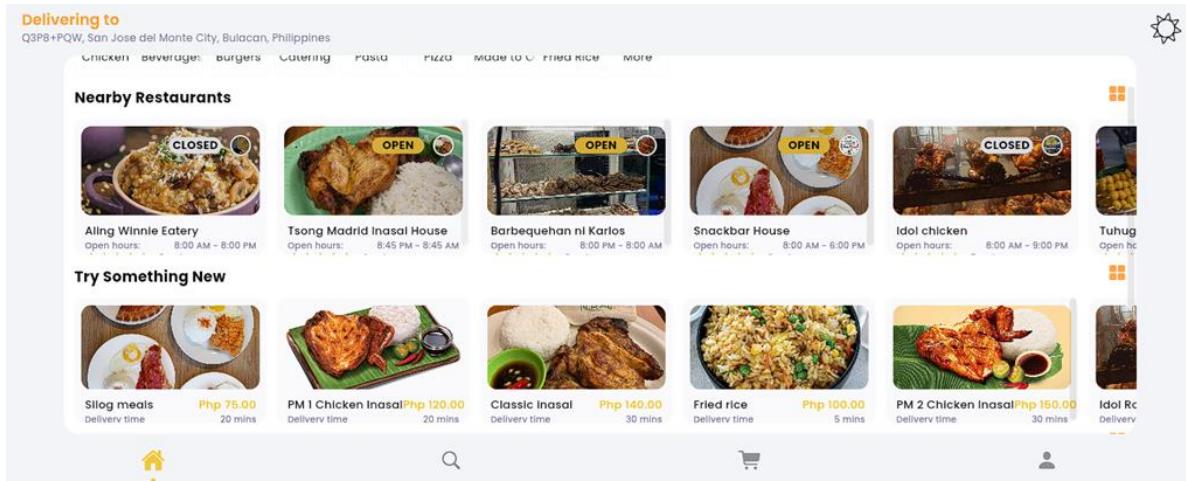


Figure 26. EatsEasy Homepage

- When you have found food that you want to order, just tap the food.
- You will see more details about the dish, including options to customize your order.

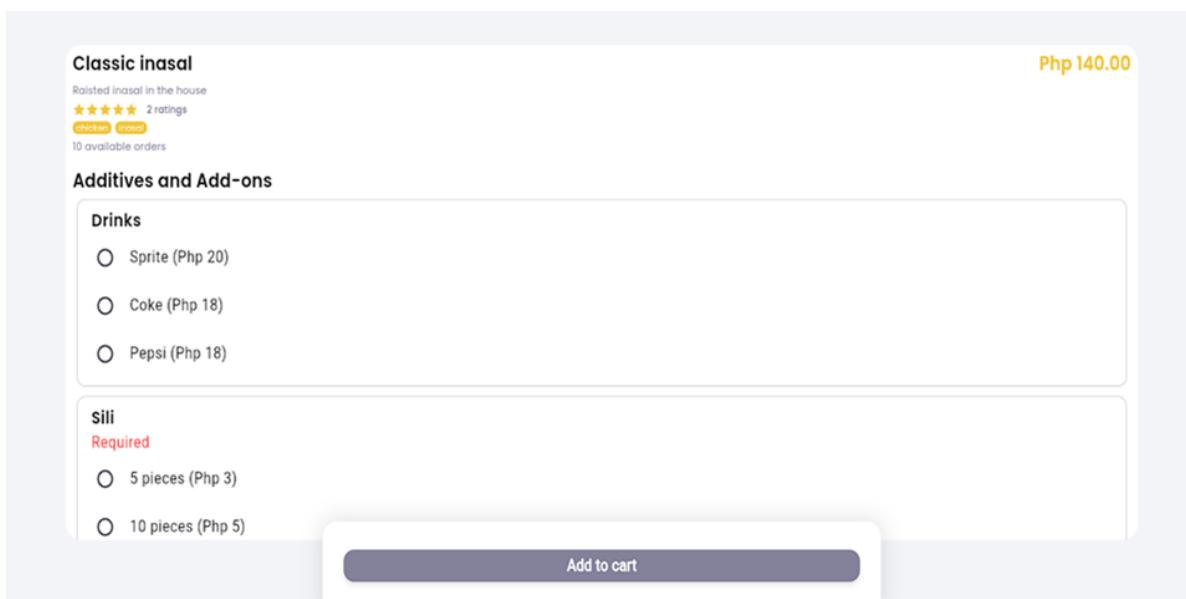


Figure 27. EatsEasy Food Page

4. Exploring the Restaurant

- Once you choose a food, you will have two options:
 - Open Restaurant:** Tap this button to view the full restaurant menu and what they offer.
 - Chat:** Use the Chat button to contact the restaurant for any special requests or questions.

Adding Food Additives

- Some food includes additional extras or sides (like additional toppings or side orders).
- Select any you'd like to add before proceeding to the next step.

The image shows a mobile application interface for ordering food. On the left, a detailed view of a dish is displayed: **Bacolod Chicken Bbq** (Php 85.00). It includes a description: "simot sarap Ang inihaw na Bacolod chicken bbq, ito Ang aming best selling menu, soky with sweet and savory flavor". Below the description are ratings (2 stars) and categories (Barbeque, chicken, bacolod, more). A note says "10 available orders". A section titled "Additives and Add-ons" lists customization options: **Toastedness** (a slider from 1 to 5, currently at 3), **Sauce** (Suka maanghang (Php 0), Suka matamis (Php 0), Barbeque sauce (Php 0)), and **Flavor** (Spicy (Php 0), Original (Php 0)). At the bottom is a large "Add to cart" button. On the right, a restaurant profile for **Snackbar House** is shown. It features a photo of various breakfast items (eggs, bacon, hash browns). The profile includes: 2 ratings, Distance To Restaurant (7.3 kr), Delivery Price From Current Location (Php 93.3), a "Menu" tab, and an "Explore" tab. Under the "Menu" tab, two items are listed: **Silog meals** (Php 75.00) and **Bacsilog Overload** (Php 85.00), each with a small image and a 5-star rating.

Figure 28. EatsEasy Food and Restaurant Page

5. Checkout Process

Once you've chosen your dish and any extras, proceed to the **Checkout Screen:**
Delivery Options

- You can update the **delivery address** if needed.
- Choose your preferred **delivery option**:
 - **Priority Delivery**: Fastest option with the shortest waiting time.
 - **Standard Delivery**: Default delivery option with regular waiting times.
 - **Saver Delivery**: More economical option, but with a longer waiting time.
 - **Order for Later**: Schedule your order for a later time and date.
- If you change your mind, you can **delete items** from your order before finalizing.

Payment Options

- Choose your payment method:
 - **Wallet (Cashless)**:
 - Will use your eats easy wallet balance if you have enough balance.
 - **Cash on Delivery (COD)**:
 - Select this option if you prefer to pay with cash when your order is delivered.

6. Payment Options

- Choose your payment method:
 - **Wallet (Cashless Payment):**
 - Select this option if you have enough balance on your EatsEasy Wallet, if not but you want to access this type of payment, you must top up in the wallet page located in user profile.
 - **Cash on Delivery (COD):**
 - Select this option if you prefer to pay with cash when your order is delivered.
- A successful payment notification pop-up will show up once an order has been placed.

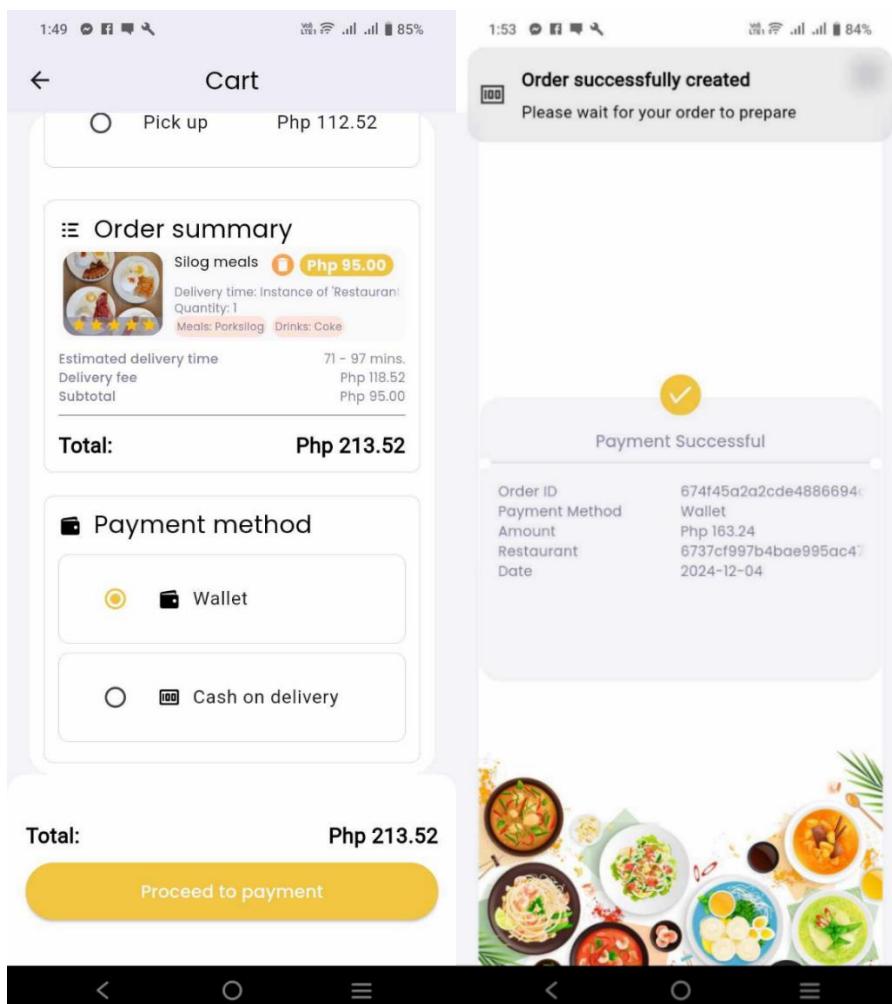


Figure 29. EatsEasy Cart Page

7. Tracking and Confirmation of an Order

- Once your payment is processed, you will receive an **order confirmation**.
- Track the status of your order in real-time, from preparation to delivery.
- Use the profile tab then press my orders to view updates, estimated delivery times, and any notifications from the restaurant.

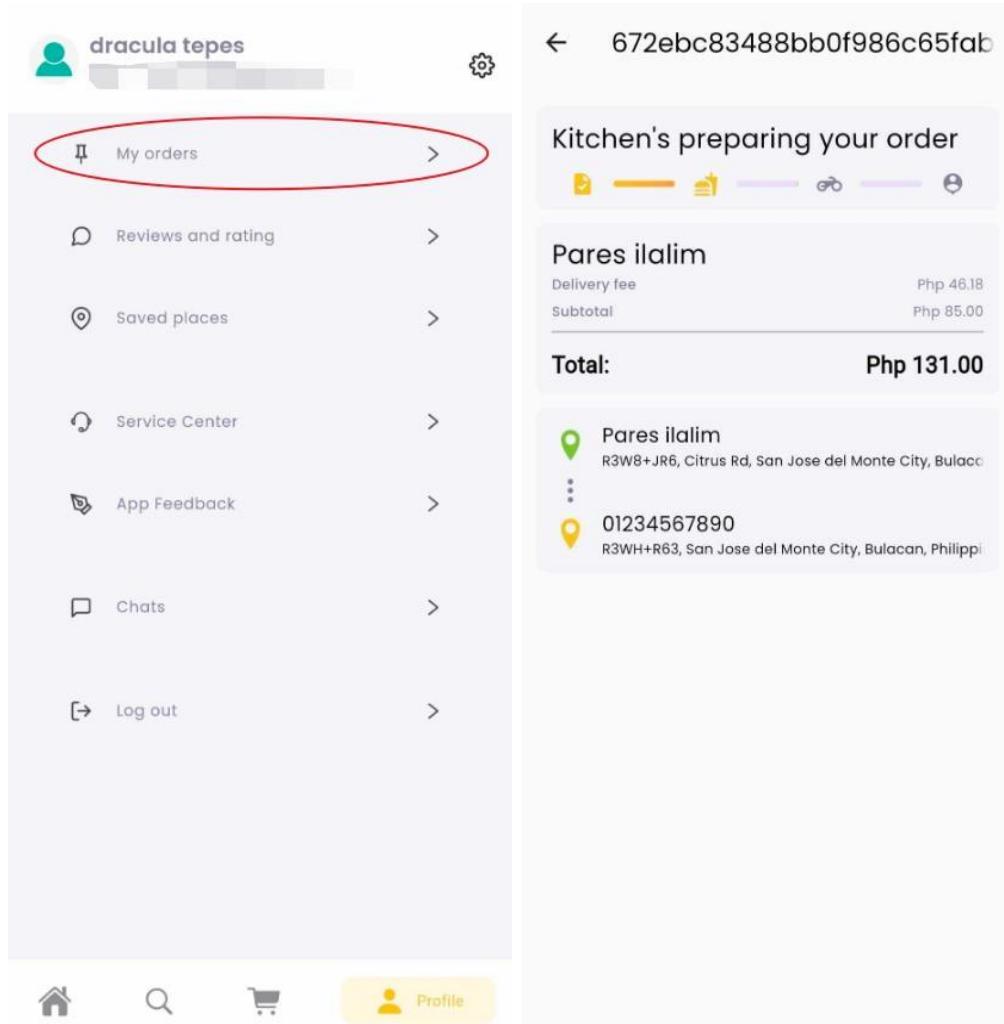


Figure 30. EatsEasy My Orders Page

8. EatsEasy User wallet top-up for cashless payment

- Users can access cashless payment by topping up balance in the wallet page located in the user profile.
 - Click the profile button on the homepage
 - Click the wallet button.

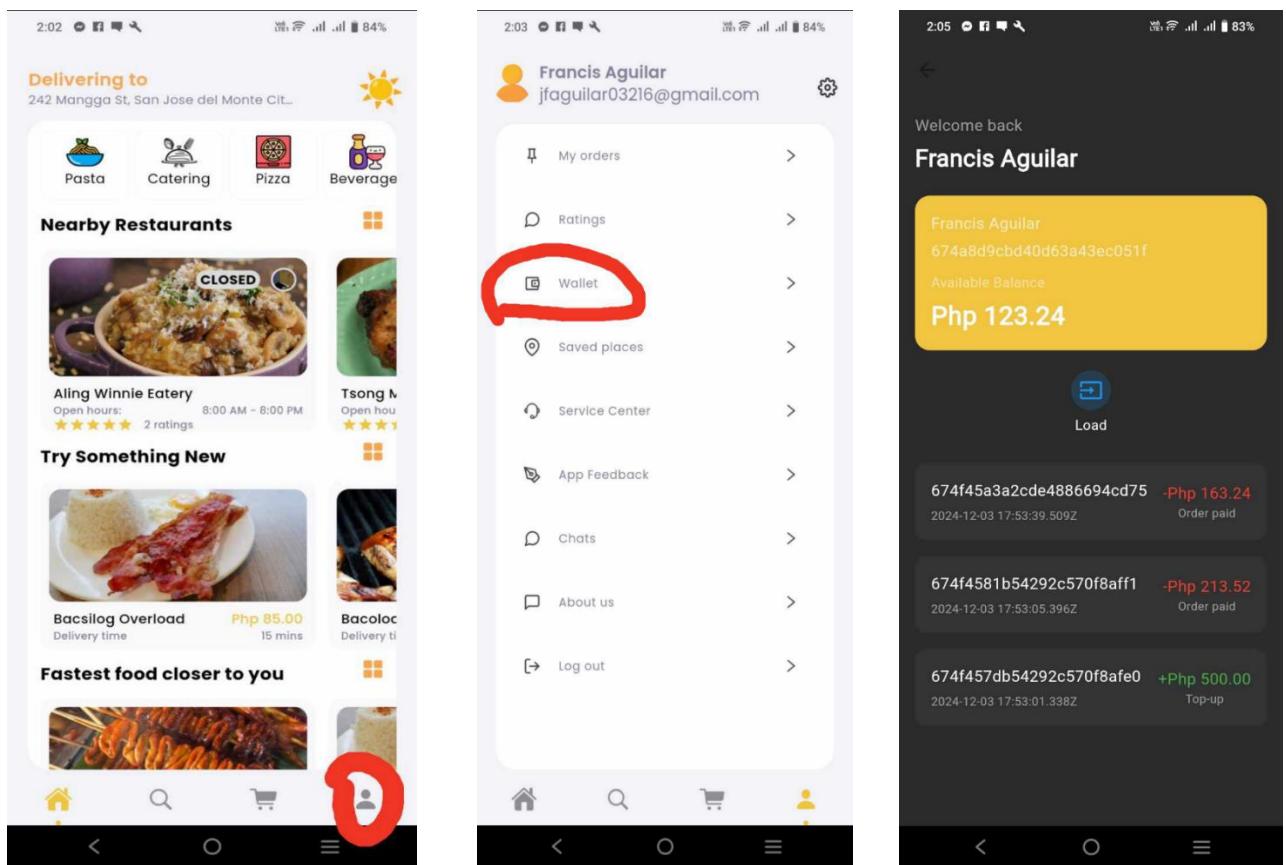


Figure 31. EatsEasy Wallet Page

- To top up in the user wallet, just click the load button.
 - The minimum amount of top up must be 260 Php (around 5 USD)
- Clicking on the load button will navigate you to our 3rd party payment partner.
 - Fill in all the details and ensure everything is correct.
 - Incorrect details will result in a top-up failure.
 - A successful top up will navigate you back to the wallet page indicating that you have a new balance amount along with a notification confirming the successful top-up.

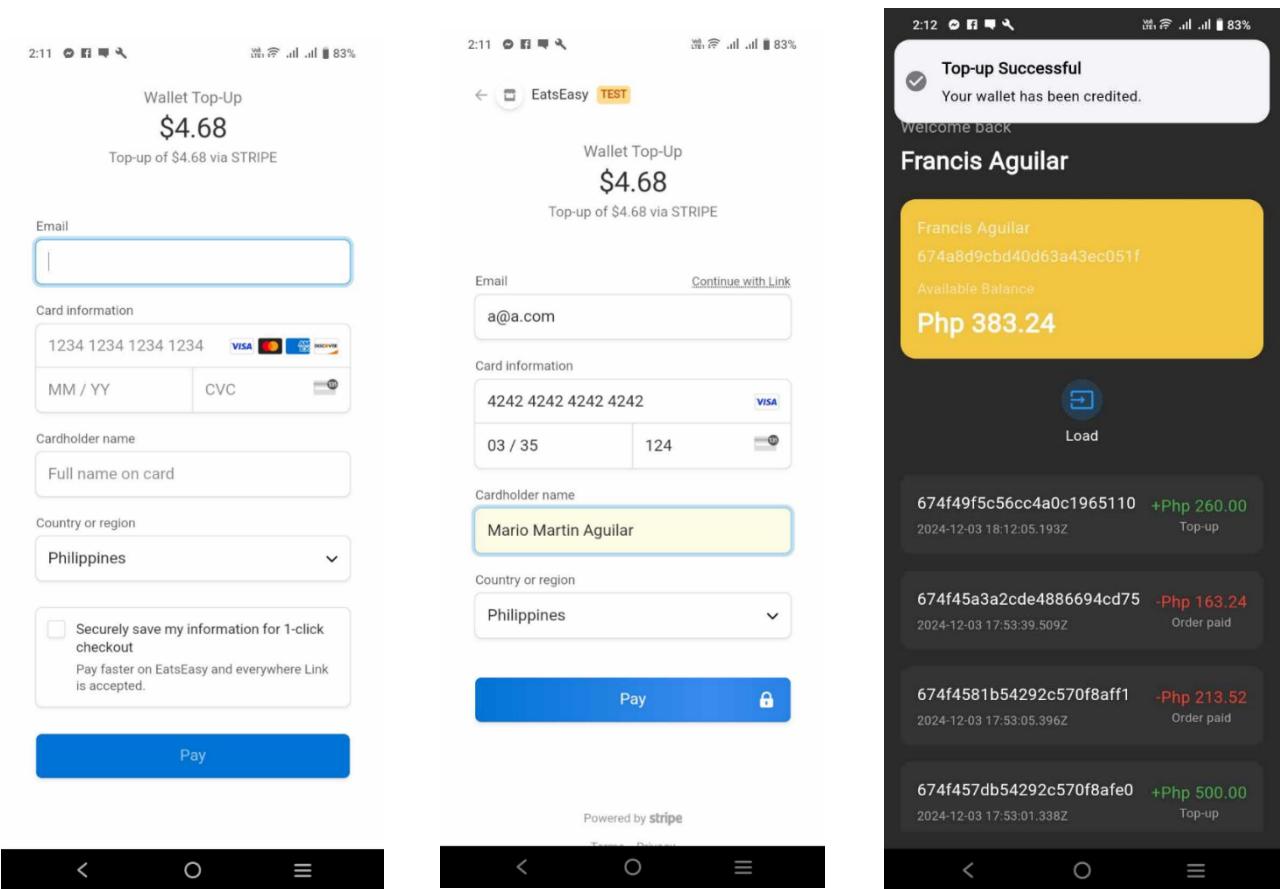


Figure 32. EatsEasy Stripe Top-up Page



**EATSEASY
PARTNER
MANUAL**

EatsEasy Partner App

1. Login Screen

Download EatsEasy Partner App in Google Playstore or visit [https://partner.eatseeasy.online](https://partner.eatseasy.online) and you start with login screen.

Existing Users:

- Enter your **Email** and **Password** in the box.
- Tap the **Login** button to access your account.

New Users:

- click on the register button to make an account.

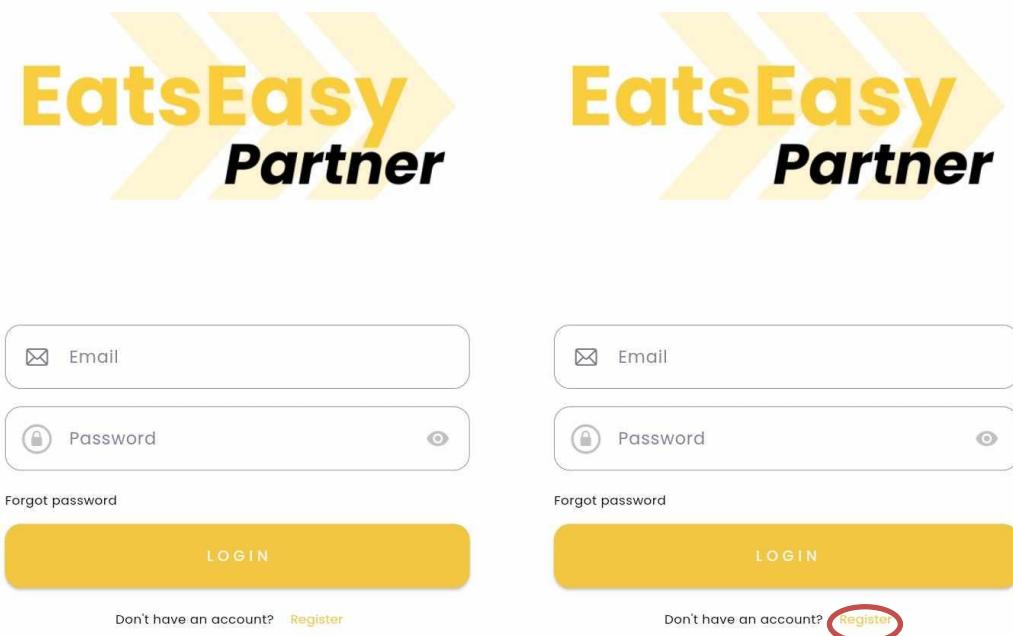


Figure 33. EatsEasy Partner Login Page

2. Register

Registration is done in a fast, easy way.

You'll need to fill in the following information:

- **You just need to enter the following info First Name and Last Name**
- **Email Address** (make sure it's valid as you'll need it for verification)
- **Password** (choose a strong password to protect your account)
- **Valid ID**
- **Proof of residence**

Once all fields are filled out, tap **Submit**.

Email Verification

- Immediately after registration, you'll receive a verification code to your email.
- Enter this code in the app to verify your account.
- If you entered the wrong email address, you can Delete Email and then enter your correct email address.
- You can also choose to **Log Out** and browse the app without an account.

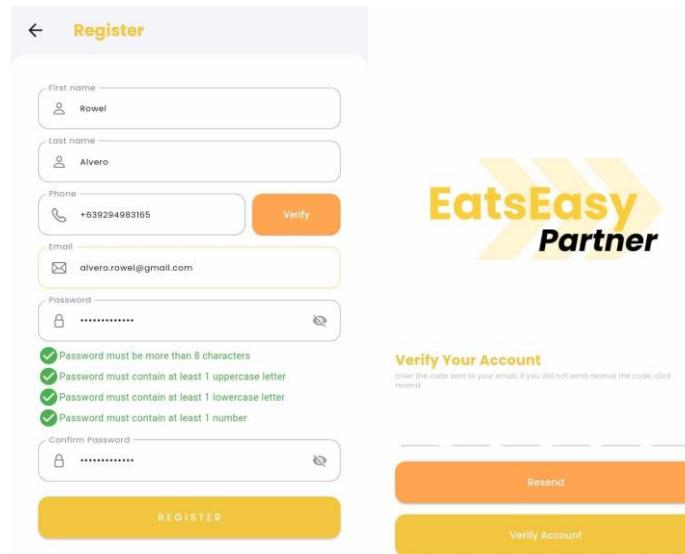


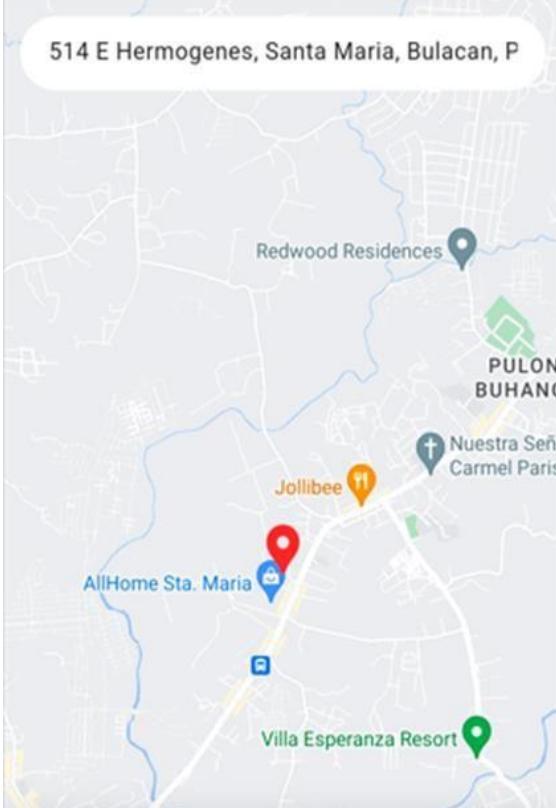
Figure 34. EatsEasy Registration Page

3. Overview of Home Page

After logging in and being authenticated, you will be forwarded to the Home Page.

- After you have logged in and got authenticated, you are taken to the Home Page from where you can choose different varieties of food.
- You also get to see the different varieties of foods.
Selecting a food
 - When you find food that you wish to order, simply tap the food.
 - You are able to view additional information of the food, such as available options to customize an order.

Restaurant registration



514 E Hermogenes, Santa Maria, Bulacan, P

Redwood Residences

PULON BUHANG

Jollibee

AllHome Sta. Maria

Villa Esperanza Resort

San Jose del Monte City
514 E Hermogenes, Santa Maria, Bulacan, Philippines

Choose This Location

Business registration

←

Let's register your business!

You are required fill all the details fully with the correct information



Business Name

Business Hours
From: 7:00 AM - To: 12:00 AM

Postal Code

Address

First name

Last name

Phone number

Upload documents

You are required fill all the details fully with the correct information
Upload proof of residence e.g., Valid IDs, Electric/Water bill

Upload Valid ID

Proof of Residence

SUBMIT

Figure 35. EatsEasy Partner Registration Page

4. Home Page Overview

After your account is verified, log in to access the Home Page. Here, you'll find everything you need to manage your restaurant:

- **Create Menus:** Add new dishes, update existing ones, and organize your food offerings.
- **Wallet:** Keep track of your finances, including earnings and fees.
- **Orders Management:**
 - View and manage orders in different stages:
 - Incoming Orders
 - Preparing Orders
 - Ready for Delivery
 - Self-Delivery (if you want to deliver yourself)
 - Pick-Up Orders
 - Canceled Orders
- **Customer Chat:** Communicate directly with customers to answer questions or resolve issues.
- **Sales Charts:** Analyze your performance with visual charts that show daily, monthly, and yearly sales trends.

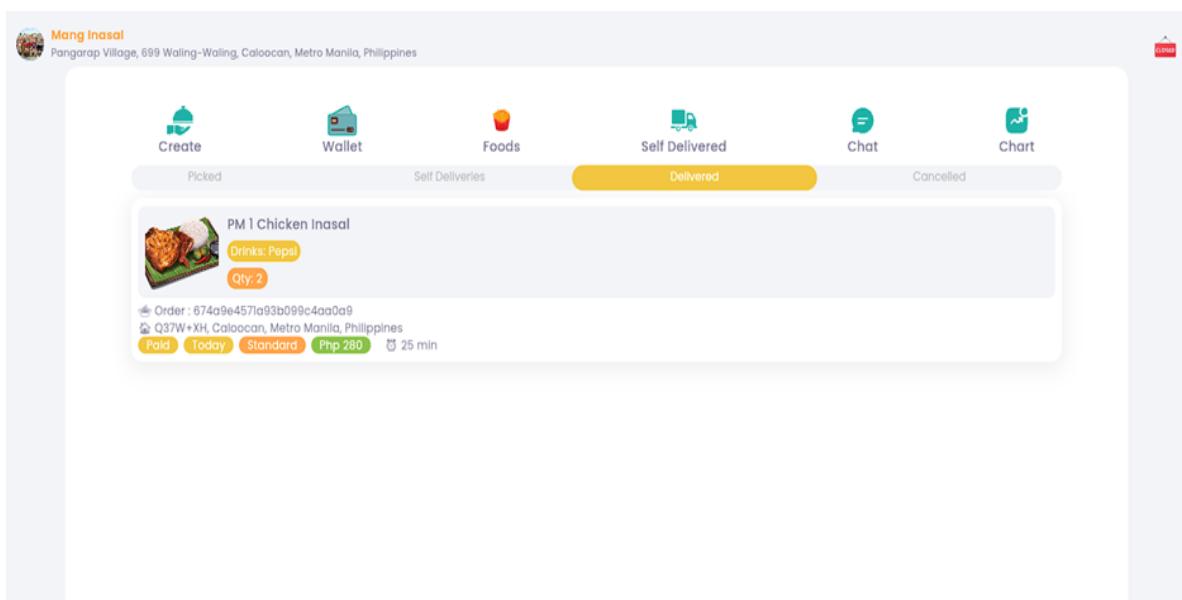


Figure 36. EatsEasy Partner Homepage

5. Food menus

Creating your menu is important in attracting the customers and increasing sales.

Here's how to create your food items:

1. Category selection:
 - Choose the categories you have for your cuisine.
2. Uploading images:
 - Add the best images of your prepared dishes to attract customers.
Make sure the photos of your foods are vivid and well-lit to attract customers.
3. Food details:
 - Enter the name of your food, short description, and price.
 - Include serving sizes, ingredients, and any special notes.
4. Add-Ons & Extras:
 - List optional add-ons (e.g. extra cheese, sides, sauces) which the customer can choose.
5. Food Tags:
 - Apply the relevant tags (spicy, vegetarian, popular, etc.) so that customers can find your product through search.
 - Once you've entered the details, tap Add to save your menu item.
6. Management of Menu:
 - You can update the menu items you created at any time by editing or deleting them.

- a. Choose from categories.

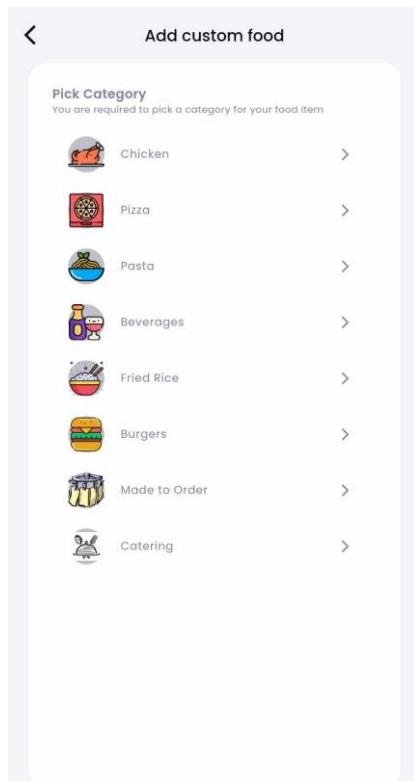


Figure 37. EatsEasy Partner Add Custom Food Category Page

- b. Add high-quality images of your dishes to make them appealing.
Ensure your photos are clear and well-lit to attract customers.

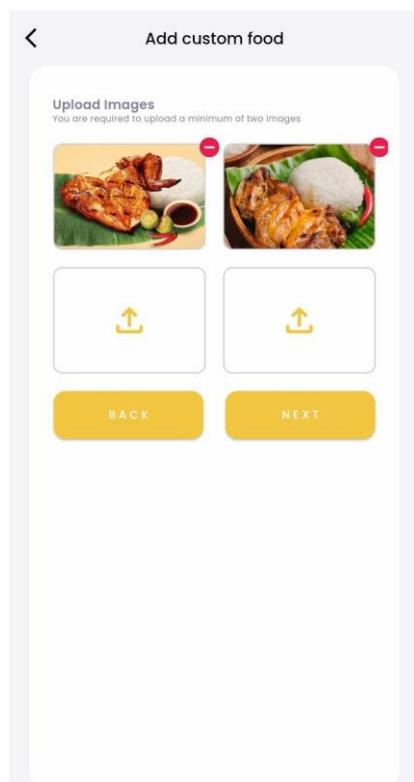


Figure 38. EatsEasy Partner Add Custom Food Images Page

c. Enter the Name of the dish, a Short Description, and the Price.

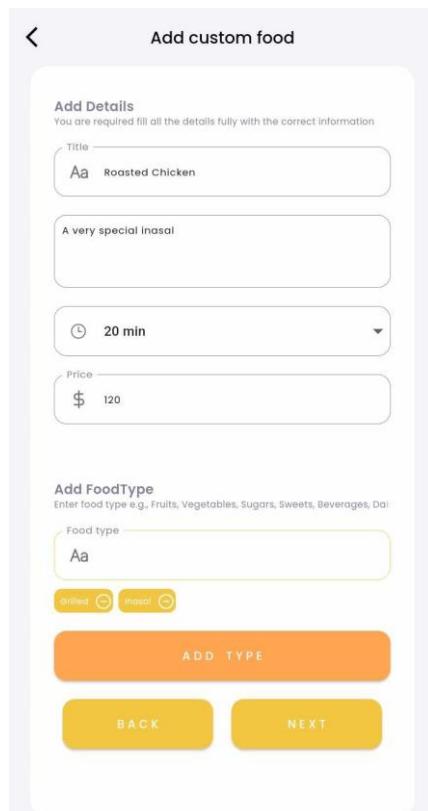


Figure 39. EatsEasy Partner Add Custom Food Details Page

d. Enter the Name of the dish, a Short Description, and the Price.

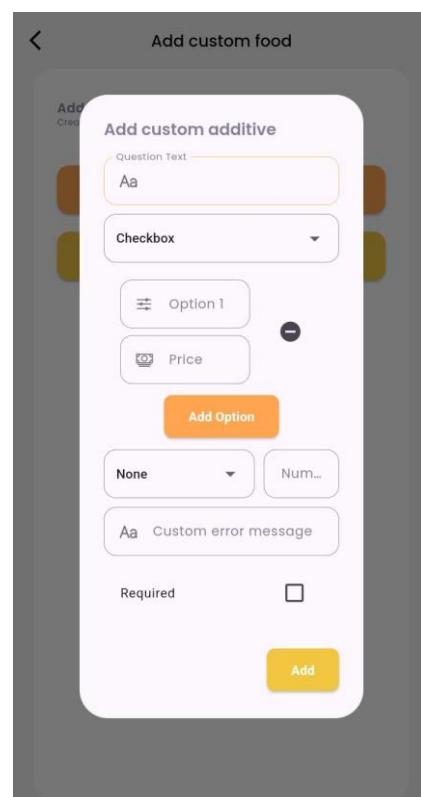


Figure 40. EatsEasy Partner Add Custom Food Additives Page

- e. Use relevant tags to help customers find your items through search. Indicate your number of food stocks and enable your food availability.

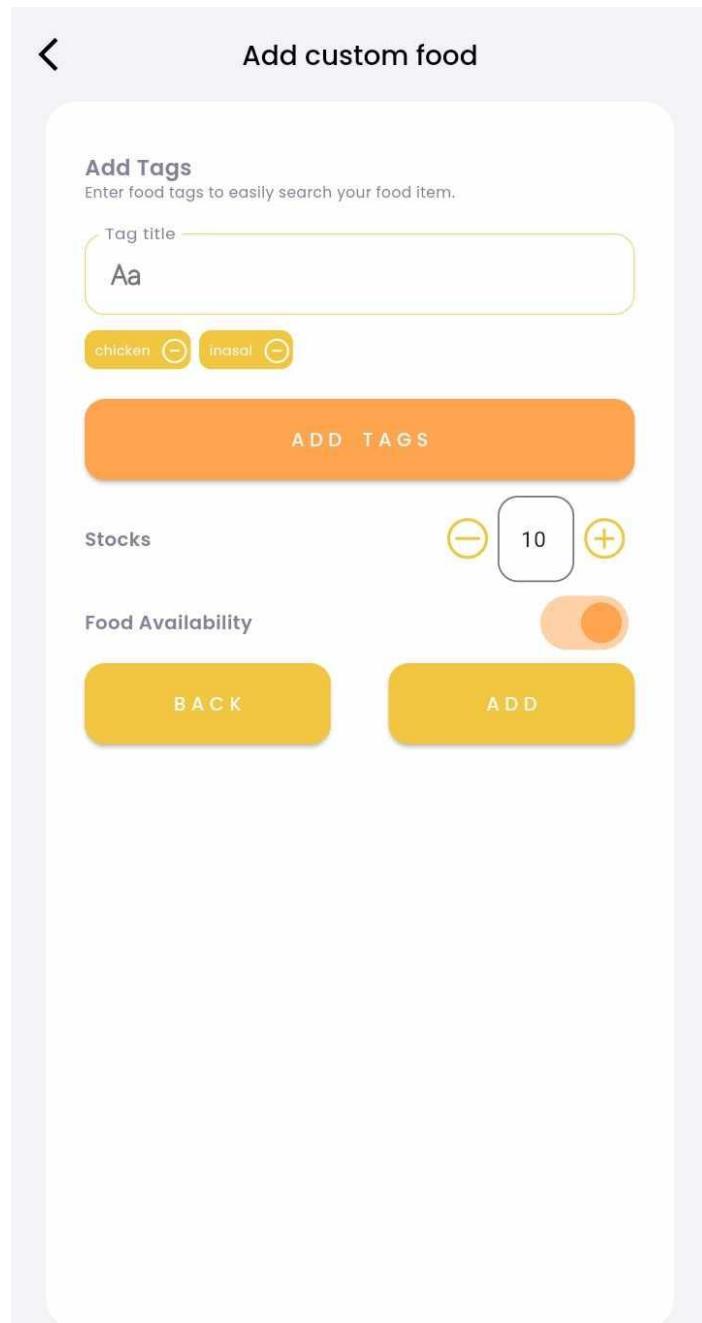


Figure 41. EatsEasy Partner Add Custom Food Final Page

6. Wallet Overview

This wallet section displays in

depth breakdowns of all the activities that happened regarding your money:

- **Total Orders:** It indicates the total orders made and completed.
- **Processing Orders:** The number of the orders being prepared to process at the moment.
- **Canceled Orders:** Shows the records of orders canceled
- **Total Deliveries:** All deliveries count is tallied
- **Delivery revenue:** Indicated how much a user earned from their delivery.
- **Commission:** total commission on all sales from sales.

The screenshot shows the EatsEasy Partner Wallet Page. On the left, there's a summary card for 'Mang Inasal' with a red circle highlighting the 'Wallet' icon. The main area displays an order for 'PM 1 Chicken Inasal' with details like 'Qty: 2', 'Drinks: Pepsi', 'Toppings: [Cheeses]', and a note about a deduction of 'Php 340'. Below this is a table of financial metrics:

Total Orders	Processing Orders	Cancelled Orders	Total Revenue
1	0	0	Php 1770.00
Total Orders	Delivery Revenue	Deducted amount	Withdrawable
1	0	Php 1770.00	Php 15930.00

On the right, a 'Latest Request' section shows a payout for '6750bb3d16553a0ec26f3f62' of 'Php 1000.00' on '2024-12-04'. A large orange button at the bottom right says 'Request Payout'.

Figure 42. EatsEasy Partner Wallet Page

7. Self-Delivery Option

If you prefer to deliver orders yourself rather than using a third-party service:

- Go to the **Self-Delivery** section.
- You can choose which orders to deliver personally.
- Manage delivery statuses and keep customers updated on their orders.

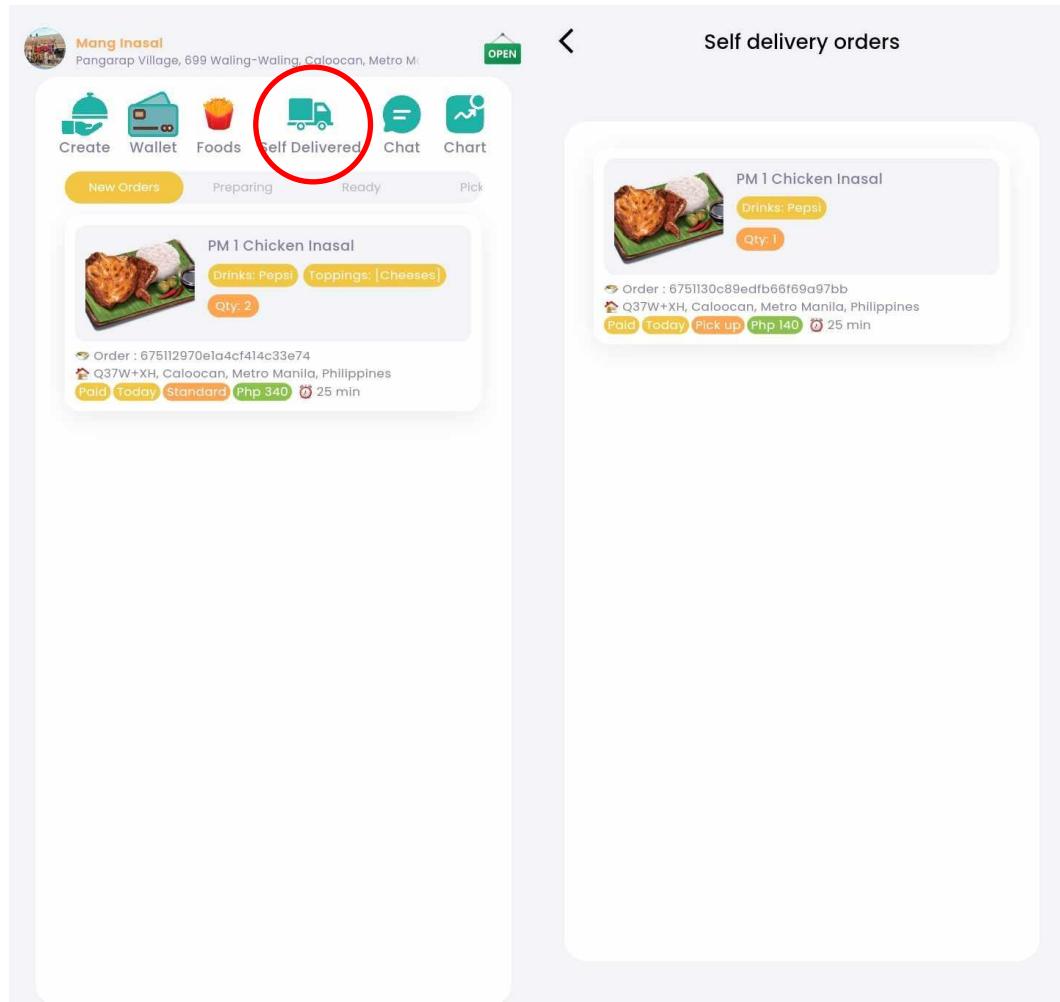


Figure 43. EatsEasy Partner Self-Delivery Page

8. Customer Chat

The **Chat** feature allows you to stay connected with your customers:

- Access the chat screen to view incoming messages.
- Respond promptly to customer inquiries, feedback, or special requests.
- Good communication can improve customer satisfaction and encourage repeat business.

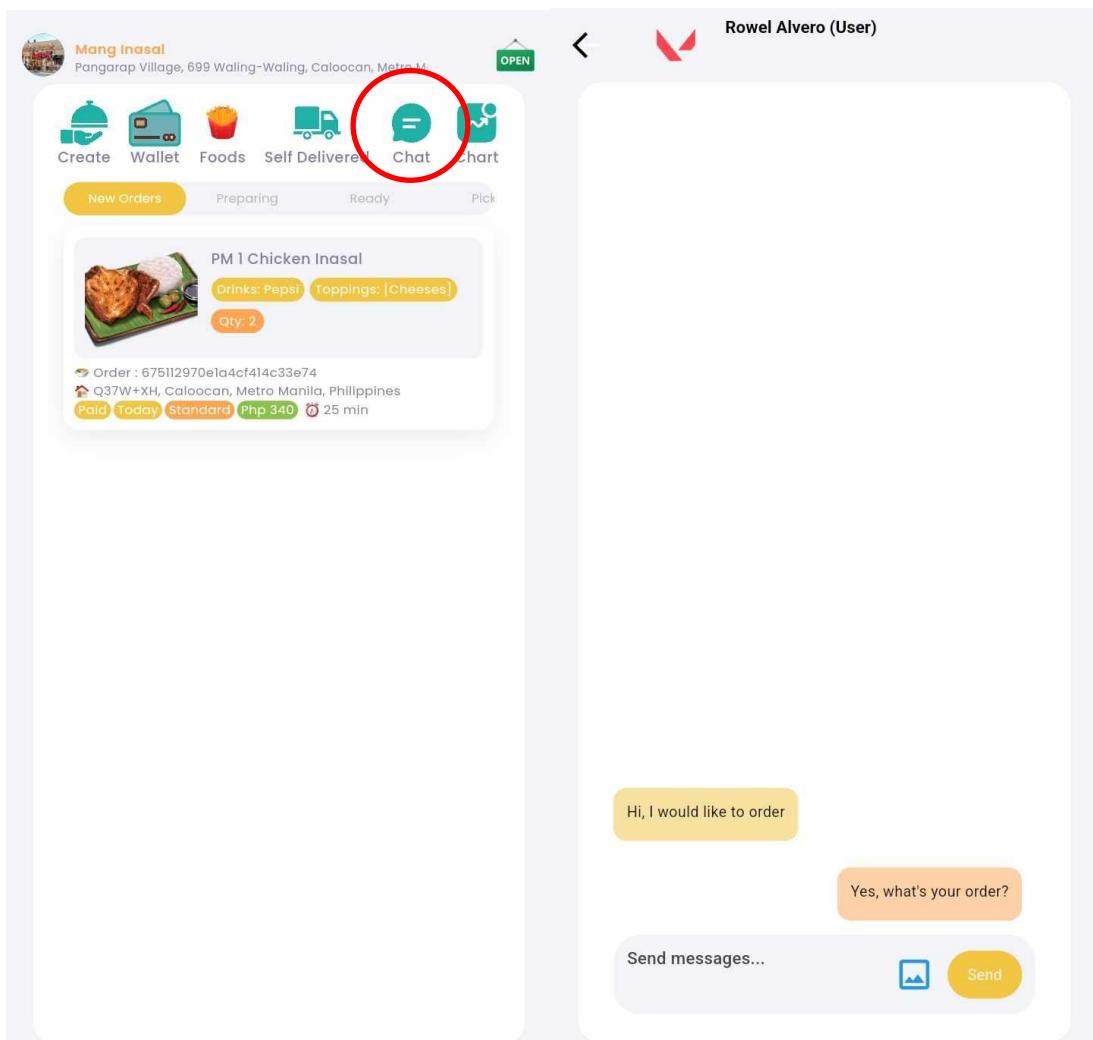


Figure 44. EatsEasy Partner Chat with User Page

9. Sales Charts

Track the performance of your restaurant with the **Charts** feature:

- View **Daily**, **Monthly**, and **Annual** sales reports.
- Analyze your revenue trends and identify peak sales periods.
- Use this data to make informed decisions, such as running promotions or adjusting menu items.

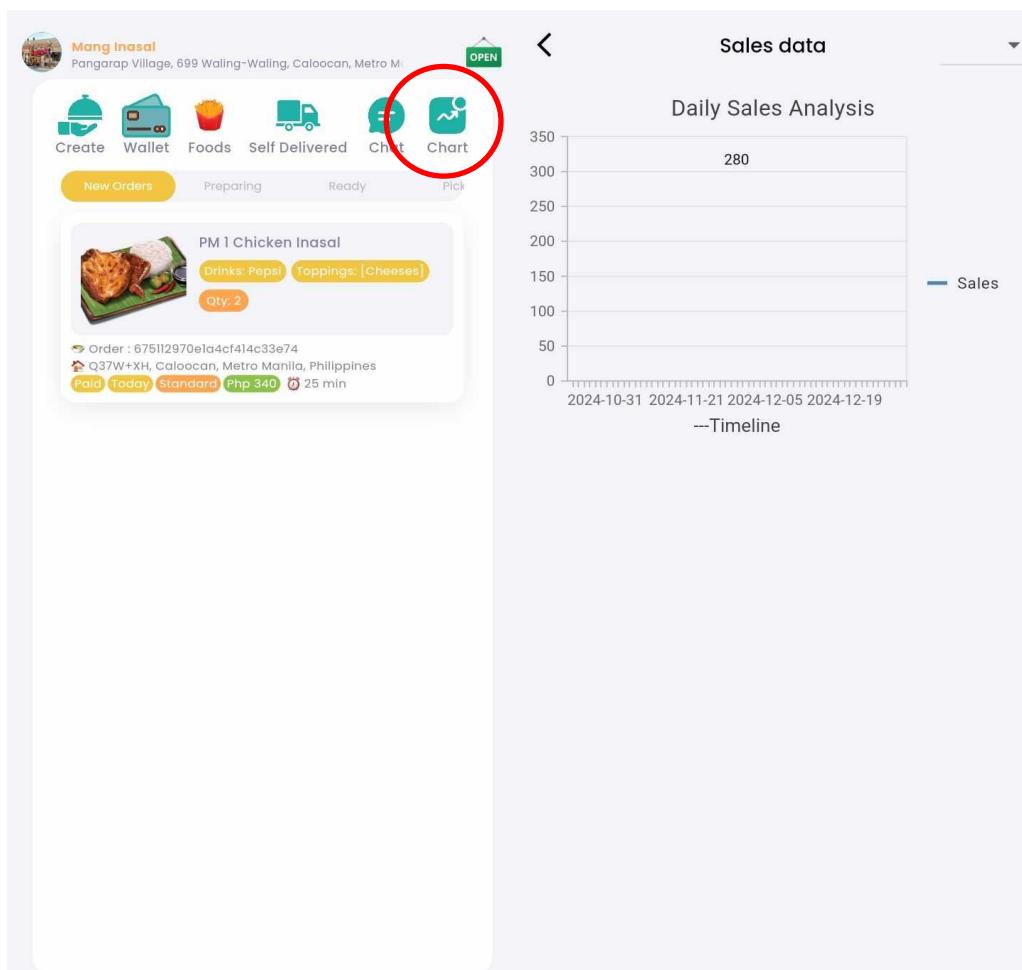


Figure 45. EatsEasy Partner Sales Chart Page

10. Requesting Payout

Orders that have been paid by the customers through the eats easy wallet would deposit its payment in the vendor's wallet. Requesting payout can be done by accessing the wallet page in the vendor app.

- Click the wallet button.
- Click Request payout
- Enter all necessary details.

Vendors must wait for the admin to validate your request before depositing the balance on the bank account entered by the customer.

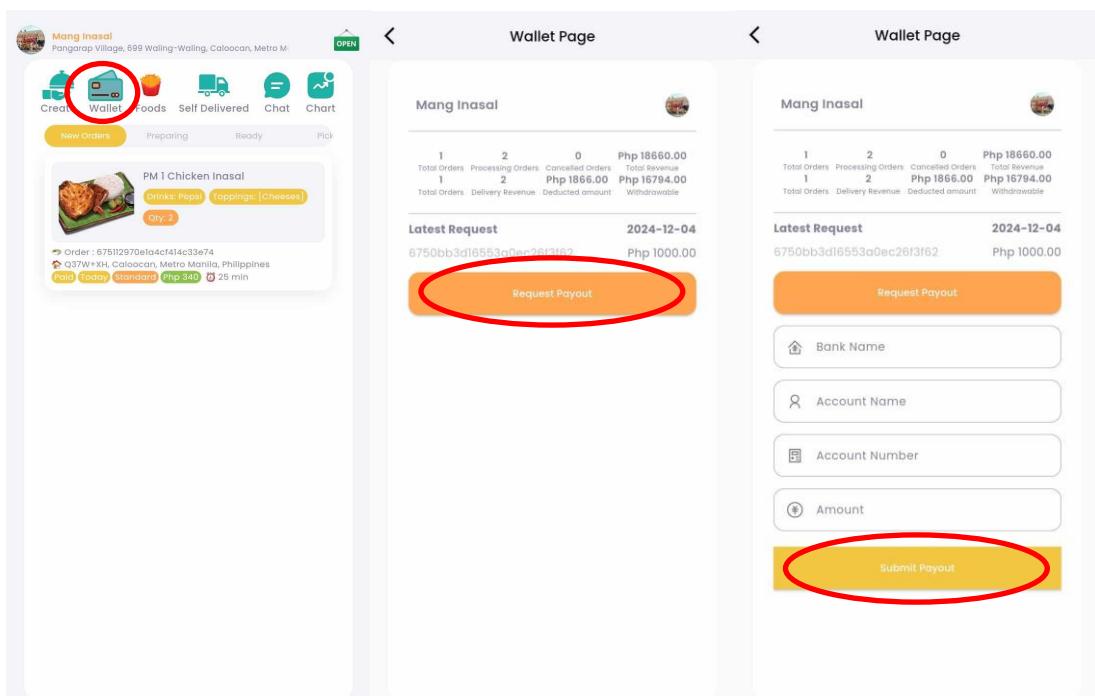


Figure 46. EatsEasy Partner Request Payout Page



**EATSEASY
RIDER MANUAL**

EatsEasy Rider App

1. Login Screen

Download EatsEasy Rider App in Google Playstore and the app you start with login screen.

Existing Users:

- Enter your **Email** and **Password** in the box.
- Tap the **Login** button to access your account.

New Users:

- Click on the register button to make an account.

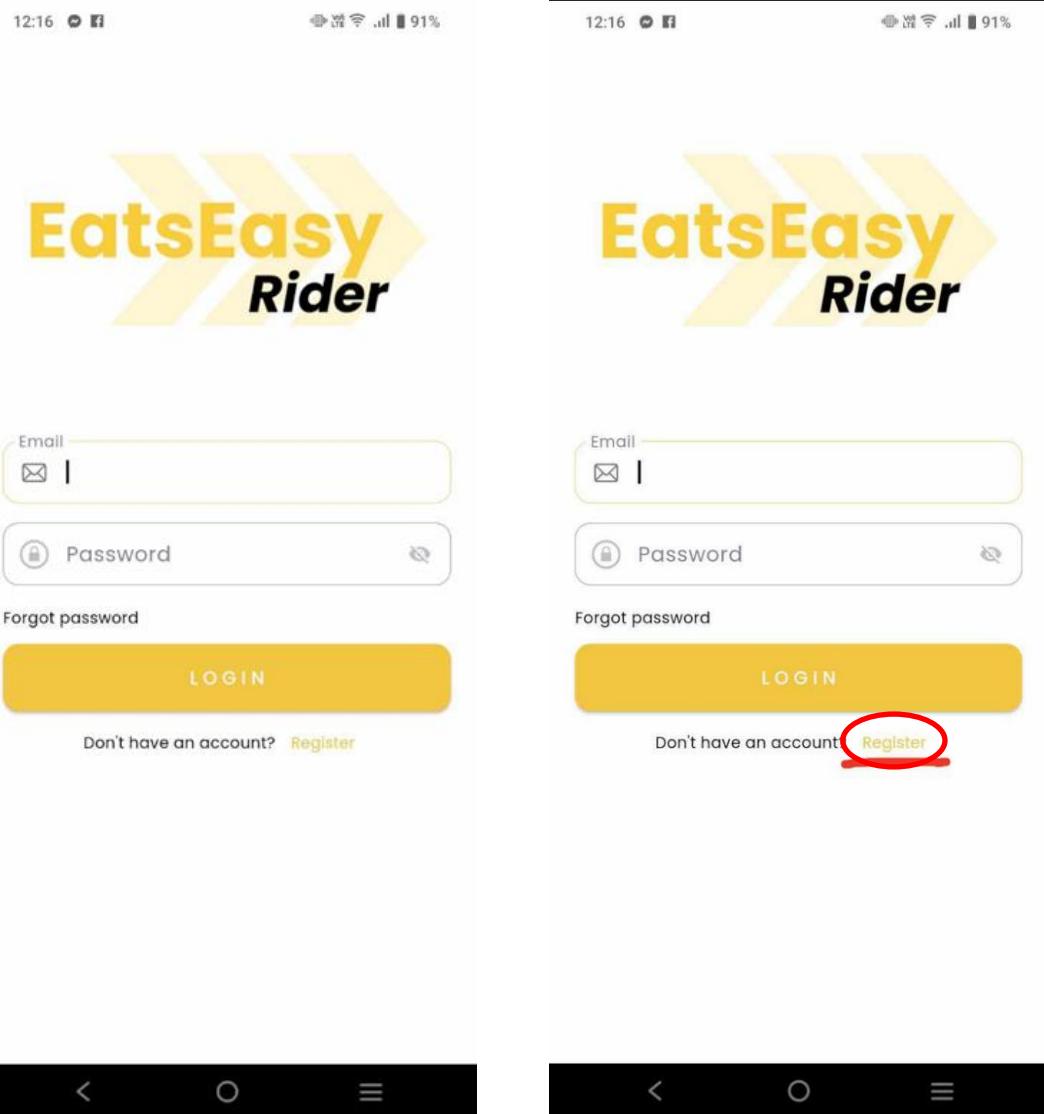


Figure 47. EatsEasy Rider Login Page

2. Register

Registration is done in a fast, easy way.

You'll need to fill in the following information:

- **You just need to enter the following info First Name and Last Name**
- **Email Address** (make sure it's valid as you'll need it for verification)
- **Password** (choose a strong password to protect your account)
- **Valid ID**
- **Proof of residence**
- Once all fields are filled out, tap **Submit**.

Email Verification

- Immediately after registration, you'll receive a verification code into your email.
- Enter this code in the app to verify your account.
- If you entered the wrong email address, you could Delete Email and then enter your correct email address.
- You can also choose to **Log Out** and browse the app without an account.

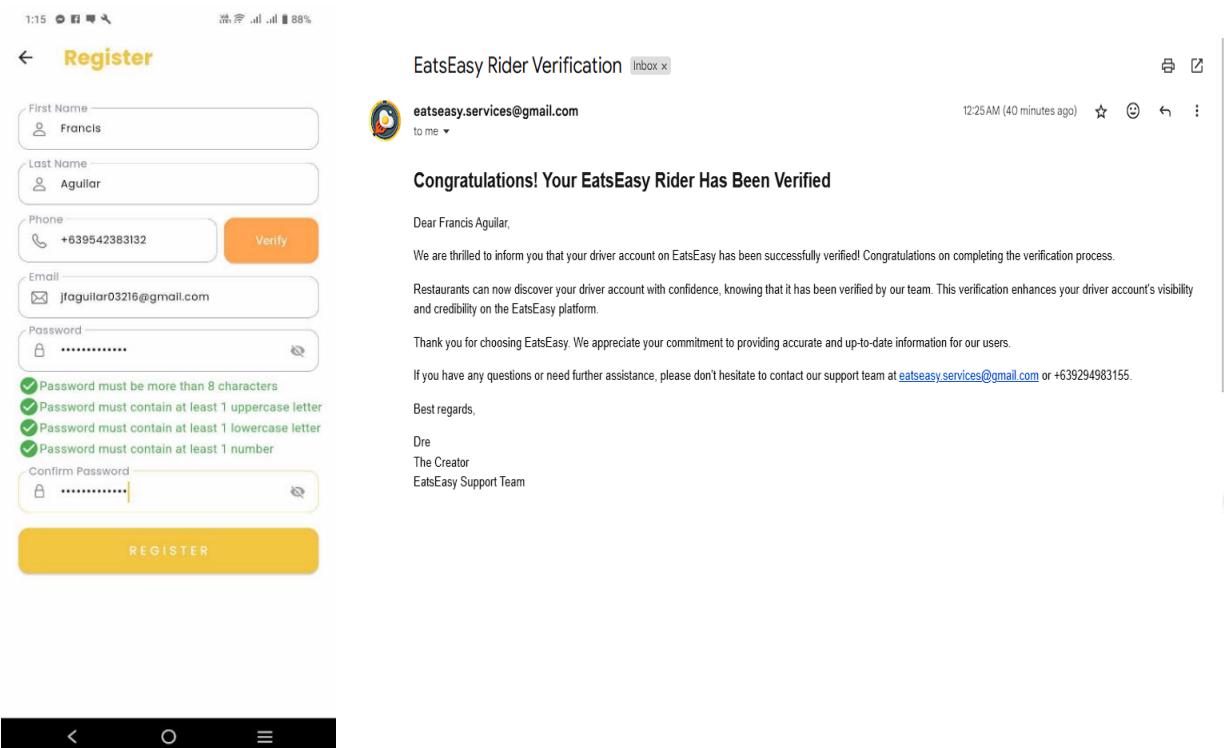


Figure 48. EatsEasy User Registration Page

3. Setting Up Your Driver Account

After Registration

- Once you've registered, log in using your **Email** and **Password**. Vehicle Information
- You'll have to provide details about your vehicle:
 - Select Your Vehicle Type: Between **Bike**, **Scooter**, or **Car**.
 - Enter Your Phone Number.
 - Vehicle Details:**
 - Vehicle Name (e.g., Honda, Yamaha)
 - Plate Number
 - License Number
 - License Expiration Date (select from the calendar).
 - Upload Required Documents:**
 - A clear photo of your **Driver's License**.
 - A scanned copy of your **NBI Clearance**.
- Once everything is filled out, tap **Submit**. It will take 3 – 5 days to verify your account.

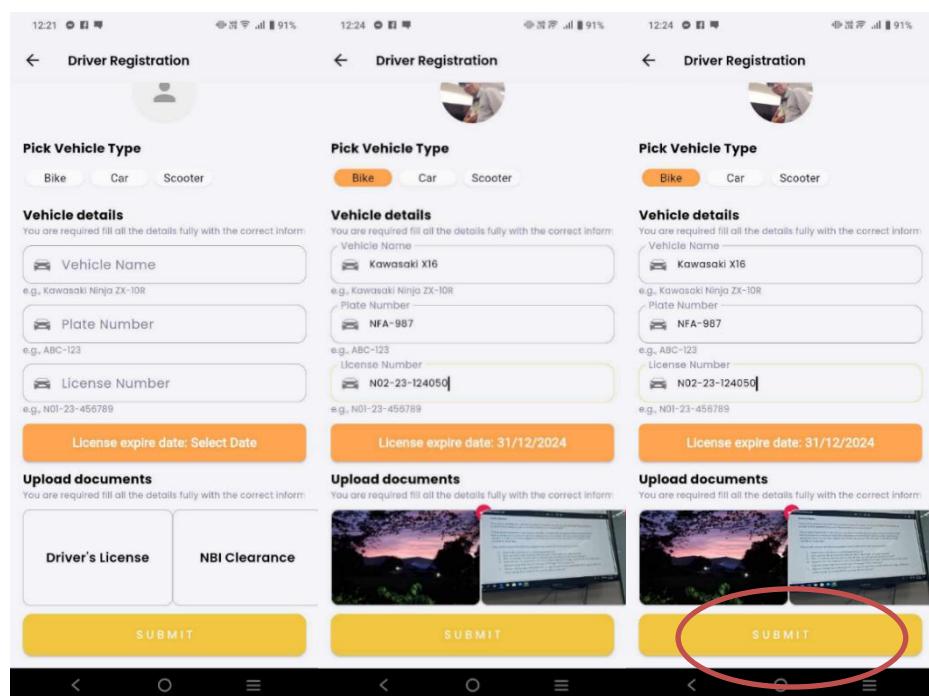


Figure 49. EatsEasy Rider Registration Page

4. Delivery Option

Exploring the Home Tab

- After logging in, you'll see the **Home Tab**.
- You'll see the list of **Available Foods to Deliver**.

Accepting an Order

1. Browse through the available orders and select the one you want to deliver.
2. Tap **Show Order Details** to review the order.
3. If everything looks good, tap **Pay and Accept Order** to confirm.

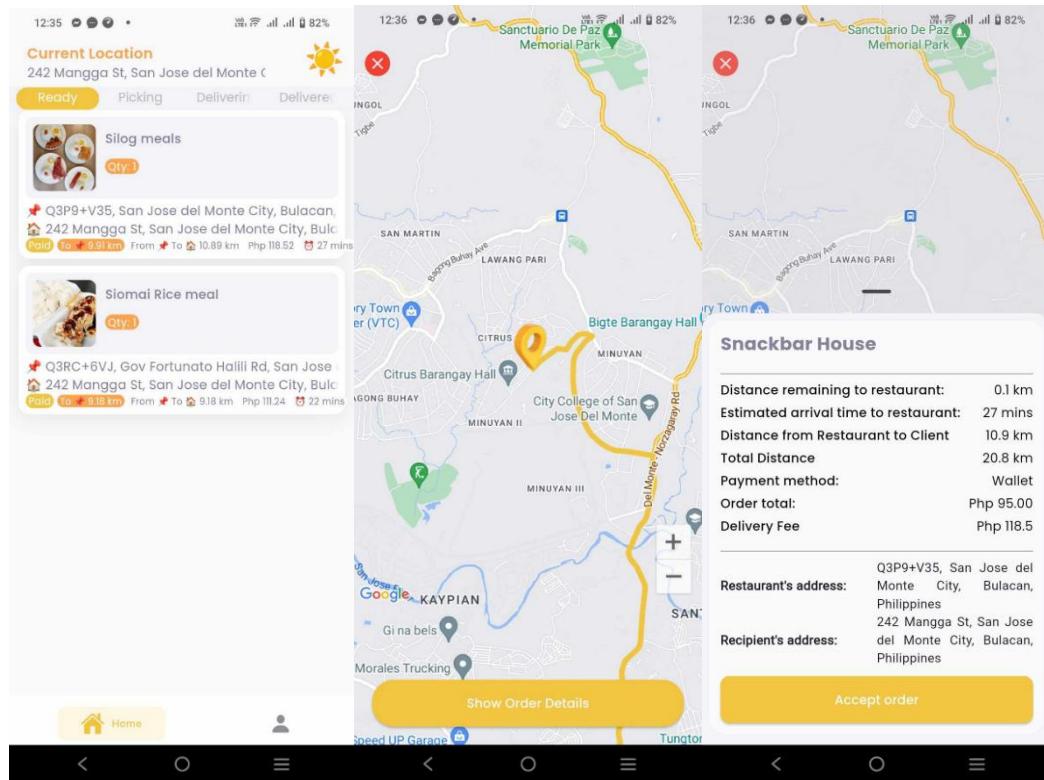


Figure 50. EatsEasy Rider Ready Page

5. Pick Up Process

Navigating the Picking Tab

- Go back to the **Home Tab** and swipe right to access the **Picking Tab**.
- Here, you'll find your assigned delivery. Tracking Your Pickup
 1. Tap on **Your Delivery Item** to get directions to the restaurant.
 2. Once you've picked up the food, press **Mark as Order Picked**.

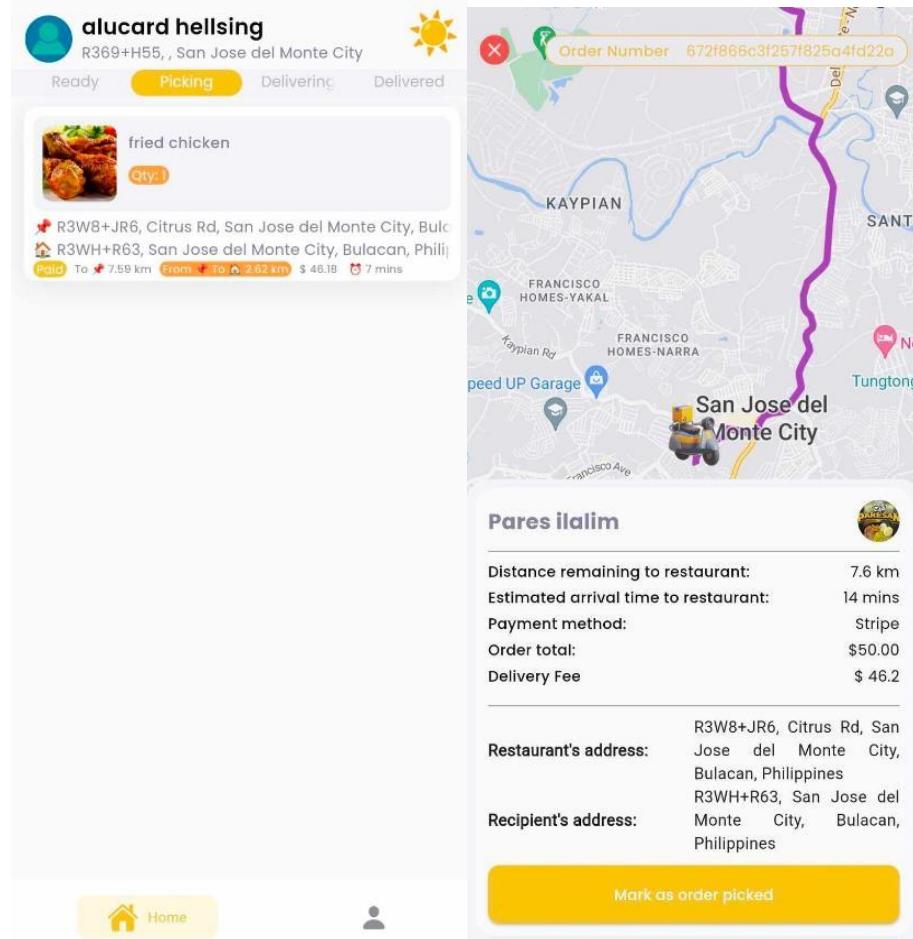


Figure 51. EatsEasy Rider Picking Page

6. Wallet Top-up

EatsEasy rider wallet top-up

Riders must have a wallet balance in order to accept COD orders. The wallet balance would be used to pay the food vendors upfront. This process is the same with the Grabfood cash on delivery order flow for riders.

- Navigate to the rider profile
- Click on the wallet button to access the wallet page.
- Click load to add balance on your rider wallet.

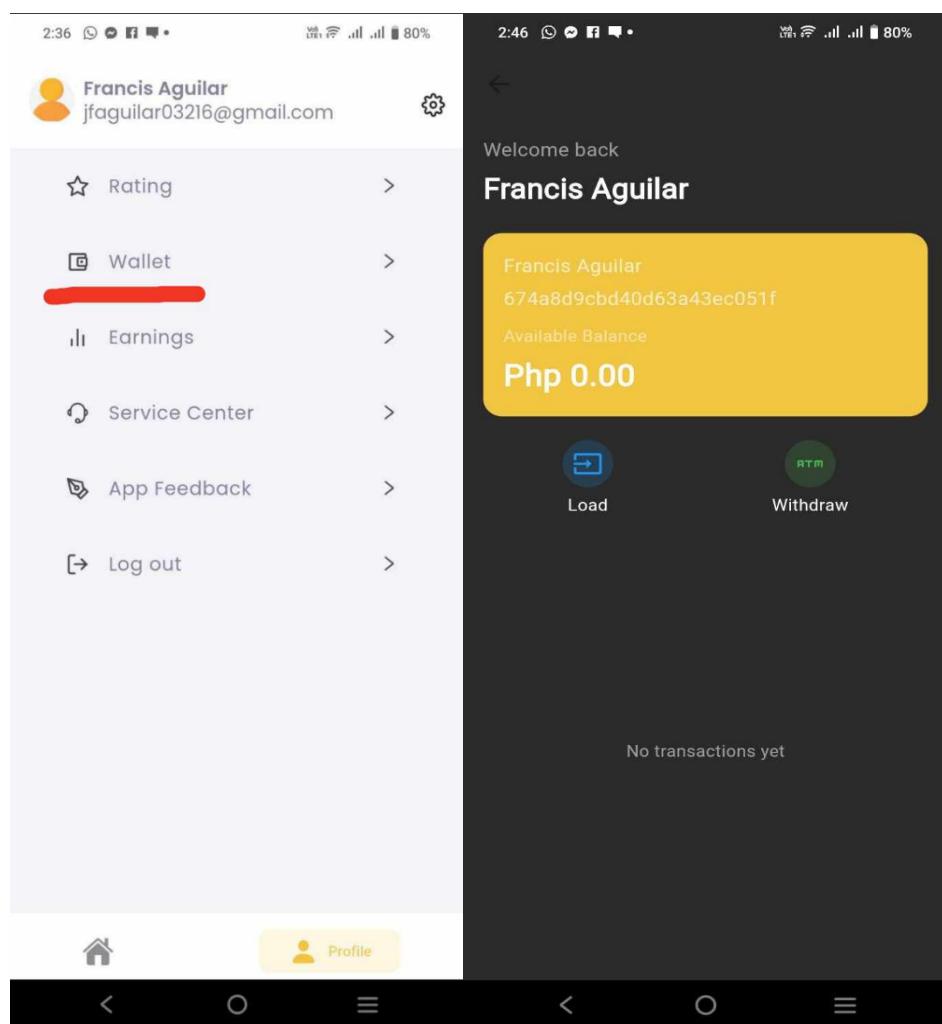


Figure 52. EatsEasy Rider Wallet Page

- Clicking on the load button would navigate you to our 3rd party online payment partner.
- The minimum amount for topping up must be 260 Php (around 5 USD).
- Fill in all the necessary details as failure to do so would result in a unsuccessful transaction.

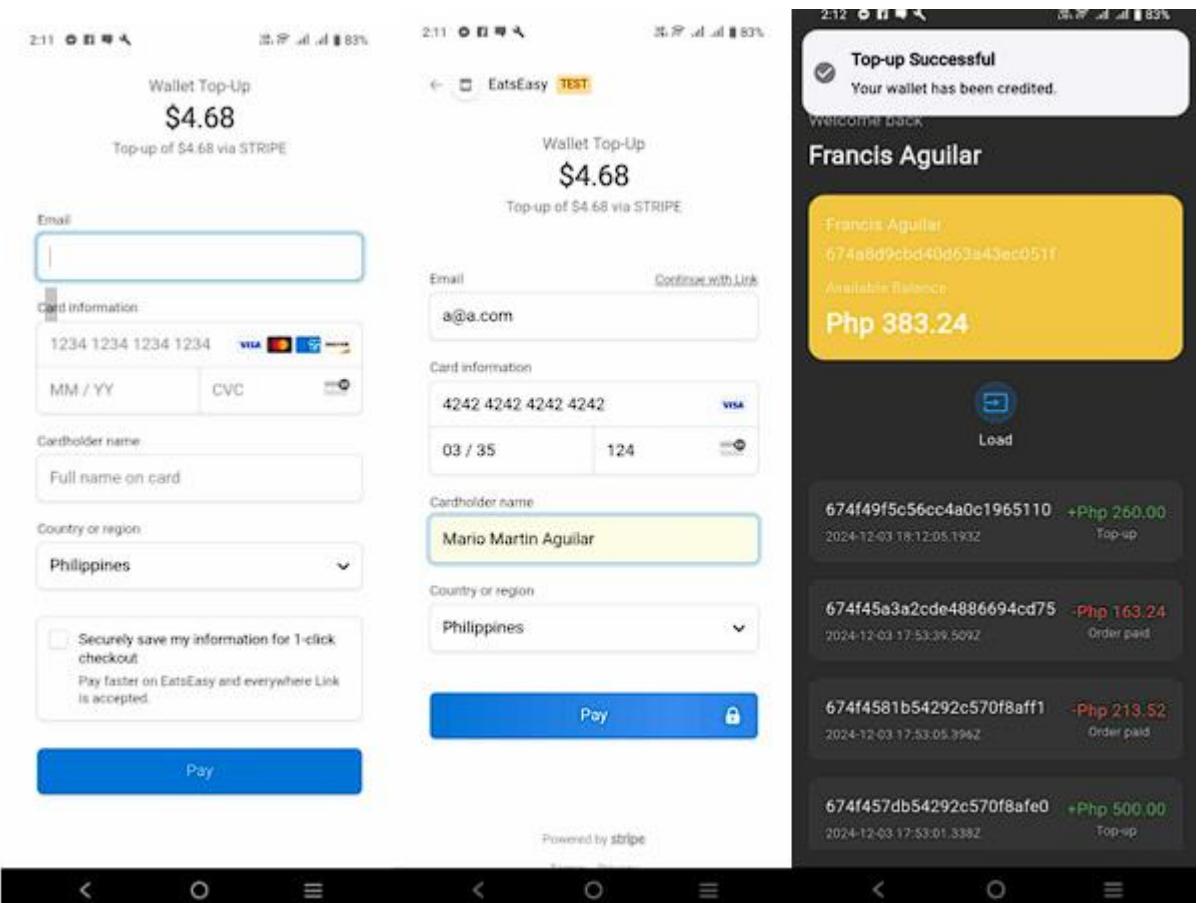


Figure 53. EatsEasy Rider Wallet Top-up Page

7. Delivering to the Customer

Navigating the Delivery Tab

- Return to the **Home Tab**, swipe right again to access the **Delivery Tab**.
- Tap on your assigned order to get the customer's delivery address.

Completing the Delivery

1. Drive to the customer's location using the in-app navigation.
2. Once you've handed over the food, tap **Mark as Delivered**.
3. After confirming the delivery, you'll see a summary screen with:
 - **Order Number**
 - **Recipient's Contact Number**
 - **Your Rating** from the customer
 - **Earnings** for the delivery

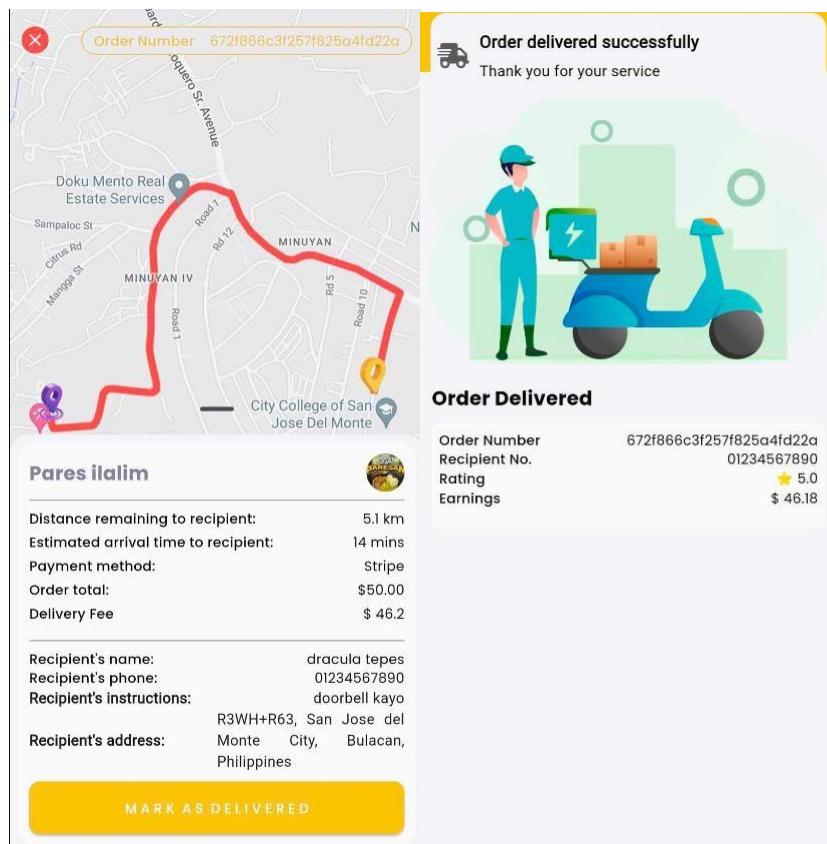


Figure 54. EatsEasy Rider Delivering Page

8. Reviewing Your Deliveries

Tracking Your Past Deliveries

- Head back to the **Home Tab** and swipe right to see the **Delivered Tab**.
- This section shows a history of all the orders you've successfully delivered.



Figure 55. EatsEasy Rider Delivered Page.



**EATSEASY
ADMIN
MANUAL**

EatsEasy Admin App

1. Accessing the Admin App

- This app is for admin use only.
- Download EatsEasy Admin App in Google Playstore or visit [https://admin.eatseeasy.online](https://admin.eatseasy.online)
- Simply **log in** using your admin credentials.
- Once logged in, you'll be taken to the **Home Tab**, which is your control panel for managing the platform.

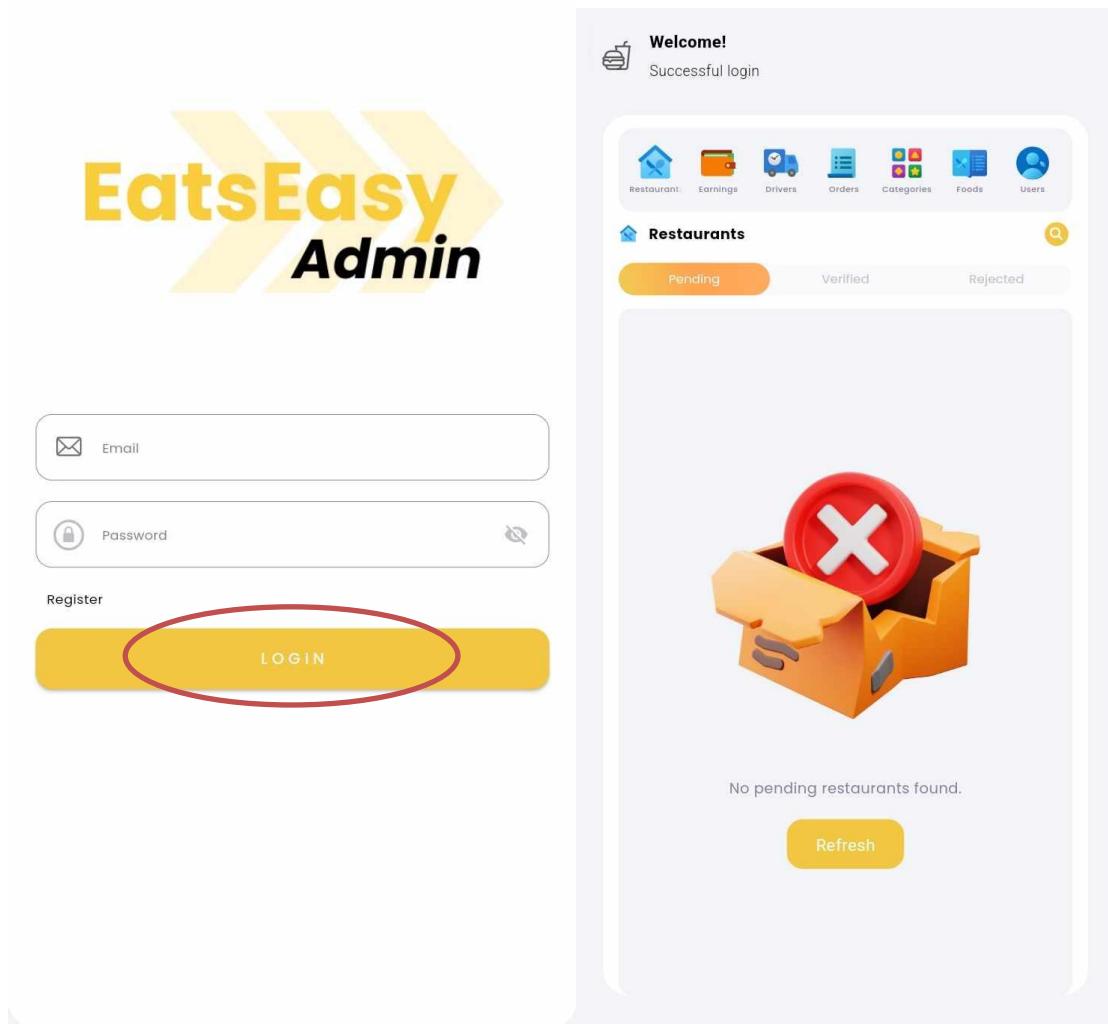


Figure 56. EatsEasy Admin Login Page and Homepage

2. Home Tab Overview

The Home Tab is your main dashboard. Where you can access different sections to manage restaurants, drivers, orders. Here's a quick overview:

Sections Available:

- Restaurants
- Drivers
- Orders
- Categories
- Foods
- Users
- Cashouts
- Feedback

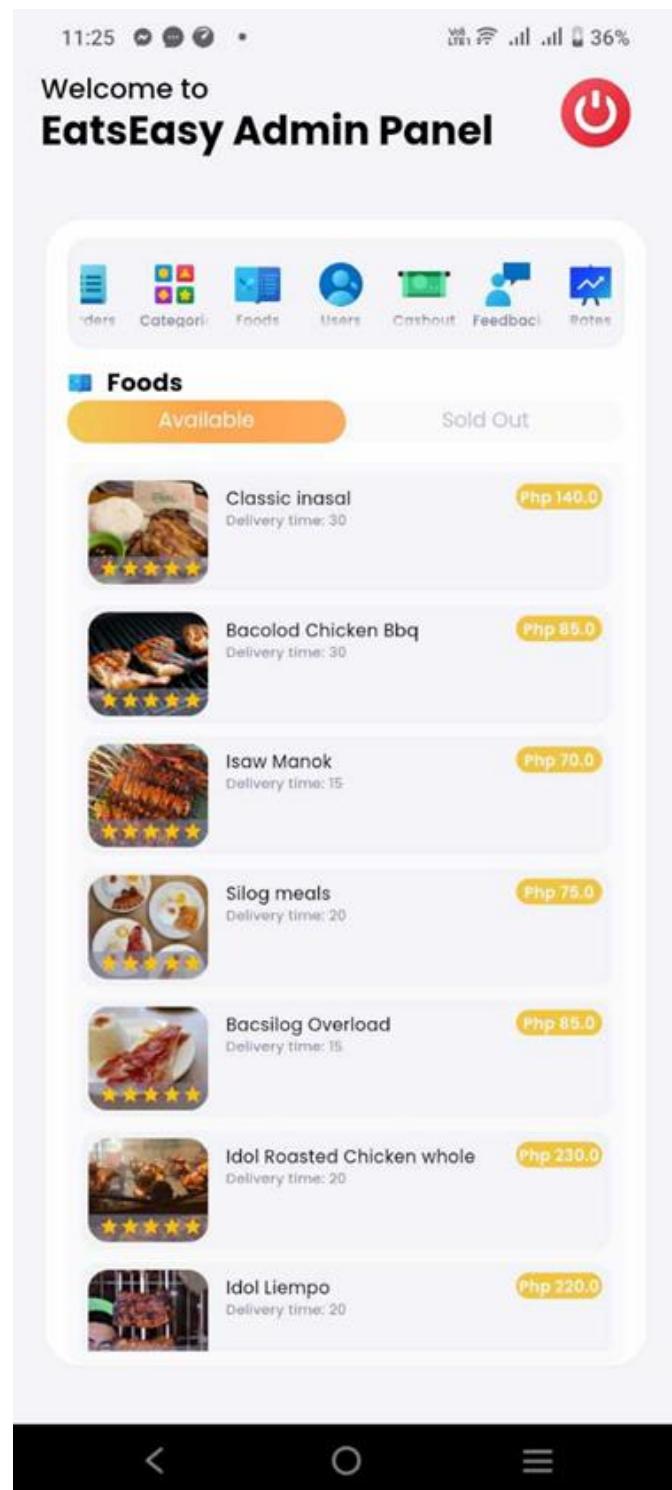


Figure 57. EatsEasy Admin Homepage

3. Managing Restaurants

- Tap on the **Restaurants Tab** to see all the restaurants using the EatsEasy platform.
- The list is divided into three categories:
 - **Pending:** New restaurants waiting for approval.
 - **Verified:** Restaurants that have been approved and are actively using the platform.
 - **Rejected:** Restaurants that didn't meet the verification criteria.

What You Can Do:

- Review pending restaurant applications.
- Approve or reject based on your evaluation.
- Manage existing verified restaurants.

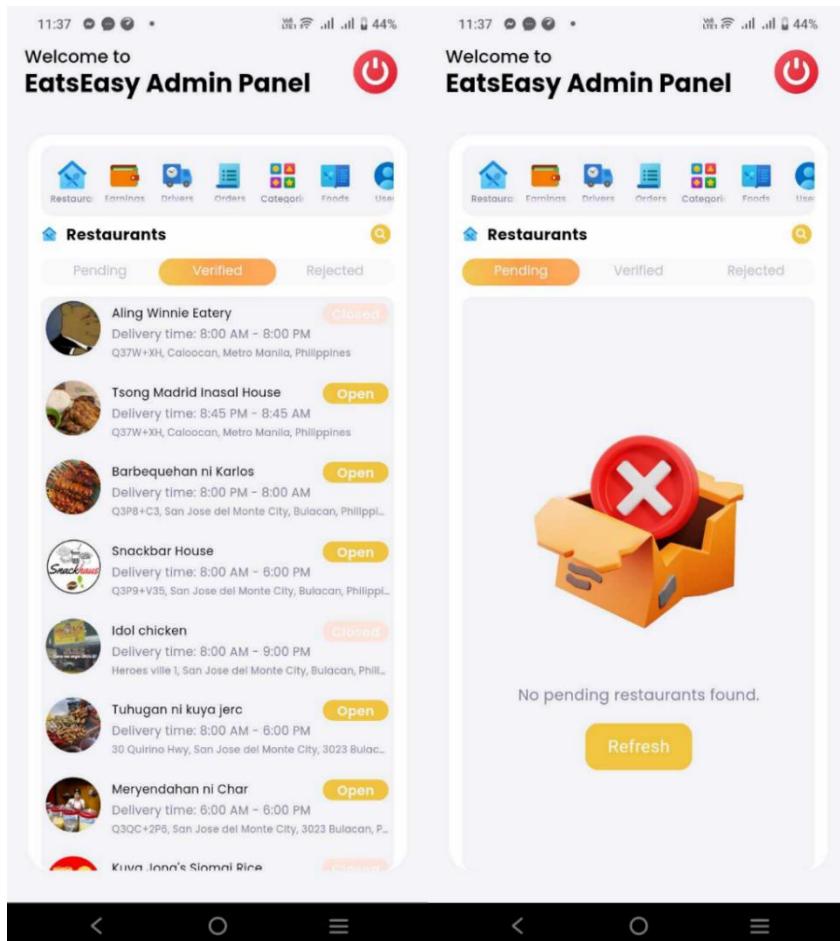


Figure 58. EatsEasy Admin Manage Restaurants Page

4. Managing Drivers

- In the **Drivers Tab**, you can view the status of delivery drivers.
- Similar to the Restaurants Tab, this section is divided into:
 - **Pending:** New drivers waiting for account approval.
 - **Verified:** Approved drivers ready to accept delivery orders.
 - **Rejected:** Drivers who were not approved.

What You Can Do:

- Review driver applications and verify their credentials.
- Approve drivers to start delivering.
- Manage the list of active drivers.

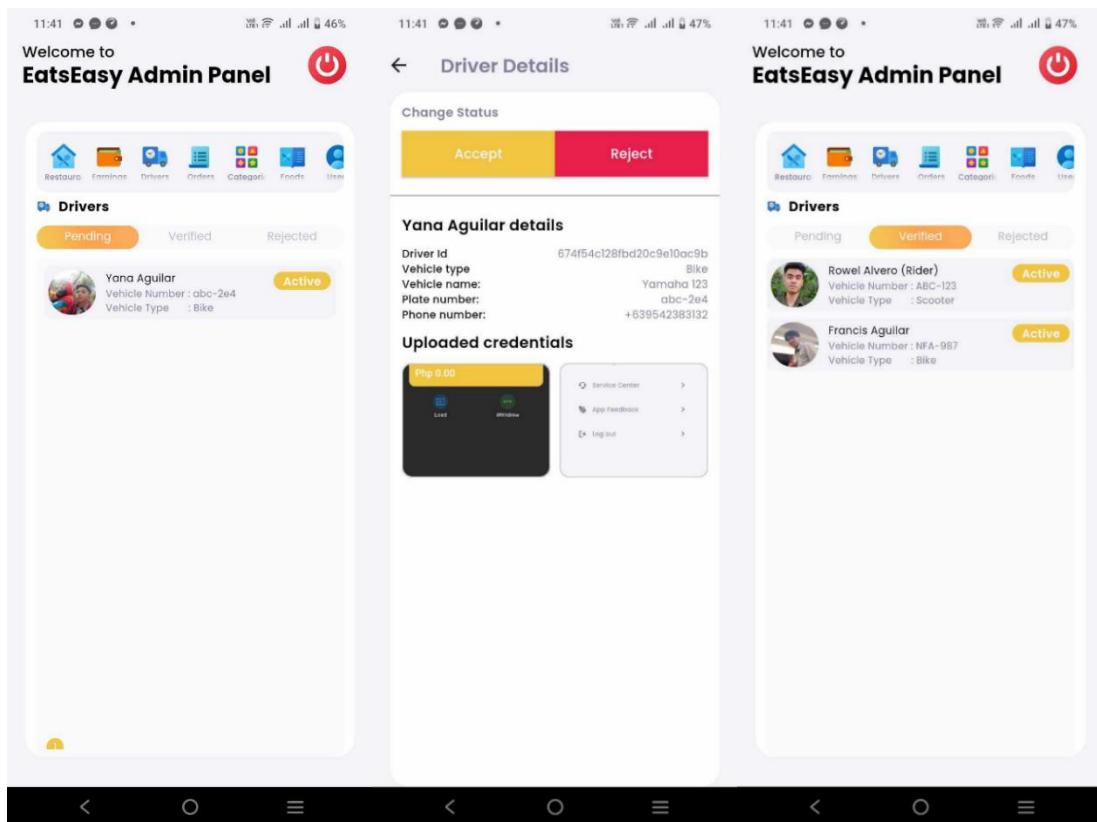


Figure 59. EatsEasy Admin Manage Drivers Page

5. Order Management

- The Orders Tab enables you to track all customer orders on the site.
- Orders are categorized into four:
 - **Placed:** These are recent orders placed by customers.
 - **Delivering:** Orders already in travel to customers.
 - **Delivered:** Successfully completed orders. Successful, completed orders.
 - **Cancelled:** Orders canceled either by the customer or the restaurant.

What You Can Do:

- Overview of orders.

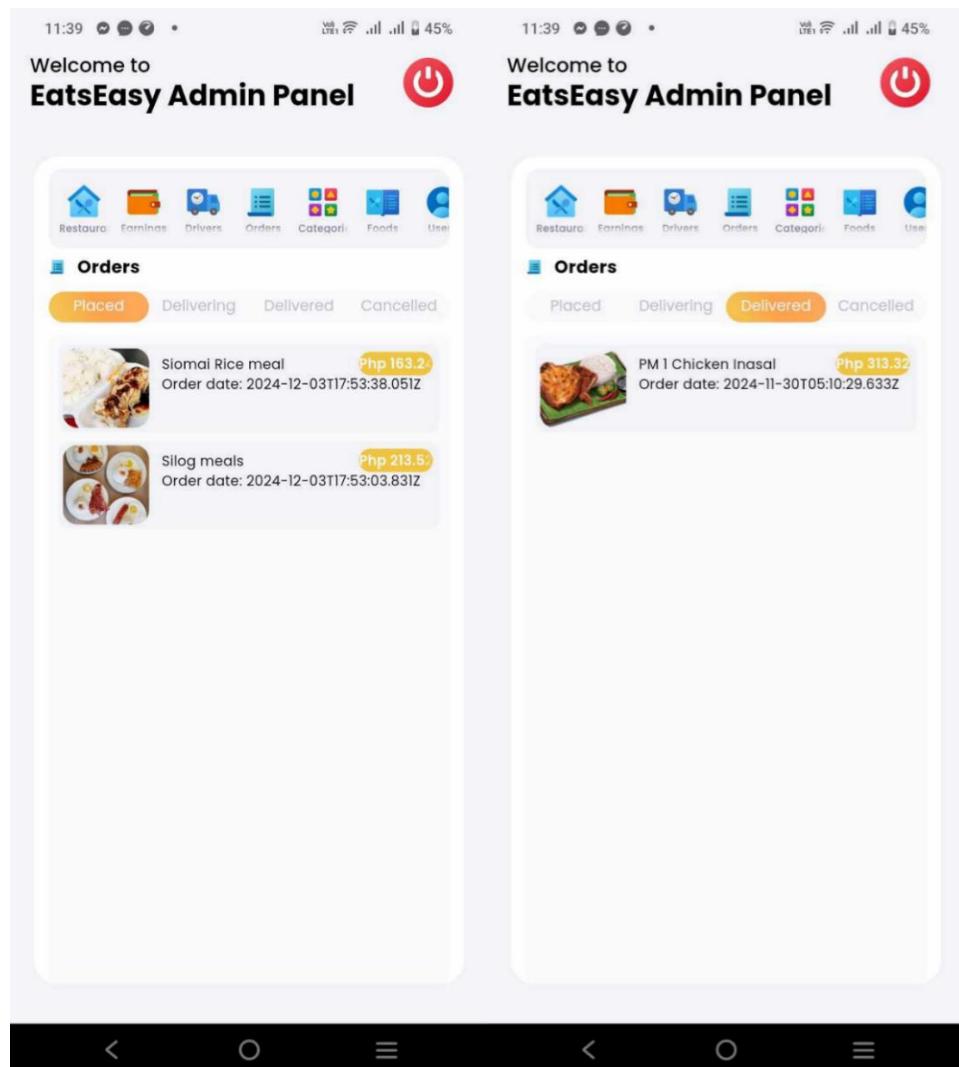


Figure 60. EatsEasy Admin View Orders Page

6. Managing Food Categories

- Go to the **Categories Tab** to manage food categories.
- These categories will be available for partner restaurants to use when listing their menu items.

What You Can Do:

- Add new categories (e.g., Appetizers, Desserts,).
- Edit or delete existing categories to keep the platform organized.

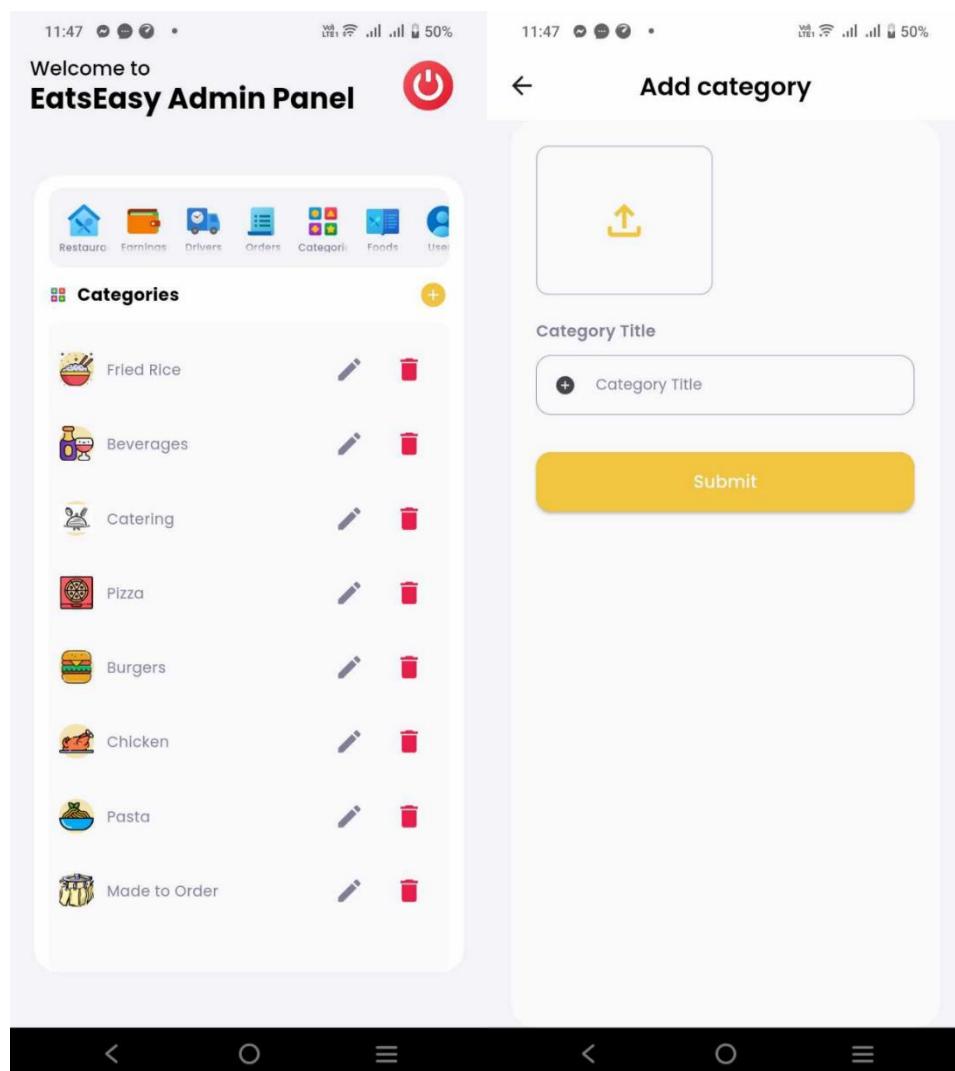


Figure 61. EatsEasy Admin Manage Categories Page

7. Viewing Of Available Foods

- In the **Foods Tab**, you can view all the food items listed by partner restaurants.
- The list is divided into:
 - **Available Foods:** Dishes that are currently being offered for delivery.
 - **Sold Out:** Items that are temporarily unavailable.

What You Can Do:

- Monitor the availability of food item.

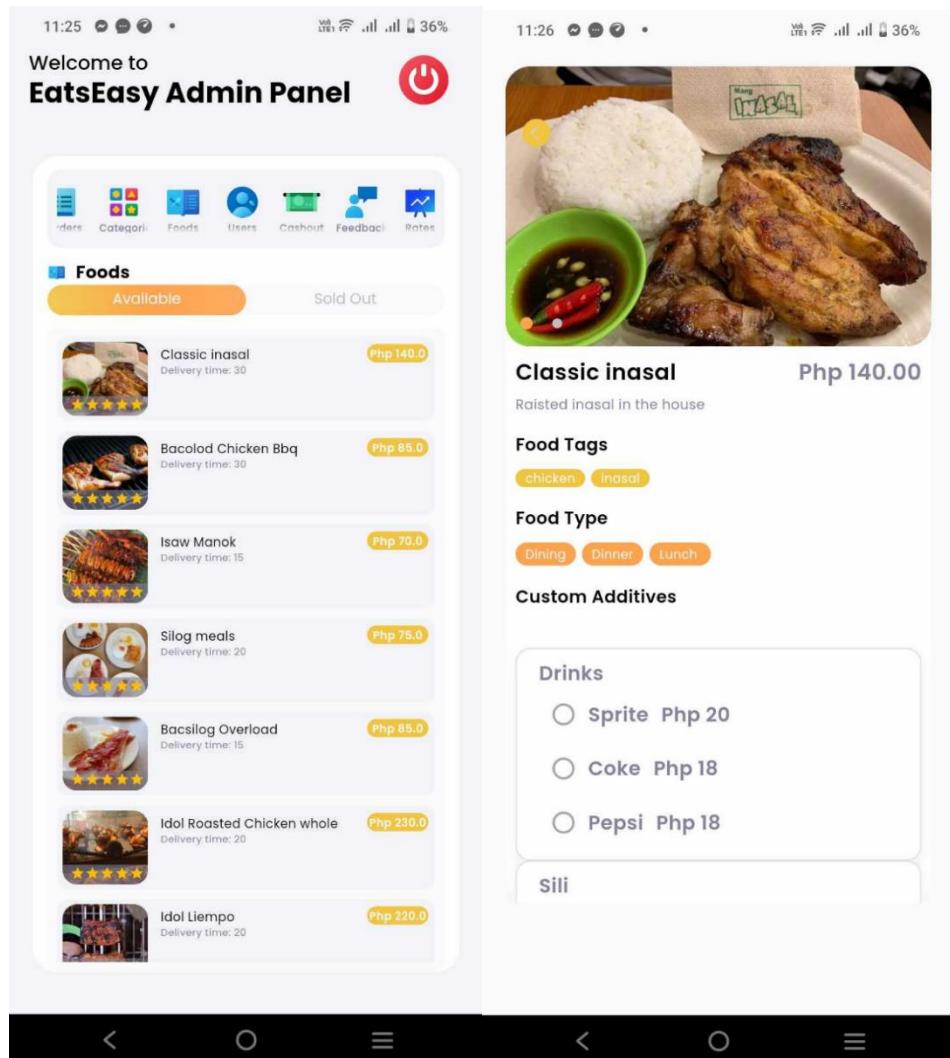


Figure 62. EatsEasy Admin View Available and Sold-out Foods Page

9. Cashout Management

- The Cashout Tab manages the financial withdrawal from restaurants and drivers.
- Cashout requests are categorized into:
 - **Request:** New cashout requests waiting for approval. Incomplete cashout requests awaiting approval.
 - **Completed:** Successfully processed payouts. Successful payout processing has been successfully completed.
 - **Failed:** Cashouts that could not be processed. Cashouts that failed to process.

What You Can Do:

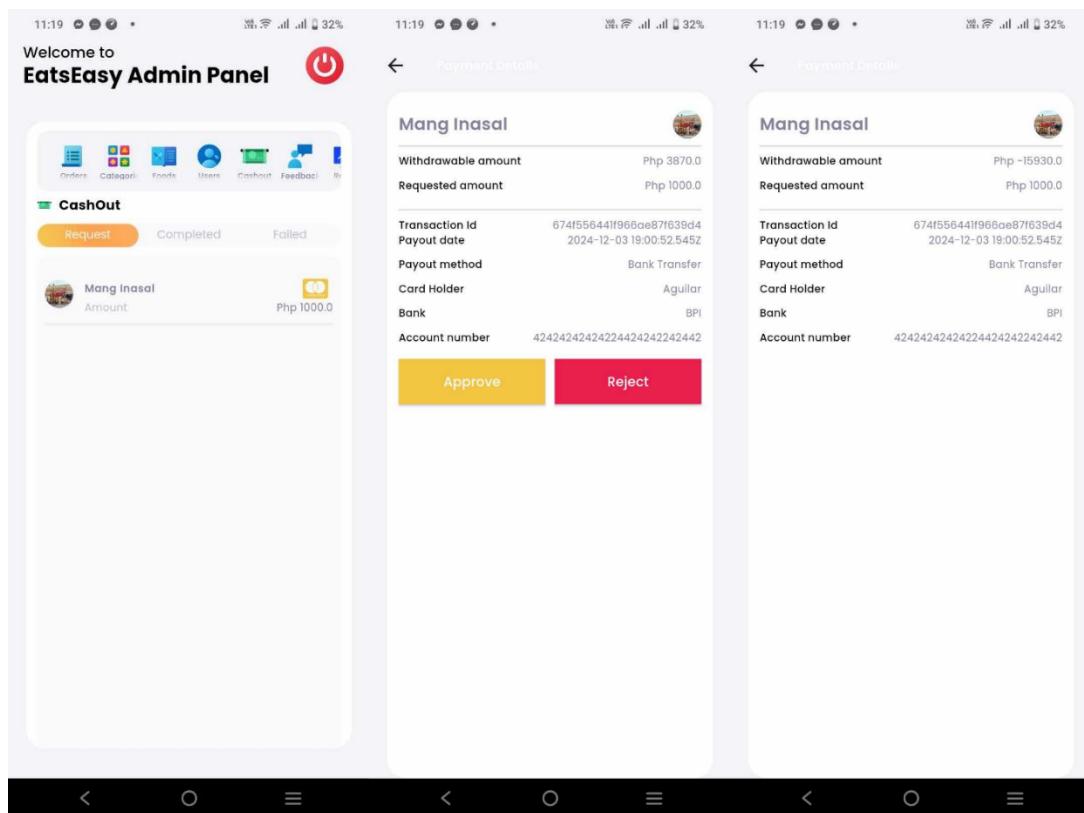


Figure 63. EatsEasy Admin Manage Cash-out Page

- Approve or deny cashout requests.
- Resolve any issues related to failed cashouts.

10. Customer Feedback

- In the **Feedback Tab**, you can review feedback from customers.
- On this feedback tab, you get a view of customer reviews.

This section helps you stay informed about user satisfaction and address any issues promptly. The section keeps you posted on the satisfaction levels of the users and gives you an opportunity to correct issues soon.

What You Can Do:

- Read customer feedback to identify areas of improvement.

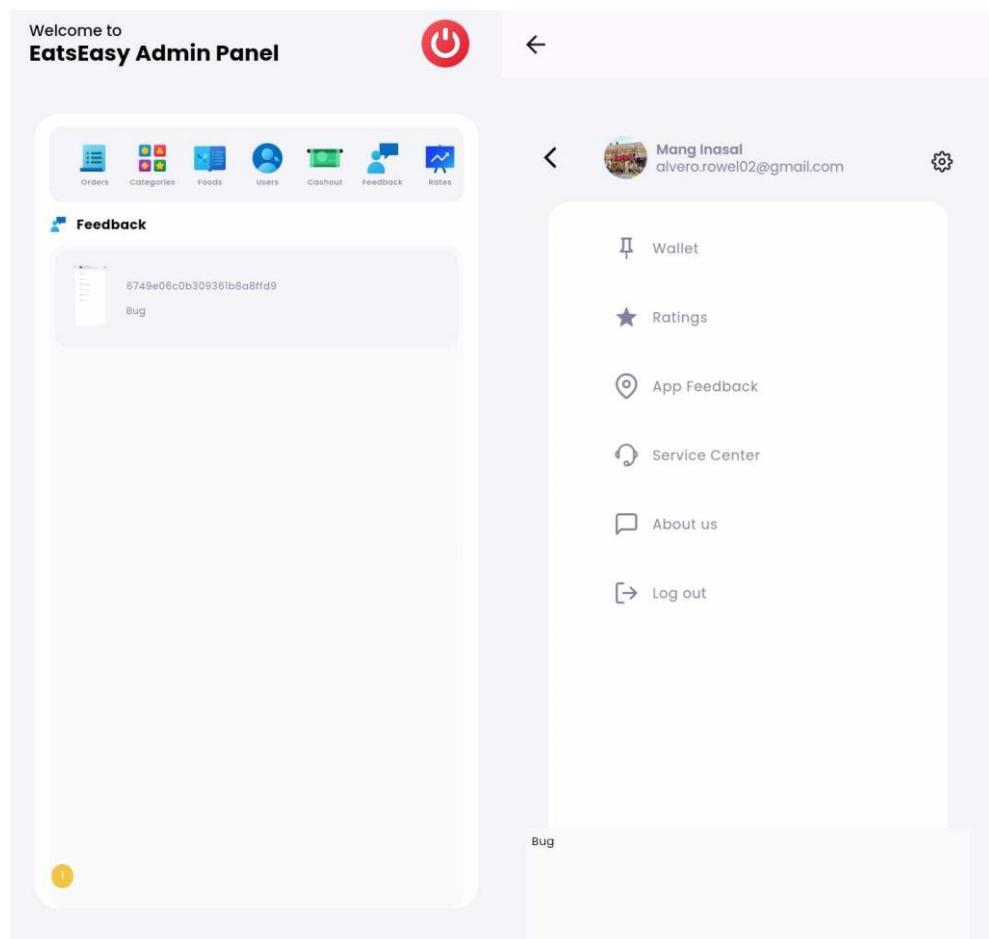


Figure 64. EatsEasy Admin Customer Feedback Page

11. Rates

- The rates tab can give the admins control of the commission rates and the driver rates.
- The admins can click the update button to edit the current commission and driver rates.
- A successful message would pop up when the update button is clicked.

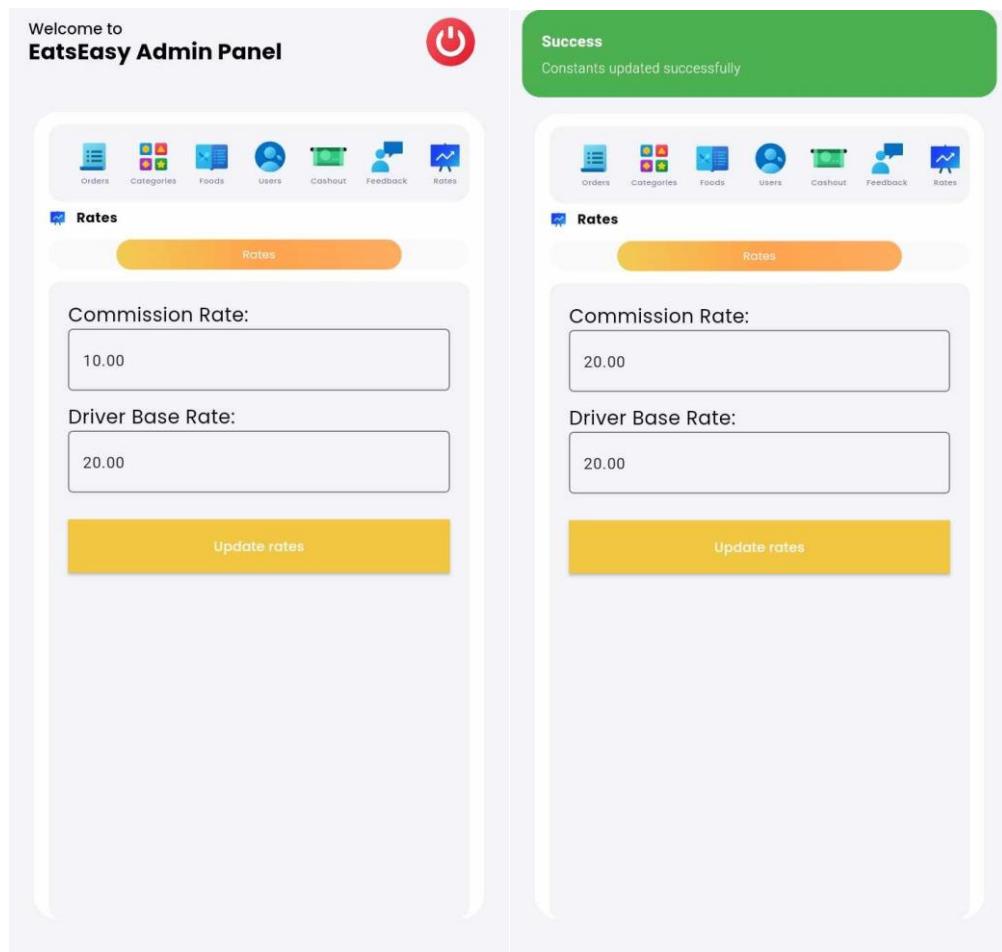


Figure 65. EatsEasy Admin Manage Rates Page

APPENDIX E.
TESTING INTERFACE

General User Account Login and Registration Test Interface:

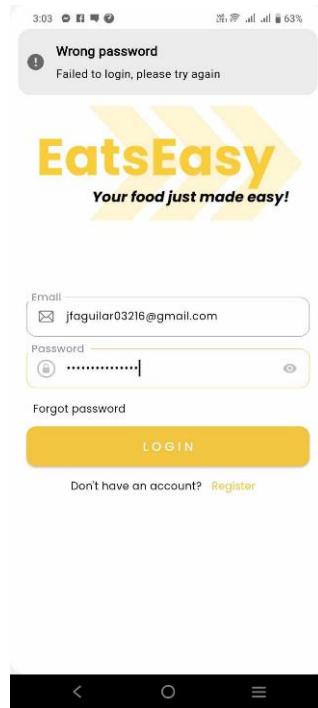


Figure 66. Invalid Password Login

When the email is valid but the password doesn't match with the existing account, the wrong password notification would show up.

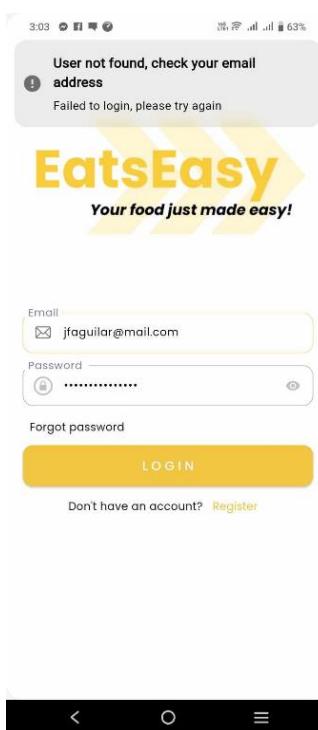


Figure 67. Invalid Email Login

When the email is not registered within the EatsEasy platform, this notification would

show up indicating that the email is not yet registered or does not exist in the system.

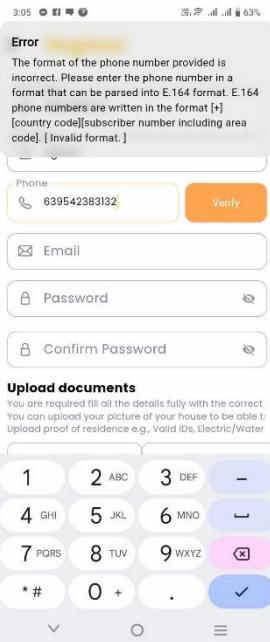


Figure 68. Invalid Phone Format

The phone number format must be in +63. Invalid format on the phone number would pop up this notification indicating the proper format.

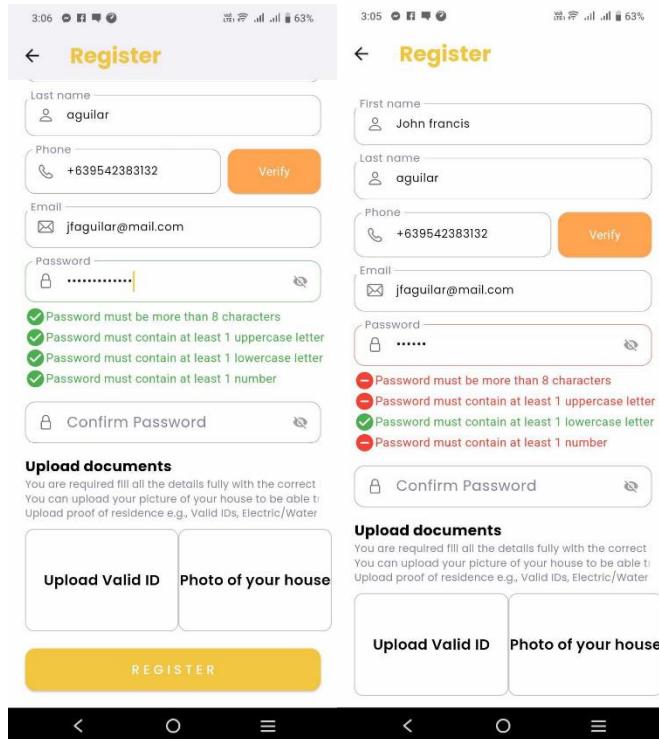


Figure 69. Invalid Password Format

When creating a password, all of these conditions must be met:

- More than 8 characters
- at least 1 uppercase and lowercase letter

- at least 1 number

Failure to follow the conditions would result in an error with the conditions in a red highlight with a red sign. If every condition has been met when creating a password, all of the conditions would be highlighted in green with a green check symbol.

The screenshot shows a mobile application interface for user registration. At the top, there is a 'Password Mismatch' notification stating: 'Confirm password does not match the entered password.' Below this, there are fields for 'Phone' (+639542383132) and 'Email' (jtaguilar@mail.com). A 'Verify' button is next to the phone number field. Below these are fields for 'Password' and 'Confirm Password', both containing masked text. To the right of the password fields, a list of validation rules is shown, all of which are highlighted in green with checkmarks: 'Password must be more than 8 characters', 'Password must contain at least 1 uppercase letter', 'Password must contain at least 1 lowercase letter', and 'Password must contain at least 1 number'. Below the password fields is a section titled 'Upload documents' with a note about uploading proof of residence. At the bottom is a large yellow 'REGISTER' button.

Figure 70. Password Mismatch Error

The confirm password textbox input must match the text input in the password textbox. Failure to do so would result in a Password mismatch notification

The screenshot shows a mobile application interface for user registration. At the top, there is a success message: 'User created successfully' with a link to 'Proceed to login'. Below this is the 'EatsEasy' logo with the tagline 'Your food just made easy!'. The registration form includes fields for 'Email' and 'Password', both with masked text. Below the password field is a list of validation rules, all of which are highlighted in green with checkmarks: 'Password must be more than 8 characters', 'Password must contain at least 1 uppercase letter', 'Password must contain at least 1 lowercase letter', and 'Password must contain at least 1 number'. To the right of the password fields is a section titled 'Upload documents' with a note about uploading proof of residence. At the bottom is a large yellow 'REGISTER' button.

Figure 71. Successful Registration

All of the fields must be completed in the register page in order for a successful registration to take place. Failure to do so would result in an incomplete information notification. When all of the fields are complete, clicking the register button would show up a User Created Successfully notification and would navigate the user back to the login page.

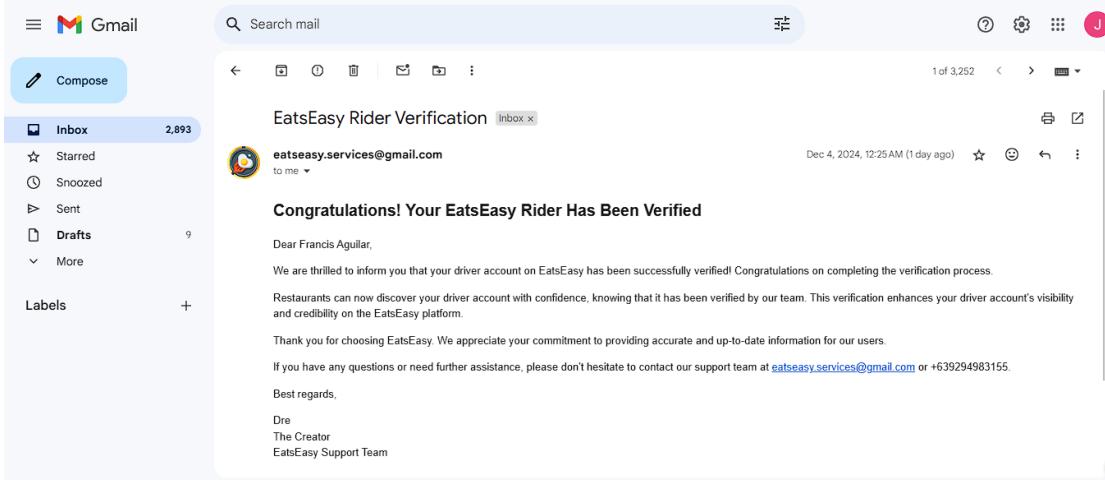


Figure 72. Verified Application for Vendor/Driver

Users who registered as riders and vendors in the EatsEasy platform would receive an email notification if their registration was successful and verified by the admin. They can check it on their email provided on the inbox page.

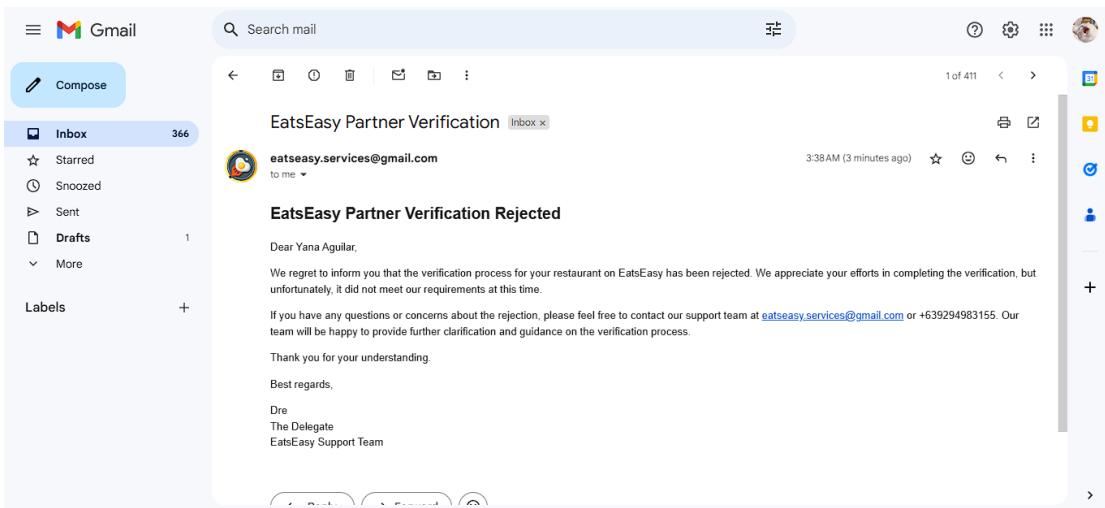


Figure 73. Rejected Application for Vendor/Driver

Unsuccessful registration is due to the requirements not being met by the Vendors or Riders. A mail will be sent to their provided email address informing them that their registration was unsuccessful as the admins verified their documents as invalid.

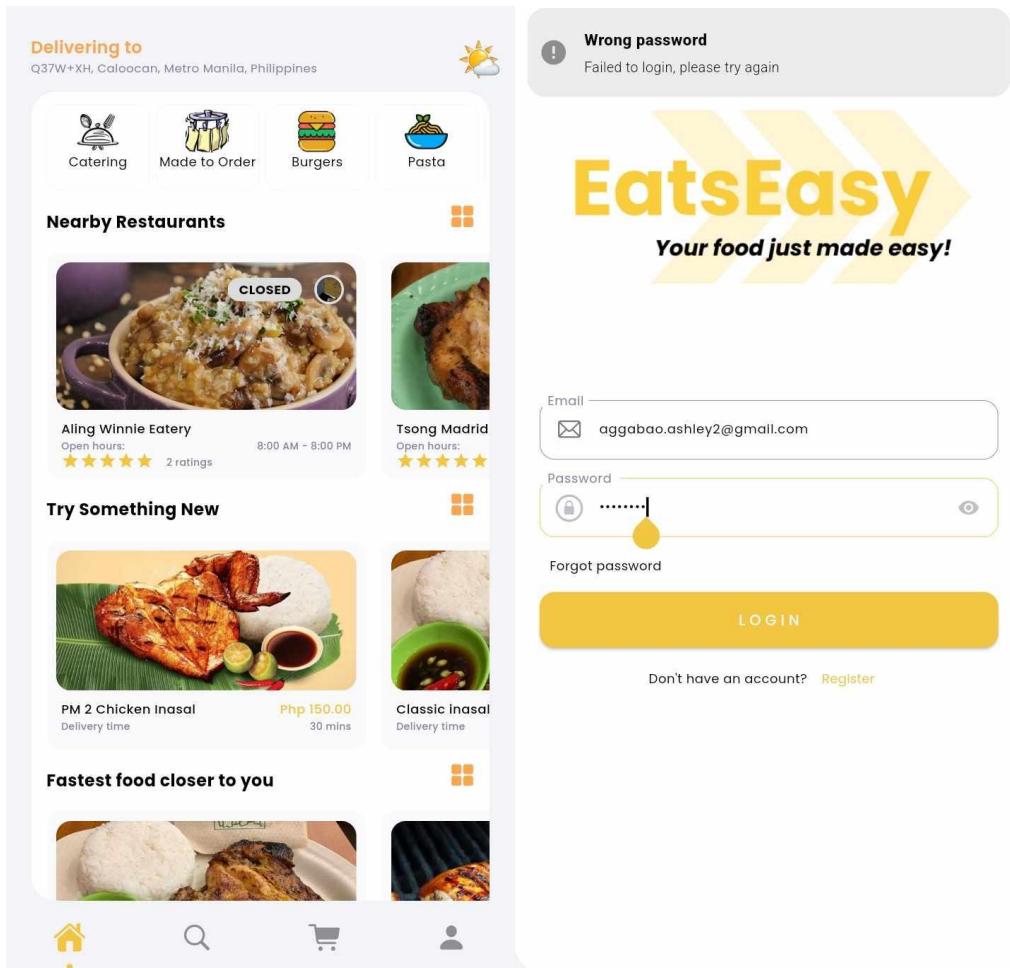


Figure 74. Successful and Unsuccessful Login

Valid Login: Shows that Login is successful and would automatically navigate to the homepage

Failed Login: would Pop-up a notification about the login attempt and the reason for error

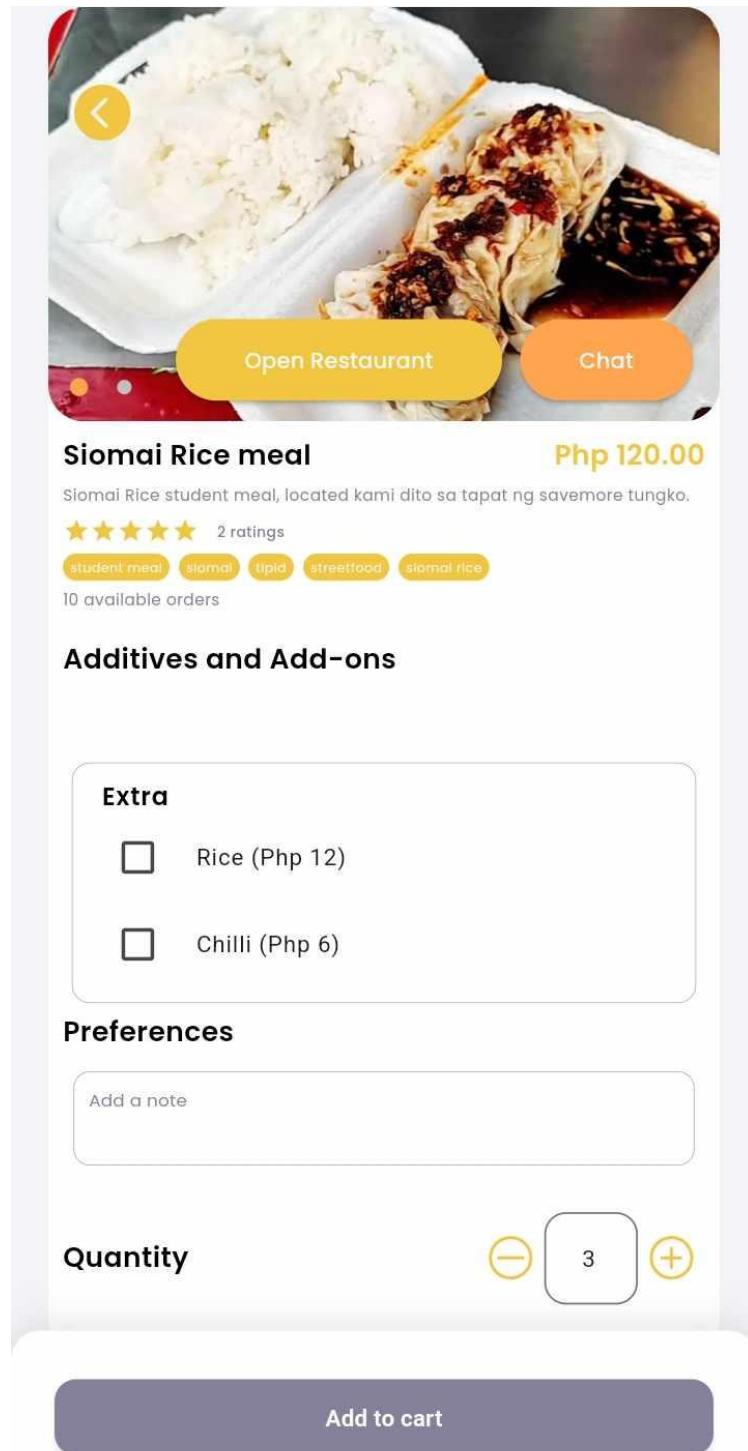


Figure 75. EatsEasy Food Page

Users can customize the menu on the food menu page. The menu customizability would explicitly depend on how it was listed by the vendor of the menu like in this case, Users can tick the checkbox for the additives or write their Preferences in the textbox.

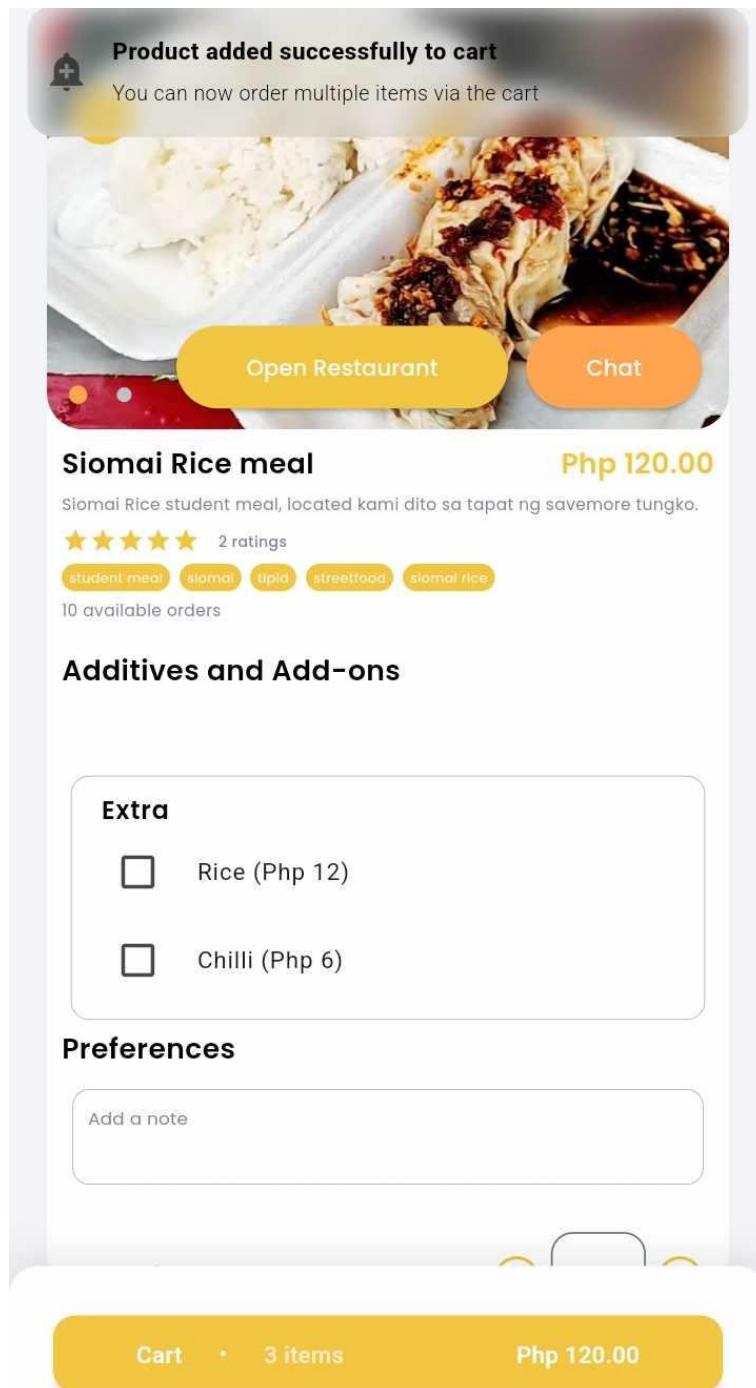


Figure 76. Add to Cart

When a product is added to cart, a successful pop-up indicating the action was successful would show up to the us.

e-Wallet top-up and cashless payment method

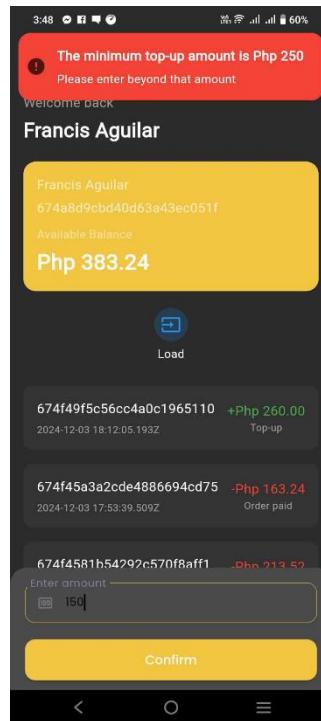


Figure 77. Invalid Amount

The minimum a top-up amount on the User and Rider wallet is 250 Php (within 5 dollars). Anything below would pop up a notification informing that the minimum top up is 250 Php.

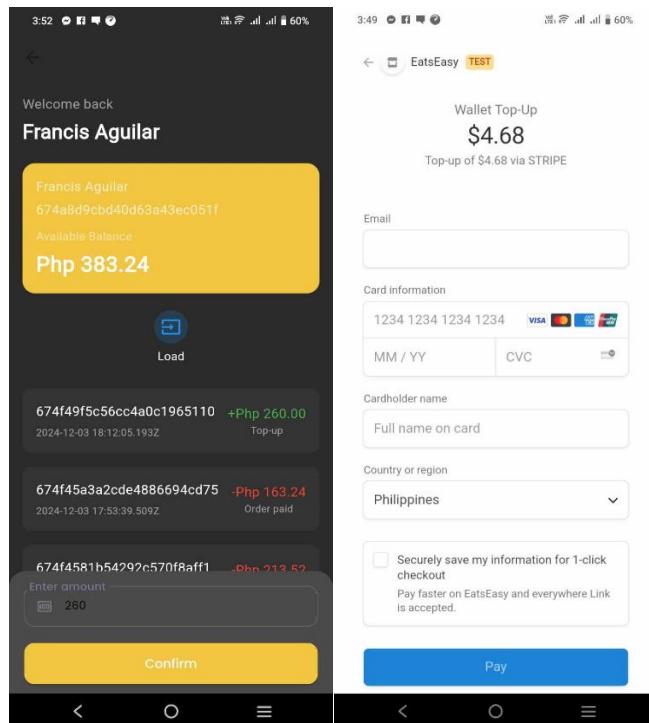


Figure 78. Successful Top-up

When the >250php condition is met, the stripe payment portal would show up.

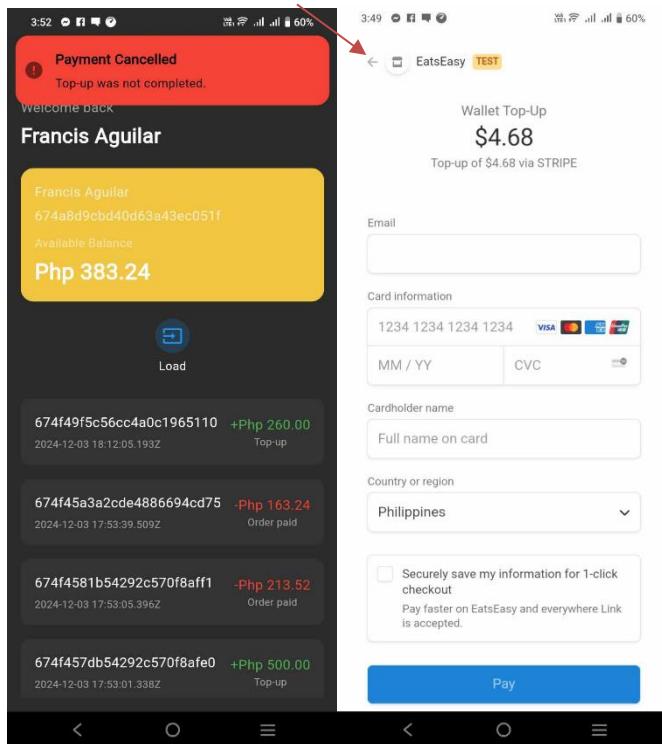


Figure 79. Cancel Top-up

Top up cancellations can be done by clicking the back button located at the top left corner of the stripe portal.

Clicking the back button would result in a top-up cancellation along with a notification indicating the cancellation has happened.

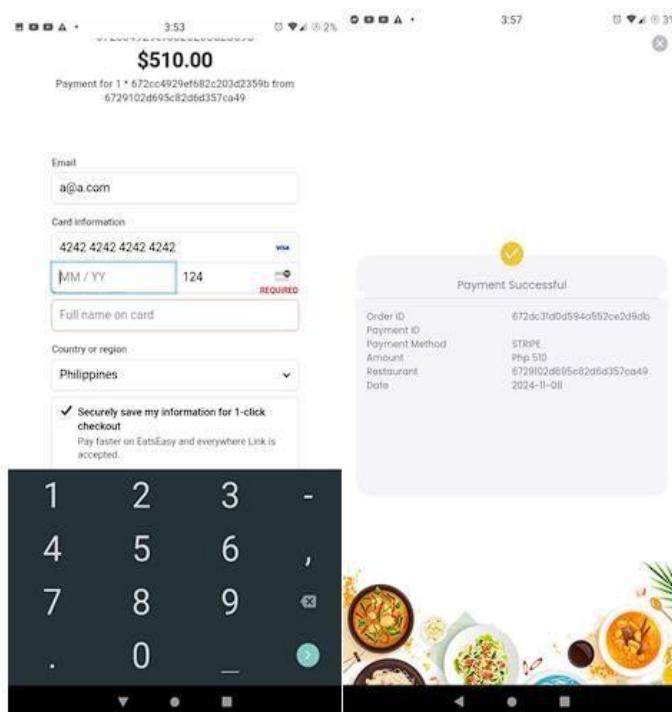


Figure 80. Top-up Interface

Stripe Payment portal- All fields in the payment interface must be filled. Whenever a field lacks input, the field would be highlighted with a red outline. This is also the behavior whenever the card information typed on the field is invalid. Successful Payment would show a pop-up indicating the Payment was successful. This also means that the order was successfully created.

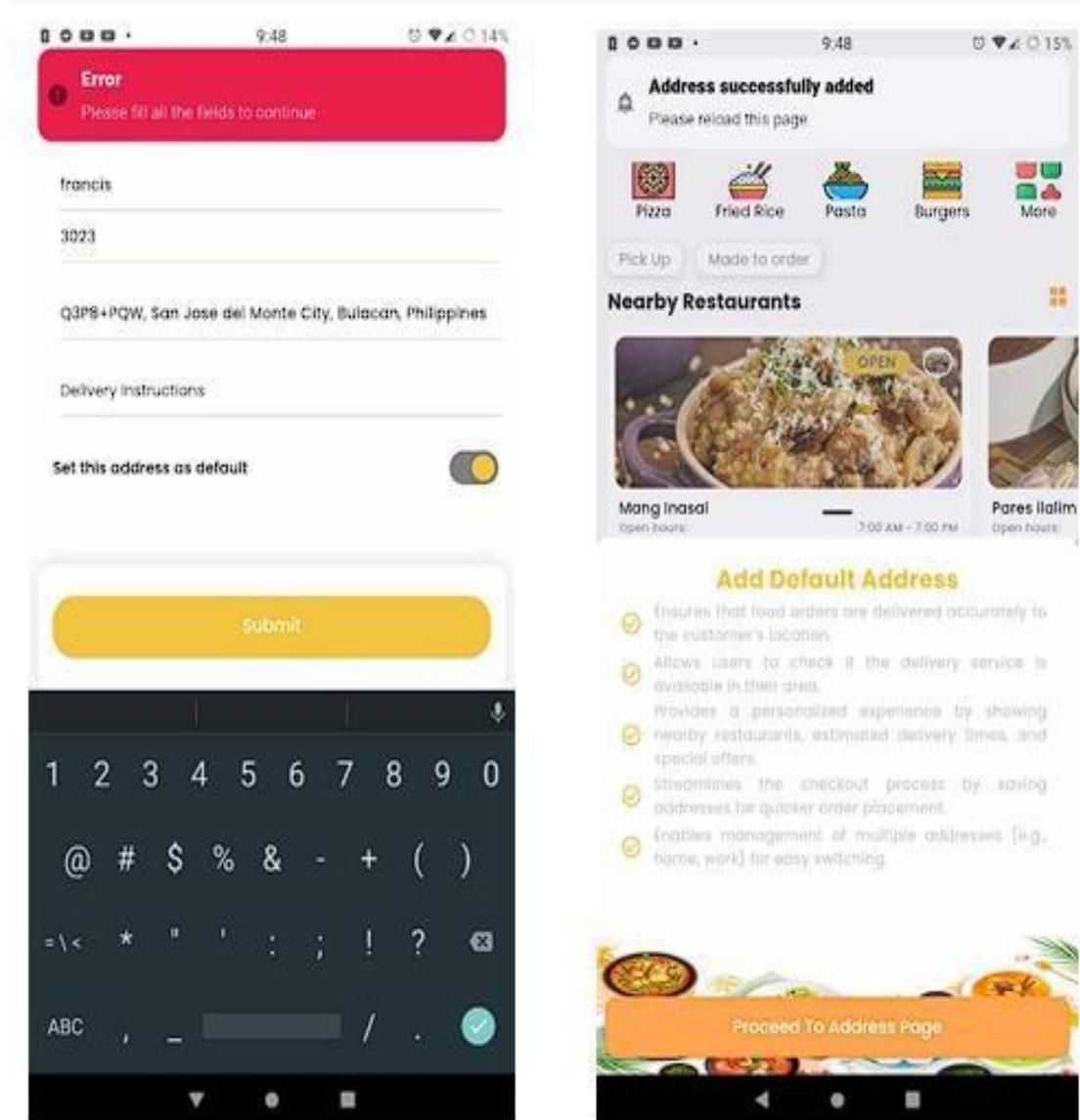


Figure 81. Add a New Place Input Fields

When setting up your address, after pinpointing your location in google maps, you will be navigated to a page where you need to input additional address and delivery information. All fields are required. Whenever a field is missing inputs, an error pop-up would show up indicating all fields are required.

Successful address set-up would automatically navigate you back to the homepage with a pop-up indicating address to be successfully added.

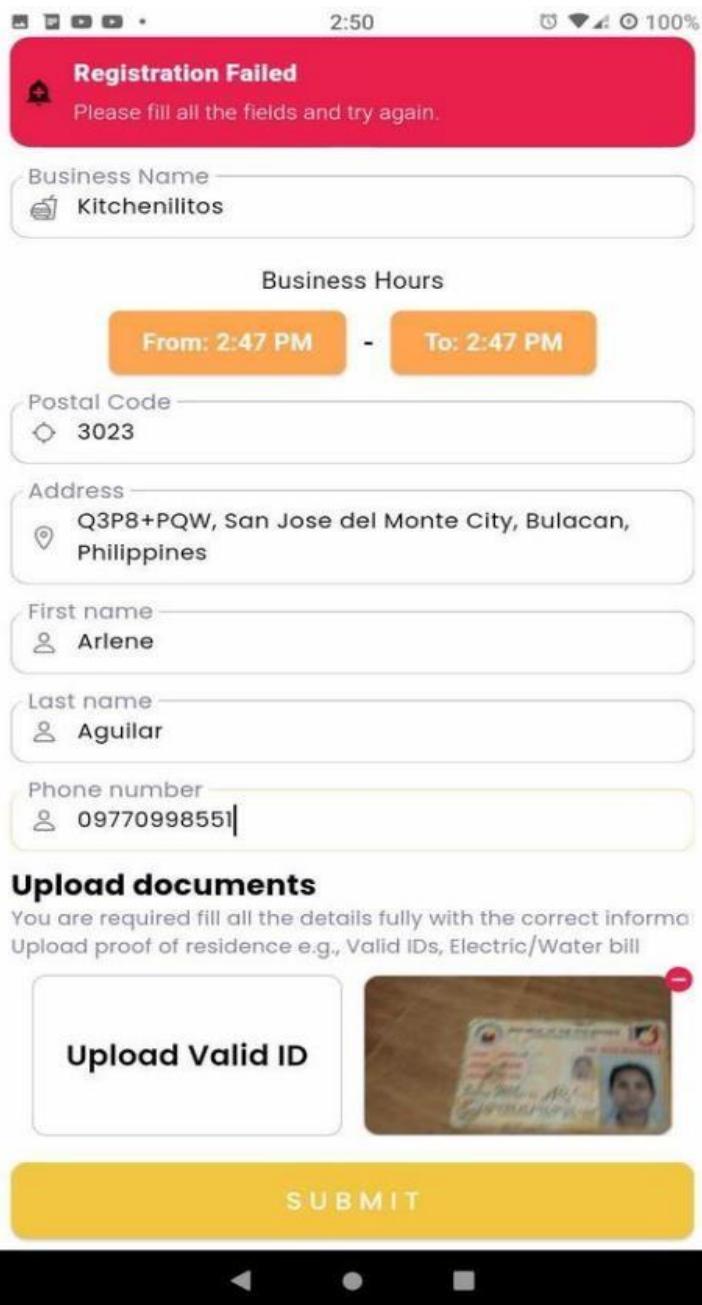


Figure 82. EatsEasy Vendor Registration Failed

All of the fields in the Vendor registration must be filled out as it will be used for verification, in this case, the vendor lack an ID photo upload which results to a registration error. Each part of the Registration field must be clear along with the photo. It should be clear so the admins can read the necessary details for verification purposes.

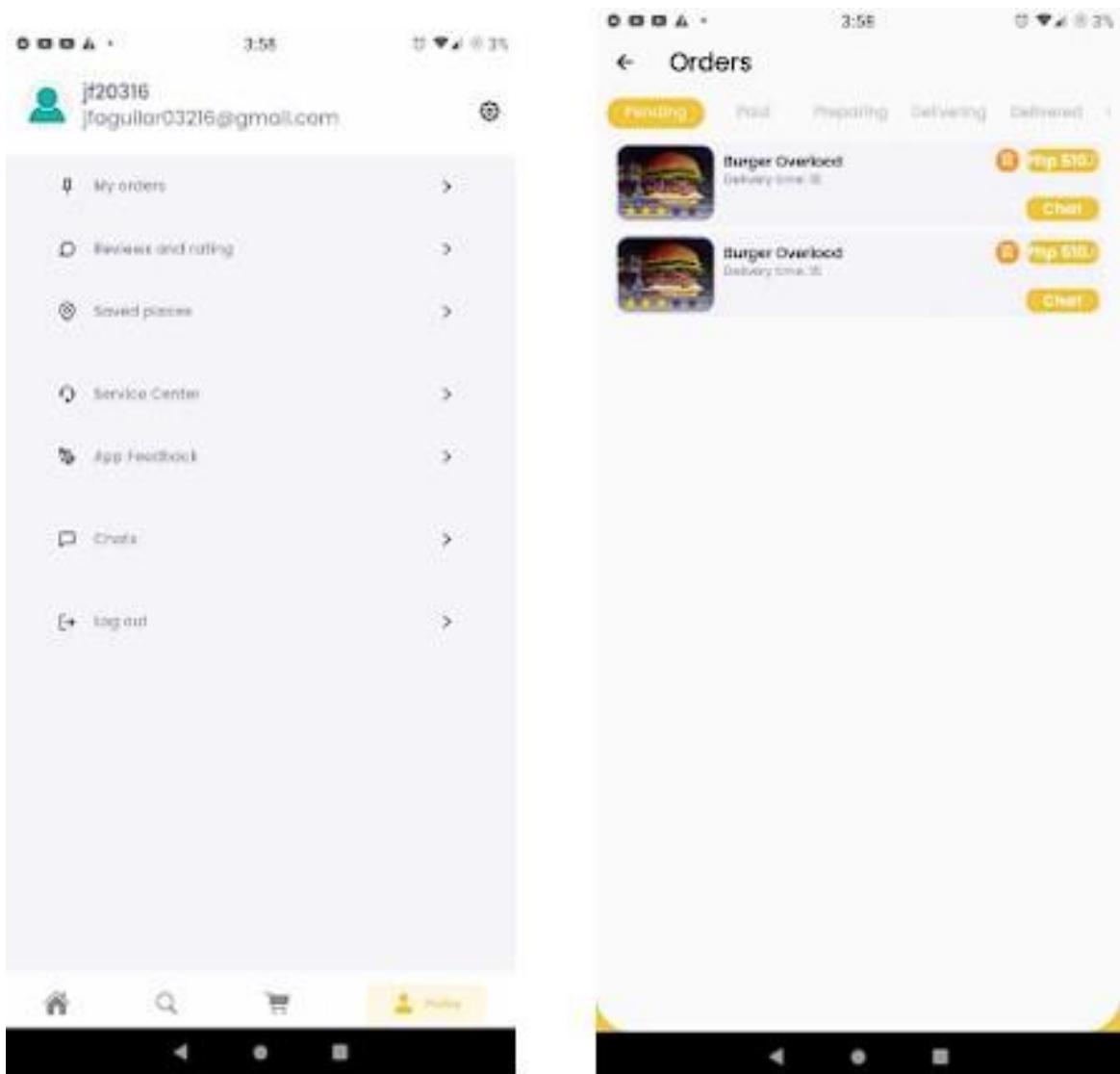


Figure 83. EatsEasy Orders Page

Successfully placed orders can be checked in the User-Profile and clicking the “My Orders”. It would show up all the orders successfully placed by the user.

Cash on delivery orders are placed in the Pending panel whereas orders placed with the stripe method are placed on the Paid panel.

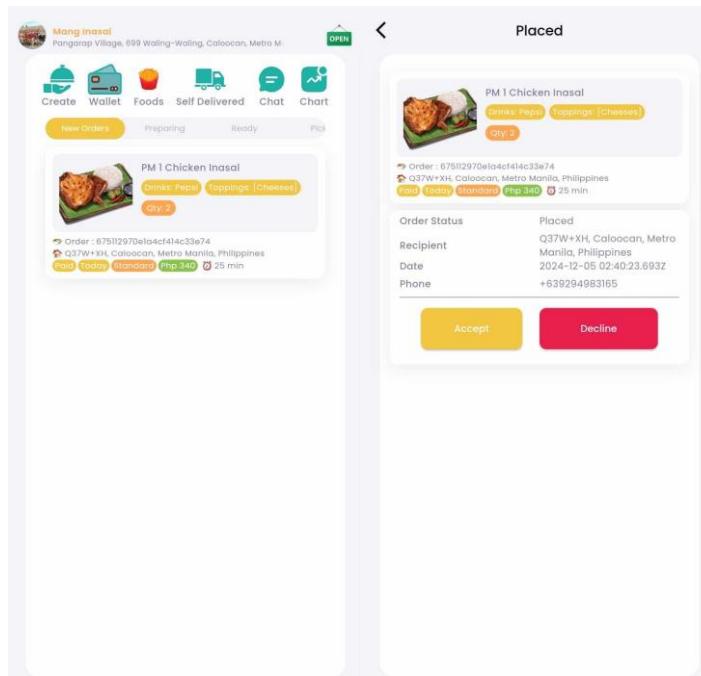


Figure 84. EatsEasy Vendor New Orders Page

Accepting orders in the vendor app homepage can be done by clicking the new orders panel, and then browse and selecting the placed order. The user will navigate to the order information where the app will prompt the vendor to accept the order.

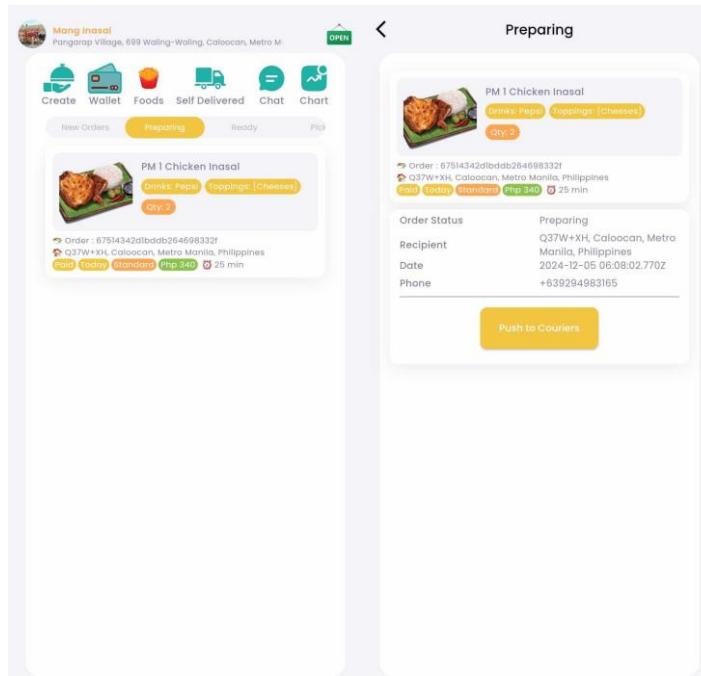


Figure 85. EatsEasy Vendor Preparing Orders Page

Accepted Orders will move to the Preparing Panel and if the order is ready the user will press to push to courier and automatically navigated to Ready Panel and ready to be picked up by driver.

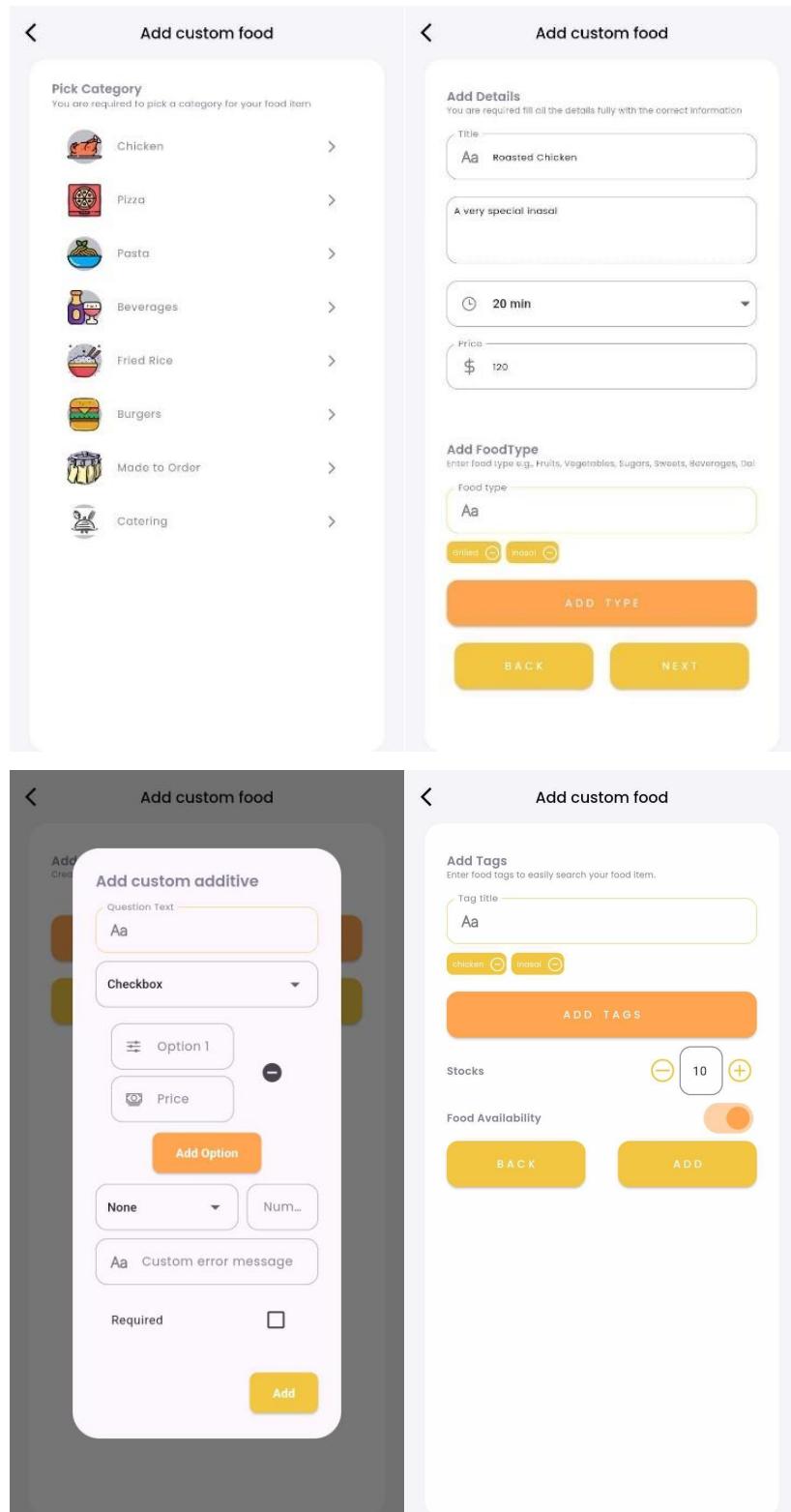


Figure 86. Add Custom Foods

The Create button along with the edit food functionality is where vendors can create or change their own menu's customizability and flexibility.

All fields on this page are required and must also be filled. Whenever a field lacks an input or the vendor uploaded less than 2 images for the food menu after clicking the add

button, an error message shows indicating to please enter a valid value. In the case below the reason for the error is the lack of description.

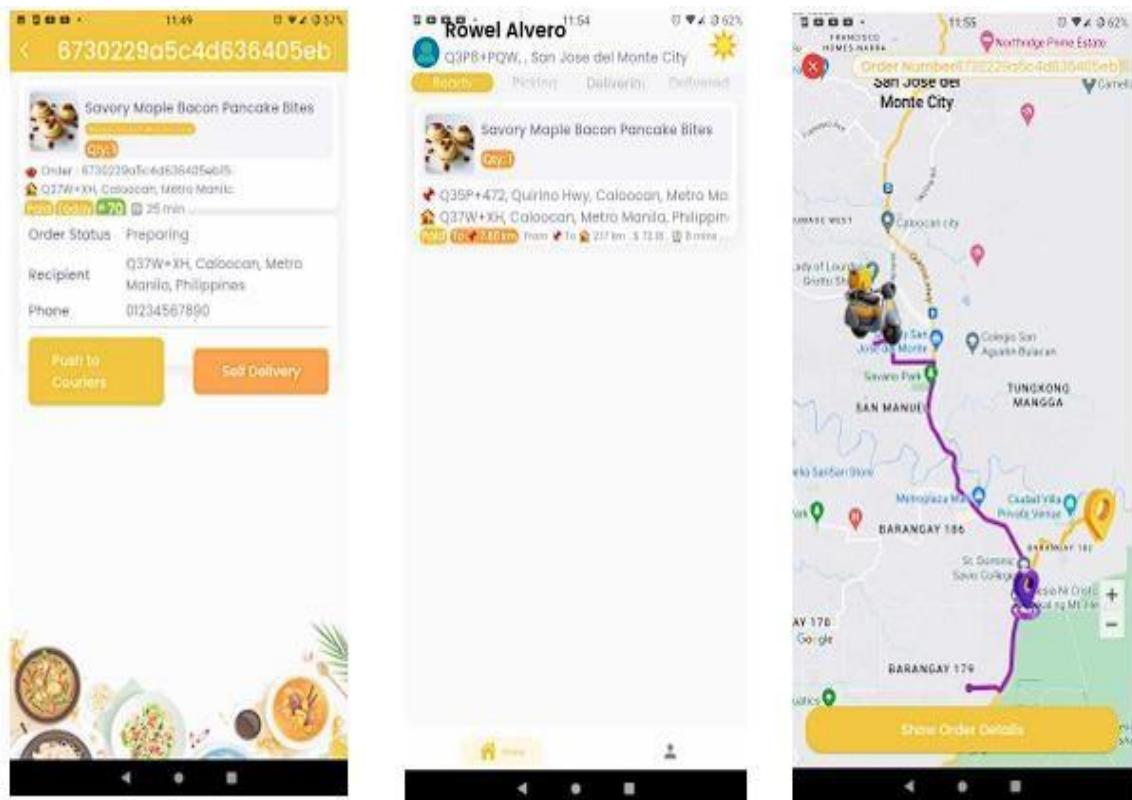


Figure 87. Order Flow

When an order is pushed to couriers by Vendors. Active riders can see the order being available for pickup in their ready panel.

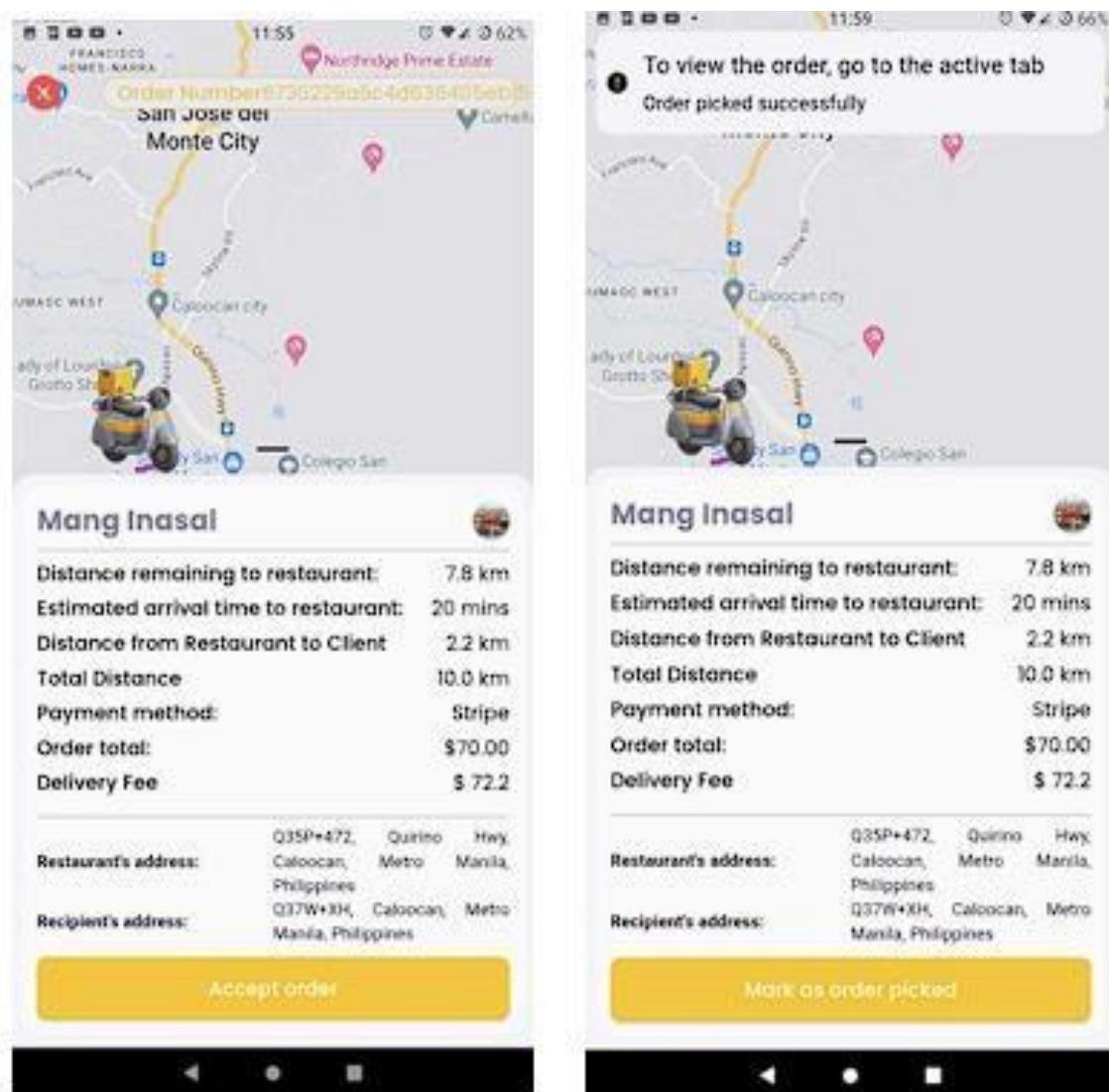


Figure 88. EatsEasy Rider Accept New Order

Clicking the order details will reveal the information regarding the order, especially the distance and the delivery fee. When accepted, a pop-up shows up where the order has already moved to the active tab.

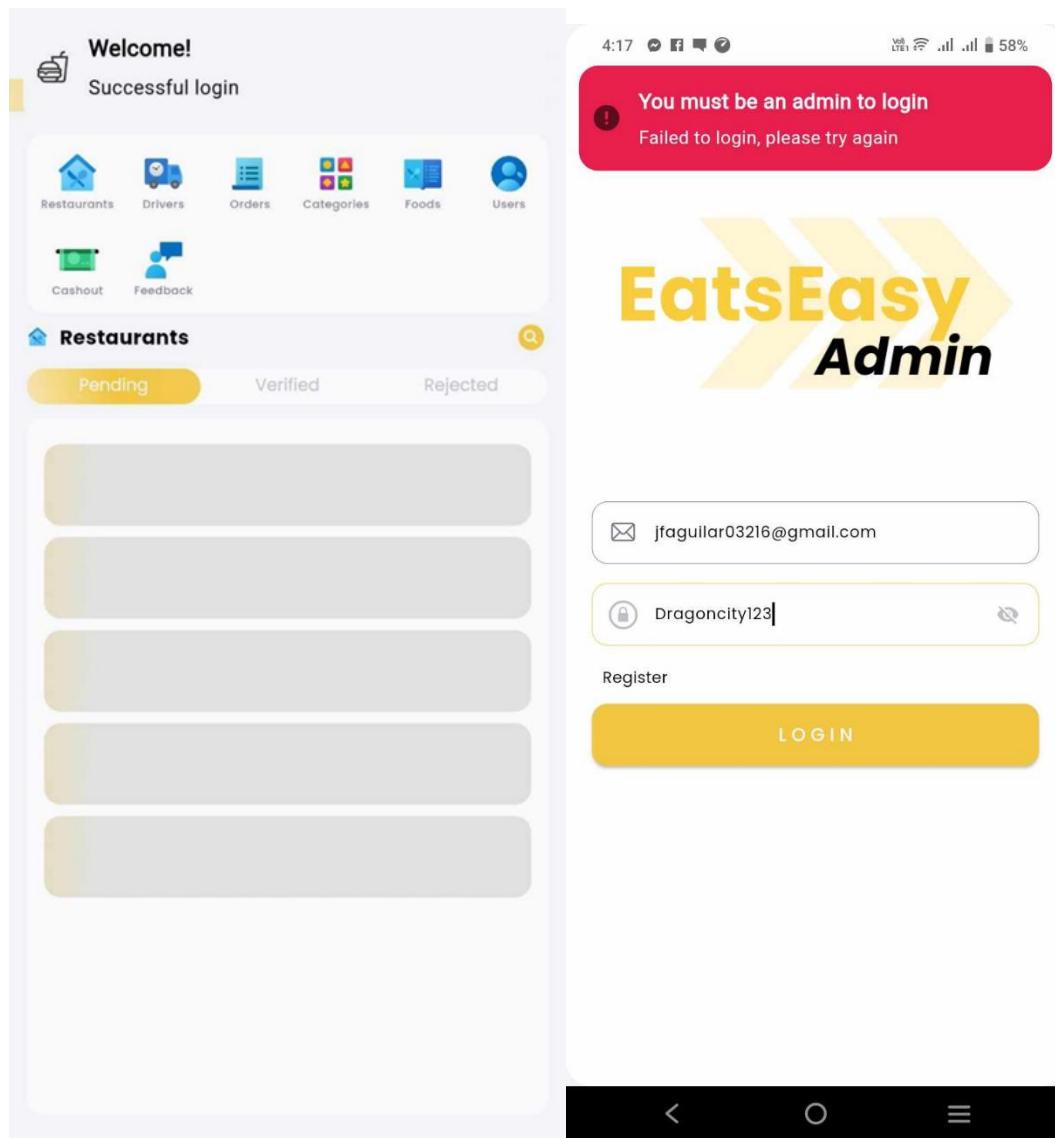


Figure 89. EatsEasy Admin Successful and Unsuccessful Login

Valid Login: The application will successfully log you in and take you to the Home Page, where you may control different areas such as users, orders, and restaurants, when you enter the right admin credentials.

Invalid Login: The application will stop you from logging in and show an error message if the credentials you submitted do not match those of the administrator's account. This guarantees that the app's admin features and activities can only be accessed by authorized users who possess the necessary admin credentials.

The screenshot displays the EatsEasy Admin Panel interface. On the left, a sidebar lists navigation options: Restaurant, Earnings, Drivers, Orders, Categories, Foods, and Users. Below this is a search bar and a 'Verified' tab under the 'Restaurants' heading. A list of restaurants is shown, each with a thumbnail, name, delivery time, address, and status (e.g., Open, Closed). One restaurant, 'Mang Inasal', is highlighted with a larger view on the right.

Mang Inasal
 ★★★★★ 5 ratings
 Change Status
 Disable Delete

Mang Inasal Statistics

Total Orders	1	Processing Orders	3	Total Revenue	Php 1934.00
Total Orders	1	Delivery Revenue	3	Commission Total	Php 17406.00
				Withdrawable	

Withdrawal History
 Total Withdrawals: 2 Pending Withdrawals: 0 Completed Withdrawals: 1

Mang Inasal details

Owner name:	Rowel Alvero
Operational time:	8:00 AM - 12:00 PM
Operational status:	Open
Phone number:	+639916193392
Business address:	Pangarap Village, 699 Waling-Waling, Caloocan, Metro Manila, Philippines

Figure 90. Manage Restaurant

You may examine full information on any restaurant that has been approved and validated in the validated Tab located under the Restaurants section. You may get important information about a restaurant, including its location, menu options, business hours, and any other pertinent details, by tapping on its name.

You may monitor the performance and status of verified restaurants using this function, making sure that all of their information is current and that they adhere to the platform's quality and service requirements.

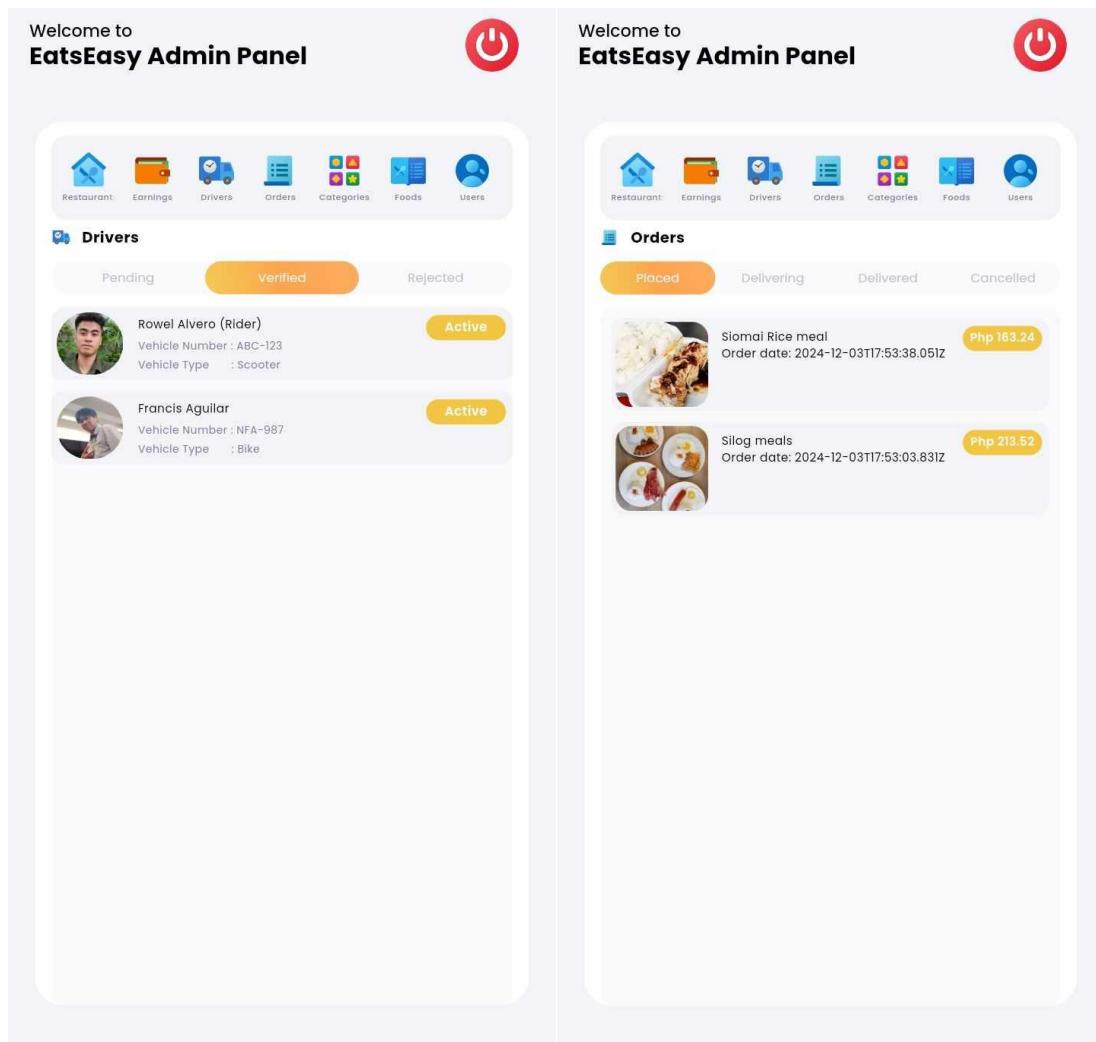


Figure 91. Manage Driver

To make sure that the appropriate individuals are managing deliveries effectively, you may control and monitor the status of every delivery driver using the Drivers Tab. This tab displays Rejected Drivers, who have not been accepted; Verified Drivers, who have successfully finished the registration procedure; and Pending Drivers, who are awaiting verification. You can see comprehensive facts about each rider, including their credentials and vehicle information, in the Verified Section. In order to maintain a high level of performance and service, you can also choose to disable or remove a rider from the platform if needed. By ensuring that only trustworthy and qualified drivers are collaborating with you, this part improves the experience for patrons and restaurants alike.

You can keep track of all user orders on the Orders Tab, which provides you with a comprehensive picture of the order flow. This section contains several order categories: Placed Orders, which displays all new user orders; Delivering Orders, which shows

riders delivering food; Delivered Orders, which shows completed deliveries; and Cancelled Orders, which shows orders that were canceled by the restaurant or by users. This page ensures a smooth order placement and delivery procedure by assisting you in effectively tracking the status of each order. You can promptly resolve any problems and update clients on the status of their orders by handling orders in real-time.

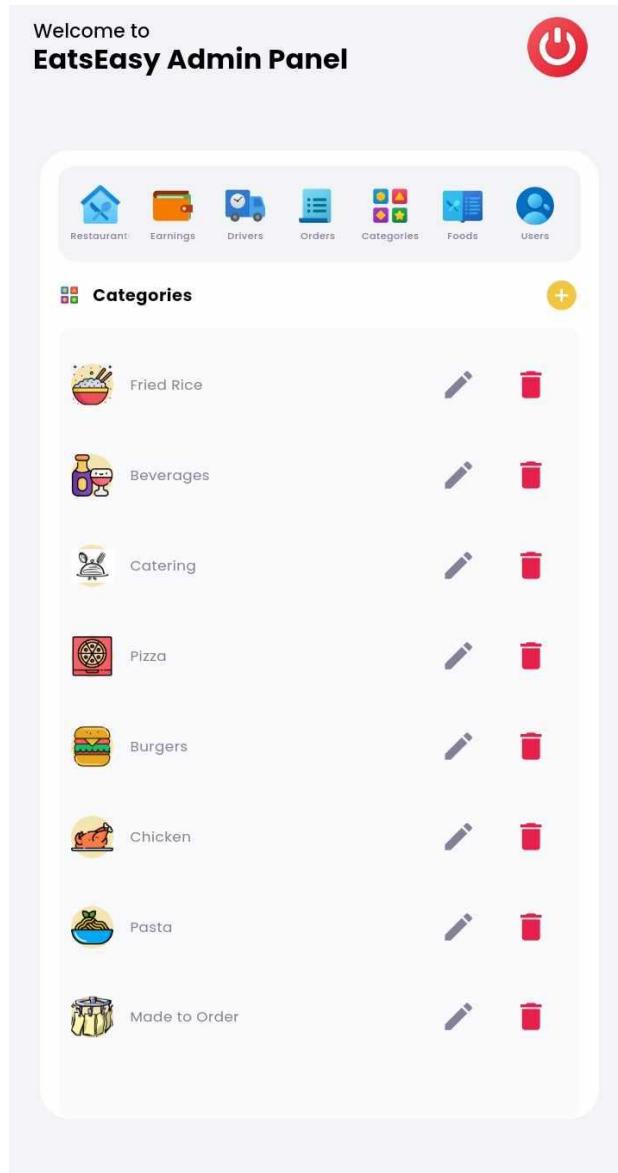


Figure 92. Categories List Page

All the food classes that are offered on the platform are managed centrally under the Categories Tab. This is a list of pre-existing categories, like appetizers, main courses, desserts, and beverages, that restaurant partners can utilize to arrange their menu items. Customers may more easily search and find what they're desiring thanks to these categories, which assist partners in classifying their food. A smoother user experience is ensured by maintaining this section's organization, which enables clients to swiftly

sift through various meal selections and cuisine kinds.

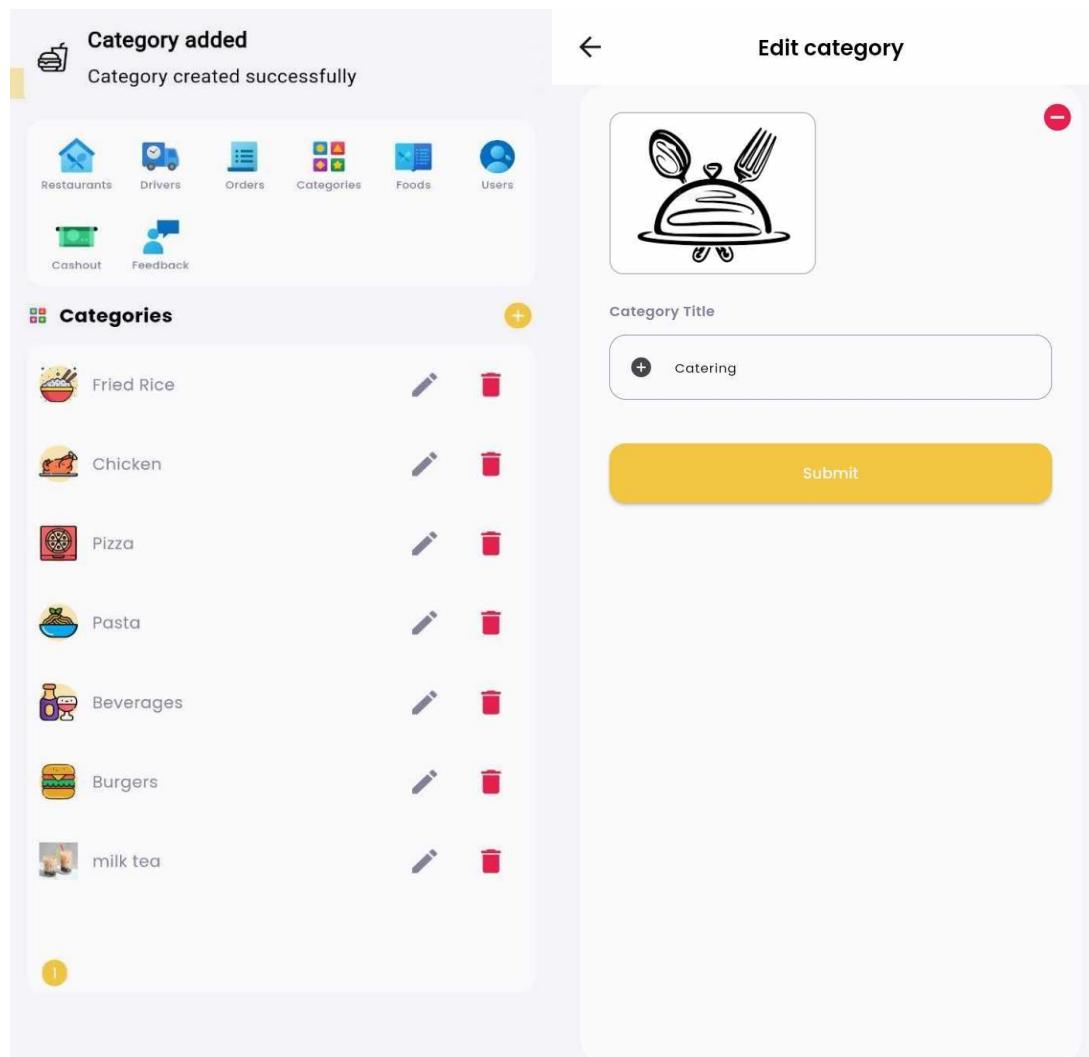


Figure 93. Add Category

Just tap the Plus Icon at the top of the screen to add a new category. Along with choosing a Category Name, you will be asked to contribute an icon or picture that best embodies the category. A "Category Added" popup verifying that your new category is now active will appear once you've entered these details and clicked Save. By keeping the menu neat, this function enables eateries to present their food in visually appealing categories, improving the browsing experience for customers.

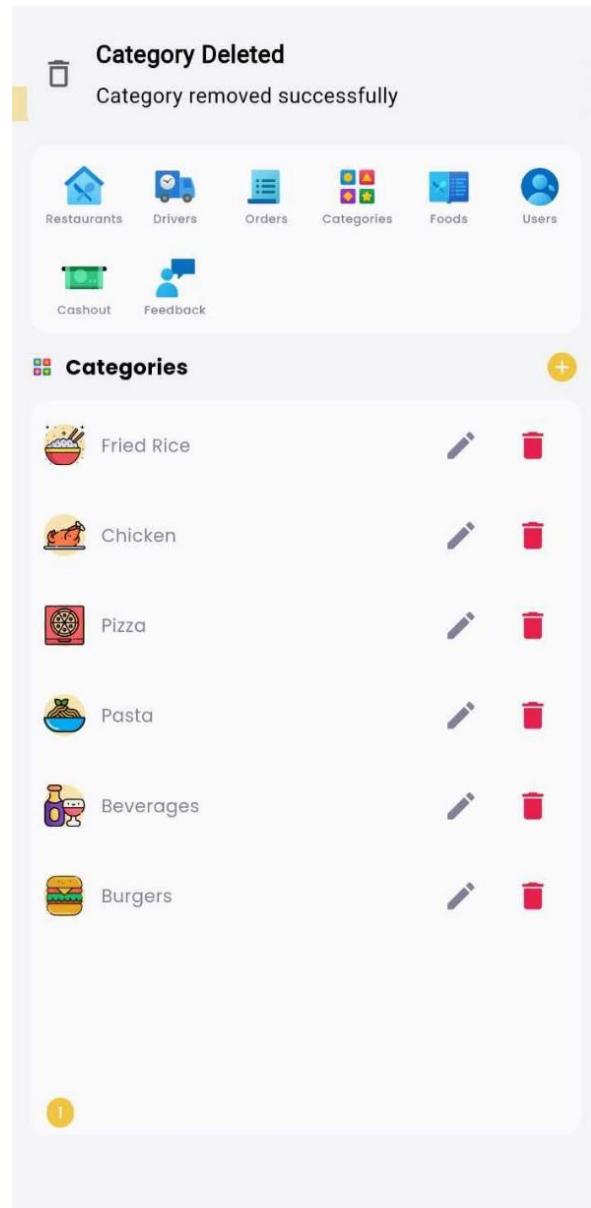


Figure 94. Delete Category

You have the option to add new categories, update ones that already exist, or remove ones that are unnecessary. To be sure you're making the correct decision, the app will display a confirmation popup if you decide to remove a category. A notification stating "Category Deleted" will appear after confirmation, informing you that the category has been deleted. Customers can more easily locate the dishes they enjoy thanks to this functionality, which keeps the app's menu layout clear and pertinent.

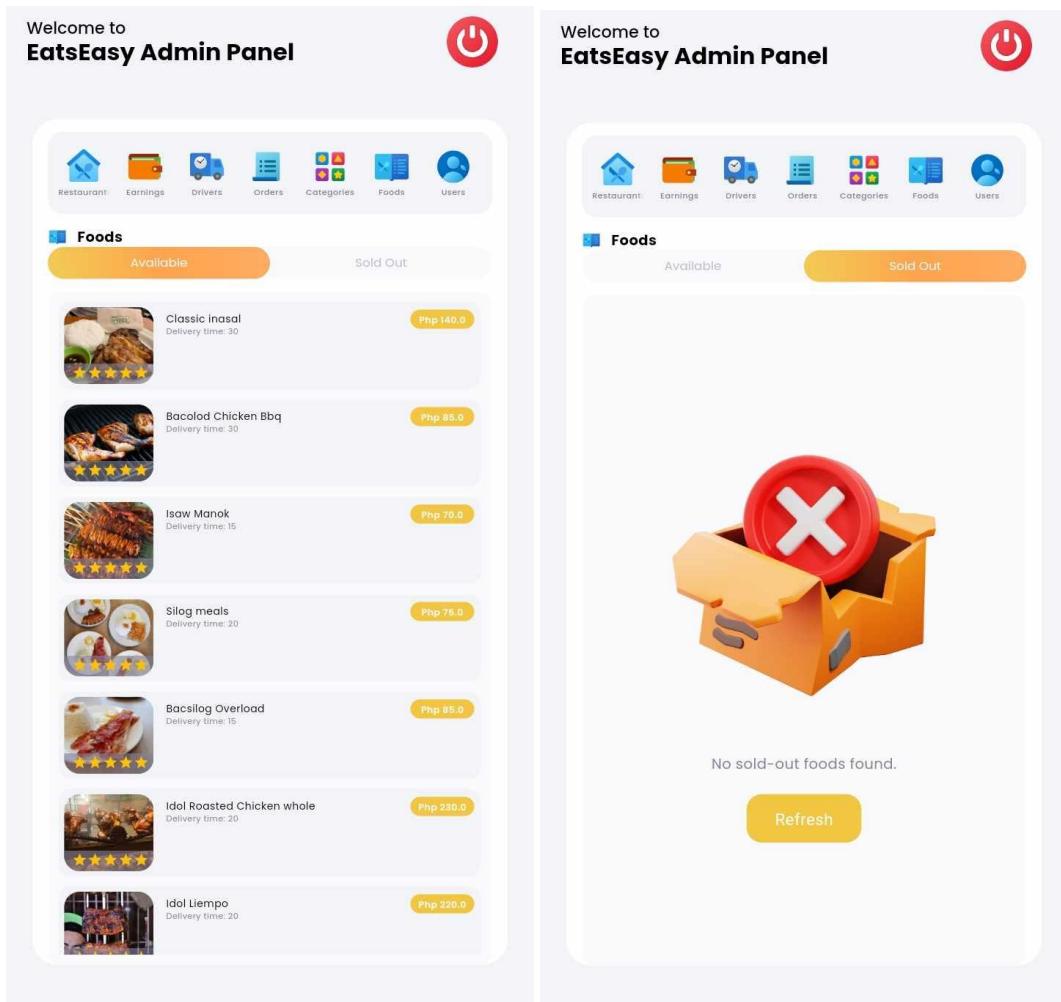


Figure 95. View Available and Sold-out Foods Page

The Food Tab provides you with a comprehensive list of all the foods that partner restaurants have listed, broken down into categories such as Sold-Out and Available. Here, you can easily see which menu items are available to consumers right now and which are temporarily out of stock. By keeping an eye on inventory and making sure eateries maintain current menus, this tab helps prevent customers from being disappointed by out-of-stock items. By maintaining the menu selections correct and dependable, you can ensure a seamless customer experience by routinely monitoring this section.

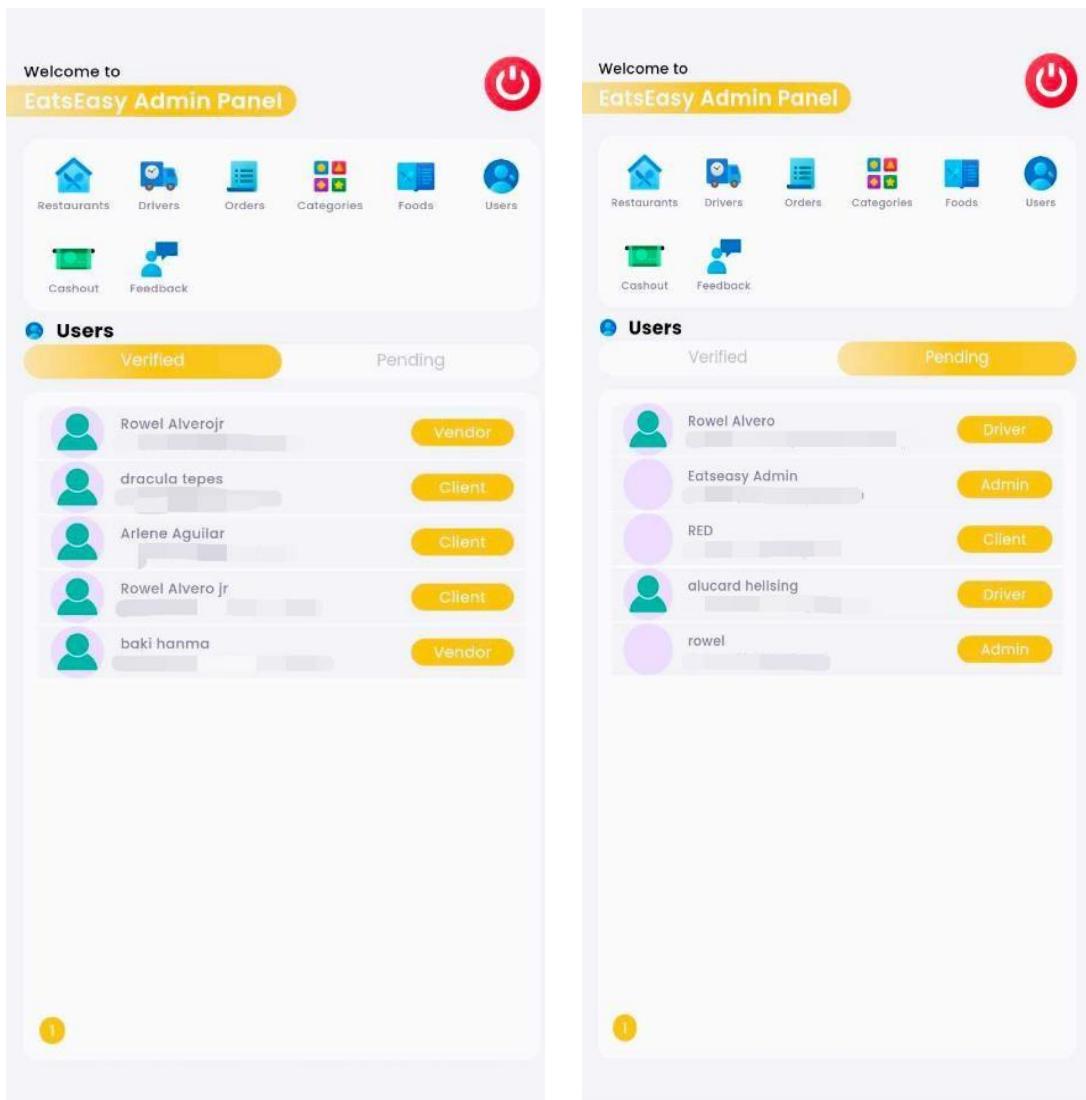


Figure 96. Users List Page

The Users Tab allows you to monitor all registered app users, categorized into Verified and Pending statuses. In this section, you can review details of users waiting for account approval and ensure they meet the necessary requirements before verification. For existing users, you can also manage their profiles, troubleshoot account issues, or revoke access if needed. This tab is essential for maintaining a safe and trustworthy community on the platform, ensuring that all users are properly vetted.

You manage all payout requests from delivery drivers and restaurant partners under the Cashout Tab. Request Payouts, which are for pending withdrawal requests; Completed Payouts, which are for those that have been processed successfully; and Failed Payouts, which are for any transactions that did not proceed, are the three primary components of this page. By keeping track of all financial transactions in one location, this tool helps you make sure partners receive their revenues on schedule. Checking this page frequently guarantees a seamless payout process and promptly resolves any problems with unsuccessful transactions, keeping everyone happy.

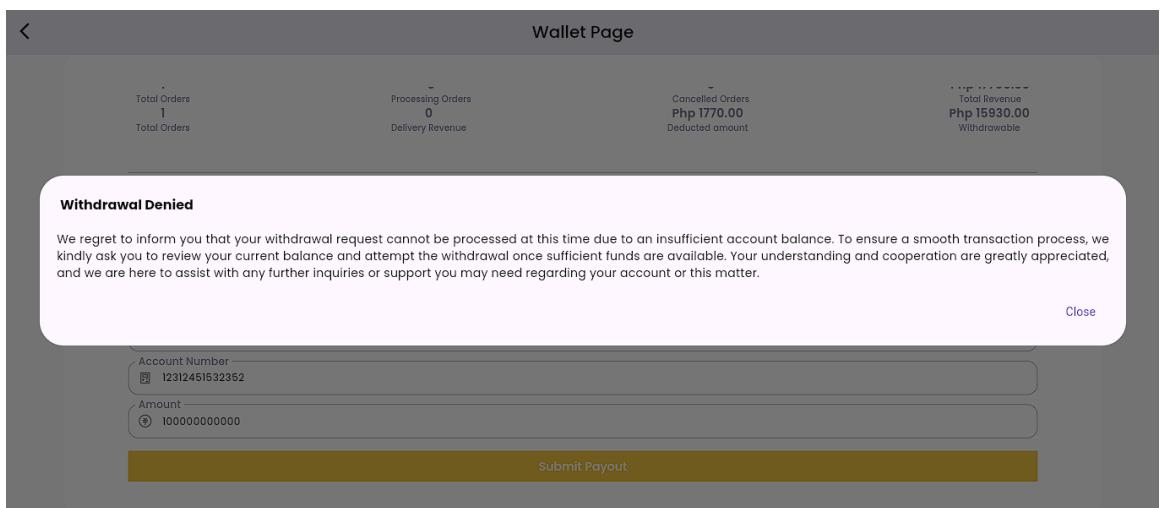


Figure 97. Cash Withdrawal Denied

Requesting Payout has 2 parts, Vendor request and Admin approval.

Vendors can request payout as long as it is within their available wallet balance. If the payout request is not within their balance amount, a pop-up notification would show up informing that the vendor's wallet balance is not within the payout request amount with a withdrawal request denied text.

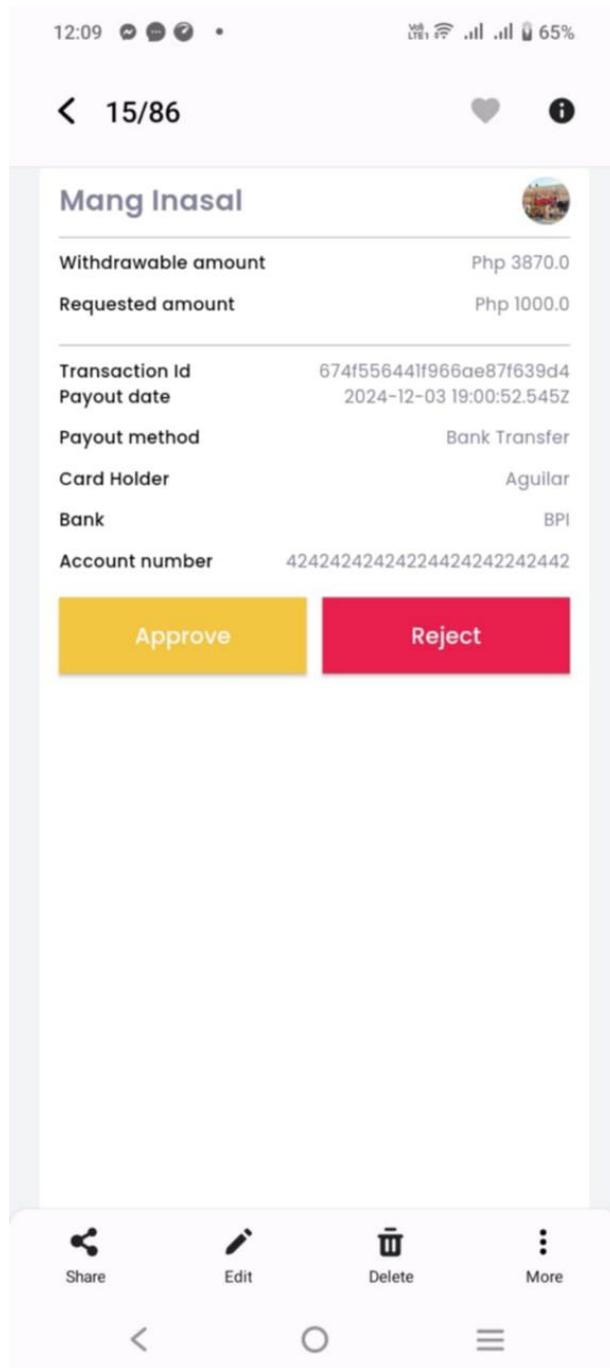


Figure 98. Manage Cash-out

When a payout request is successfully submitted, it would show up in the cash out page of the admin app. Clicking on the cash out request will navigate the admin to the cash out request information page where the admin can approve or reject the request. Accepting it would automatically send the cash amount on the bank account provided by the vendor.

APPENDIX F.
RELEVANT SOURCE CODE



```
import 'dart:convert';
import 'dart:convert';
import 'package:cached_network_image/cached_network_image.dart';
import 'package:eatseasy/common/back_ground_container.dart';
import 'package:flutter/material.dart';
import 'package:flutter_hooks/flutter_hooks.dart';
import 'package:flutter_rating_bar/flutter_rating_bar.dart';
import 'package:flutter_screenutil/flutter_screenutil.dart';
import 'package:flutter_vector_icons/flutter_vector_icons.dart';
import 'package:eatseeasy/common/app_style.dart';
import 'package:eatseeasy/common/custom_textfield.dart';
import 'package:eatseeasy/common/not_found.dart';
import 'package:eatseeasy/common/reusable_text.dart';
import 'package:eatseeasy/common/show_snack_bar.dart';
import 'package:eatseeasy/constants/constants.dart';
import 'package:eatseeasy/controllers/cart_controller.dart';
import 'package:eatseeasy/controllers/contact_controller.dart';
import 'package:eatseeasy/controllers/counter_controller.dart';
import 'package:eatseeasy/controllers/food_controller.dart';
import 'package:eatseeasy/hooks/fetchRestaurant.dart';
import 'package:eatseeasy/models/cart_request.dart';
import 'package:eatseeasy/models/foods.dart';
import 'package:eatseeasy/models/response_model.dart';
import 'package:eatseeasy/views/auth/login_page.dart';
import 'package:eatseeasy/views/home/widgets/custom_btn.dart';
import 'package:eatseeasy/views/restaurant/restaurants_page.dart';
import 'package:get/get.dart';
import 'package:get_storage/get_storage.dart';
import 'package:loading_animation_widget/loading_animation_widget.dart';

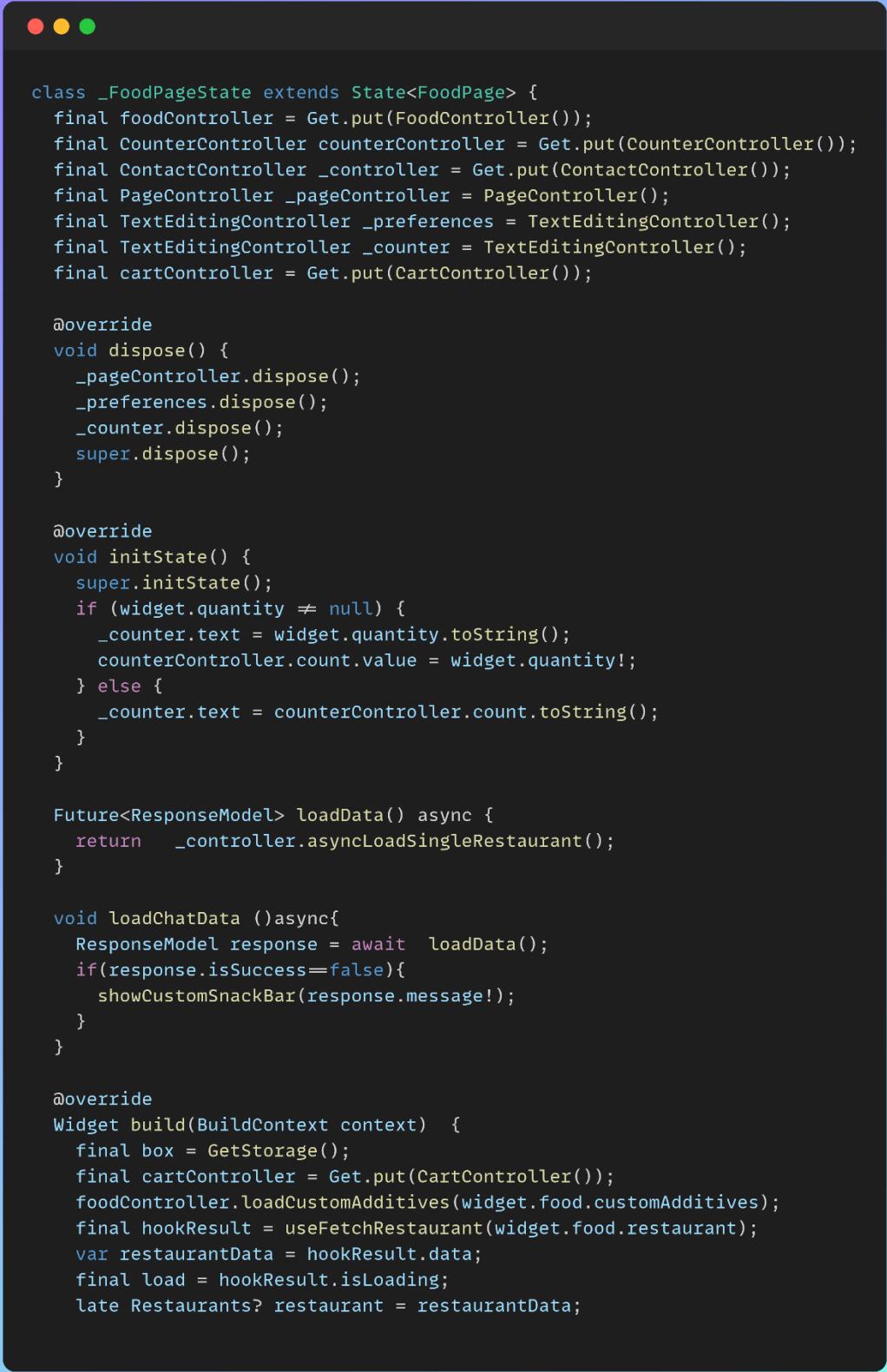
import '.../hooks/fetchCart.dart';
import '.../models/obs_custom_additives.dart';
import '.../models/restaurants.dart';

class FoodPage extends StatefulWidget {
    const FoodPage({
        super.key,
        required this.food,
        this.quantity,
        this.refetch,
        this.customAdditives
    });

    final Food food;
    final int? quantity;
    final VoidCallback? refetch;
    final Map<String, dynamic>? customAdditives;

    @override
    _FoodPageState createState() => _FoodPageState();
}
```

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```
class _FoodPageState extends State<FoodPage> {
    final foodController = Get.put(FoodController());
    final CounterController counterController = Get.put(CounterController());
    final ContactController _controller = Get.put(ContactController());
    final PageController _pageController = PageController();
    final TextEditingController _preferences = TextEditingController();
    final TextEditingController _counter = TextEditingController();
    final cartController = Get.put(CartController());

    @override
    void dispose() {
        _pageController.dispose();
        _preferences.dispose();
        _counter.dispose();
        super.dispose();
    }

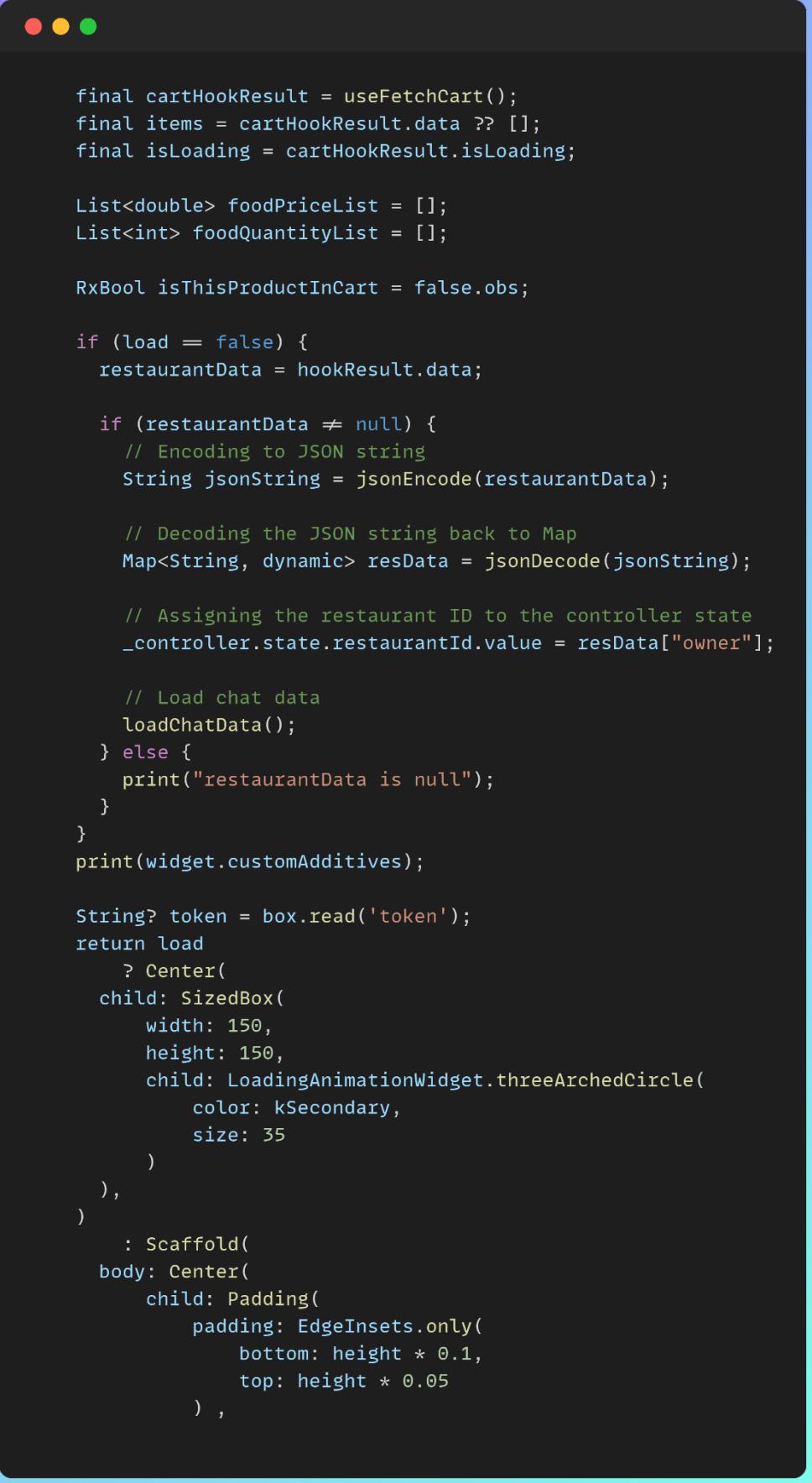
    @override
    void initState() {
        super.initState();
        if (widget.quantity != null) {
            _counter.text = widget.quantity.toString();
            counterController.count.value = widget.quantity!;
        } else {
            _counter.text = counterController.count.toString();
        }
    }

    Future<ResponseModel> loadData() async {
        return _controller.asyncLoadSingleRestaurant();
    }

    void loadChatData ()async{
        ResponseModel response = await loadData();
        if(response.isSuccess==false){
            showCustomSnackBar(response.message!);
        }
    }
}

@Override
Widget build(BuildContext context) {
    final box = GetStorage();
    final cartController = Get.put(CartController());
    foodController.loadCustomAdditives(widget.food.customAdditives);
    final hookResult = useFetchRestaurant(widget.food.restaurant);
    var restaurantData = hookResult.data;
    final load = hookResult.isLoading;
    late Restaurants? restaurant = restaurantData;
```

codesnap.dev



```
final cartHookResult = useFetchCart();
final items = cartHookResult.data ?? [];
final isLoading = cartHookResult.isLoading;

List<double> foodPriceList = [];
List<int> foodQuantityList = [];

RxBool isThisProductInCart = false.obs;

if (load == false) {
    restaurantData = hookResult.data;

    if (restaurantData != null) {
        // Encoding to JSON string
        String jsonString = jsonEncode(restaurantData);

        // Decoding the JSON string back to Map
        Map<String, dynamic> resData = jsonDecode(jsonString);

        // Assigning the restaurant ID to the controller state
        _controller.state.restaurantId.value = resData["owner"];

        // Load chat data
        loadChatData();
    } else {
        print("restaurantData is null");
    }
}
print(widget.customAdditives);

String? token = box.read('token');
return load
    ? Center(
        child: SizedBox(
            width: 150,
            height: 150,
            child: LoadingAnimationWidget.threeArchedCircle(
                color: kSecondary,
                size: 35
            )
        ),
    )
    : Scaffold(
        body: Center(
            child: Padding(
                padding: EdgeInsets.only(
                    bottom: height * 0.1,
                    top: height * 0.05
                )
            ),

```

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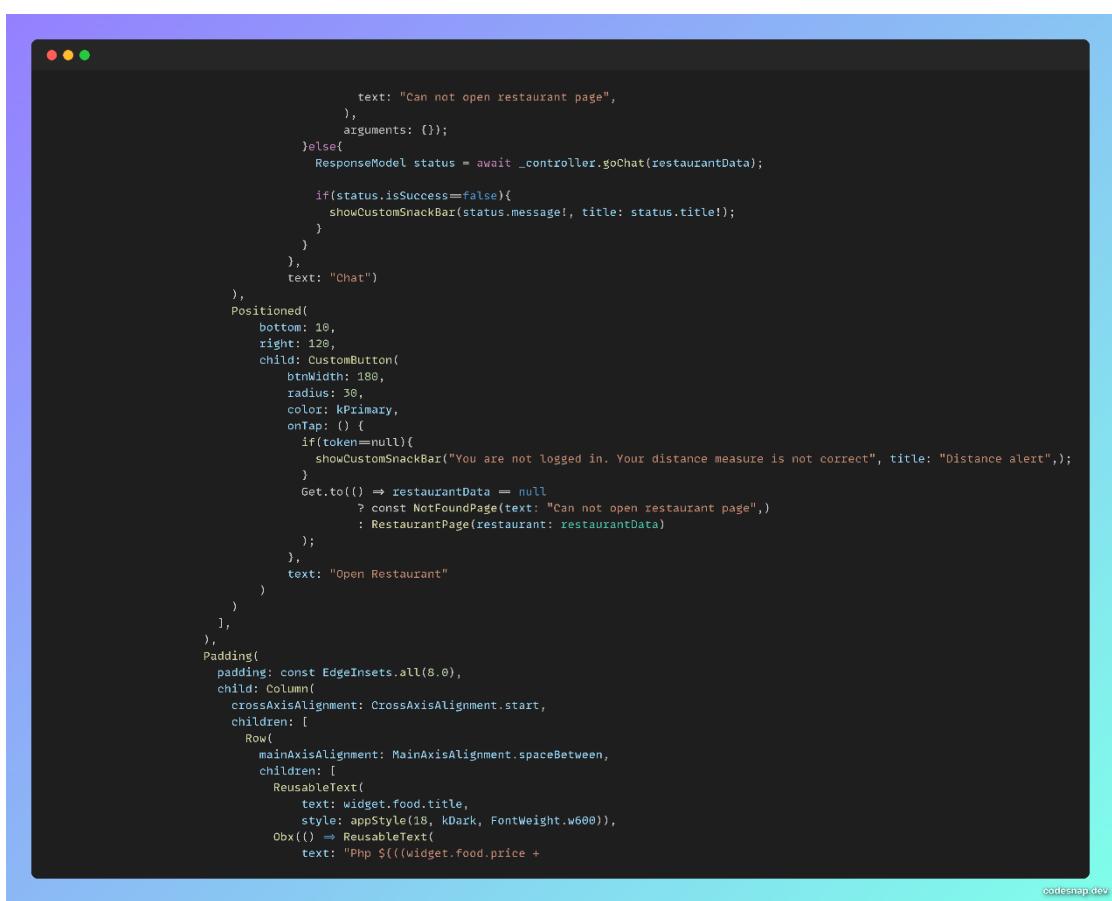
A screenshot of a mobile application interface. At the top, there is a navigation bar with three colored dots (red, yellow, green). Below the navigation bar is a header section containing the text "Food" and "Food". The main content area displays a list of food items. Each item has a title, a large image, and a description. The images are rounded rectangles with a radius of 20 pixels. The descriptions are contained within a container with a height of 230 pixels and a width matching the image's width. The text color is kLightWhite. The background of the screen is white.

```
child: BackGroundContainer(
    child: ListView(
        padding: EdgeInsets.zero,
        children: [
            Stack(
                children: [
                    ClipRRect(
                        borderRadius: BorderRadius.all(Radius.circular(20.0)),
                    ),
                    child: Stack(
                        children: [
                            SizedBox(
                                height: 230.0,
                                child: PageView.builder(
                                    itemCount: widget.food.imageUrl.length,
                                    controller: _pageController,
                                    onPageChanged: (i) {
                                        foodController.currentPage(i);
                                    },
                                    itemBuilder: (context, i) {
                                        return Container(
                                            height: 230.0,
                                            width: width,
                                            color: kLightWhite,
                                            child: CachedNetworkImage(
                                                fit: BoxFit.cover,
                                                imageUrl: widget.food.imageUrl[i],
                                            ),
                                        );
                                    });
                                ),
                            Positioned(
                                bottom: 10,
                                child: Obx(
                                    () => Row(
                                        mainAxisAlignment: MainAxisAlignment.center,
                                        children: List.generate(
                                            widget.food.imageUrl.length,
                                            (index) {
                                                return Padding(
                                                    padding: const EdgeInsets.only(left: 8.0),
                                                    child: Container(
                                                        margin: EdgeInsets.all(4.0),
                                                        width:
                                                            foodController.currentPage == index
                                                                ? 10
                                                                : 8,
                                                        // ignore: unrelated_type_equality_checks
                                                        height:
                                                            foodController.currentPage == index
                                                                ? 10
                                                                : 8,
                                                        child: Image.network(widget.food.imageUrl[index]),
                                                    ),
                                                );
                                            }));
                                );
                            ],
                        );
                    );
                ],
            );
        ],
    );
);
```

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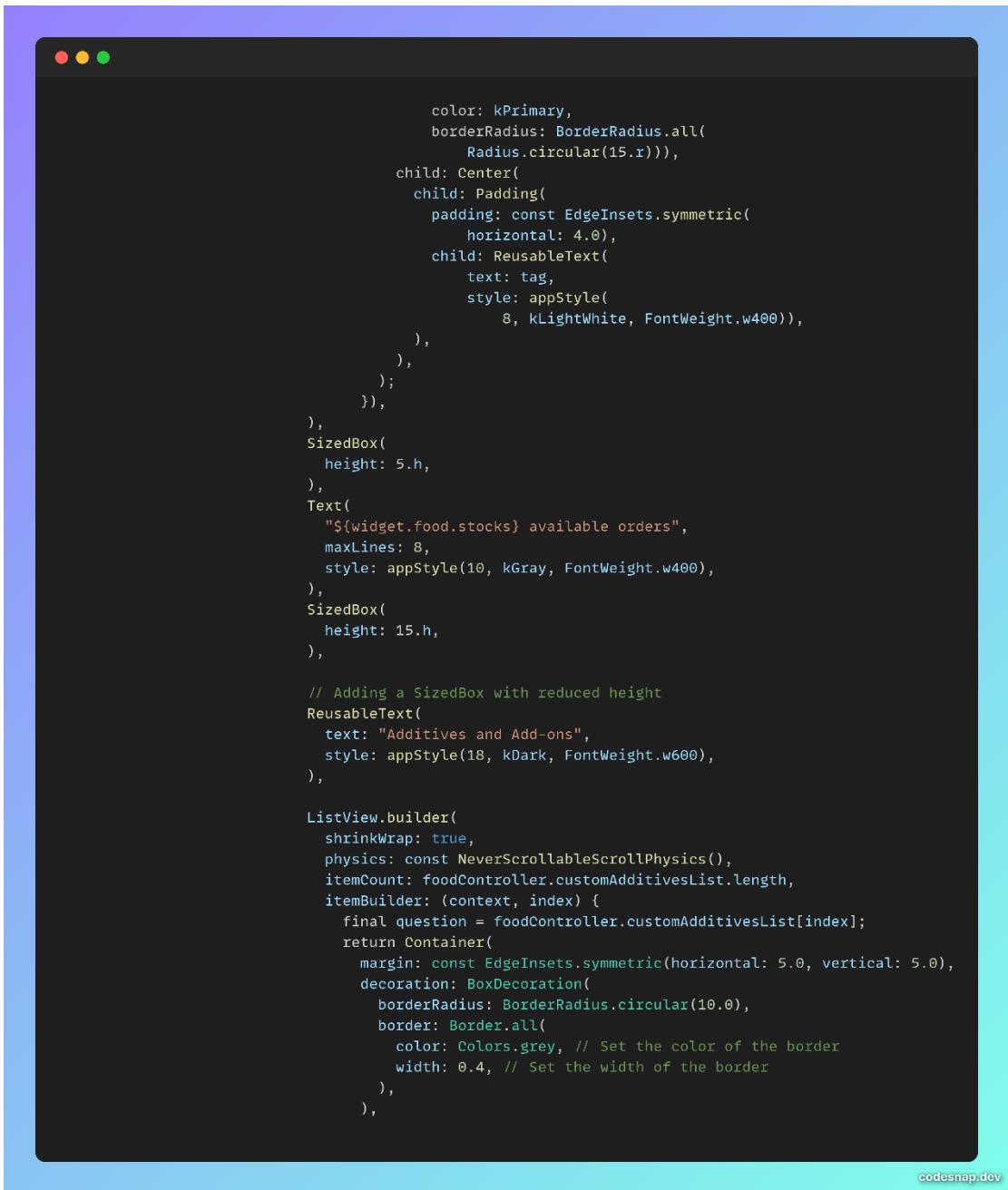


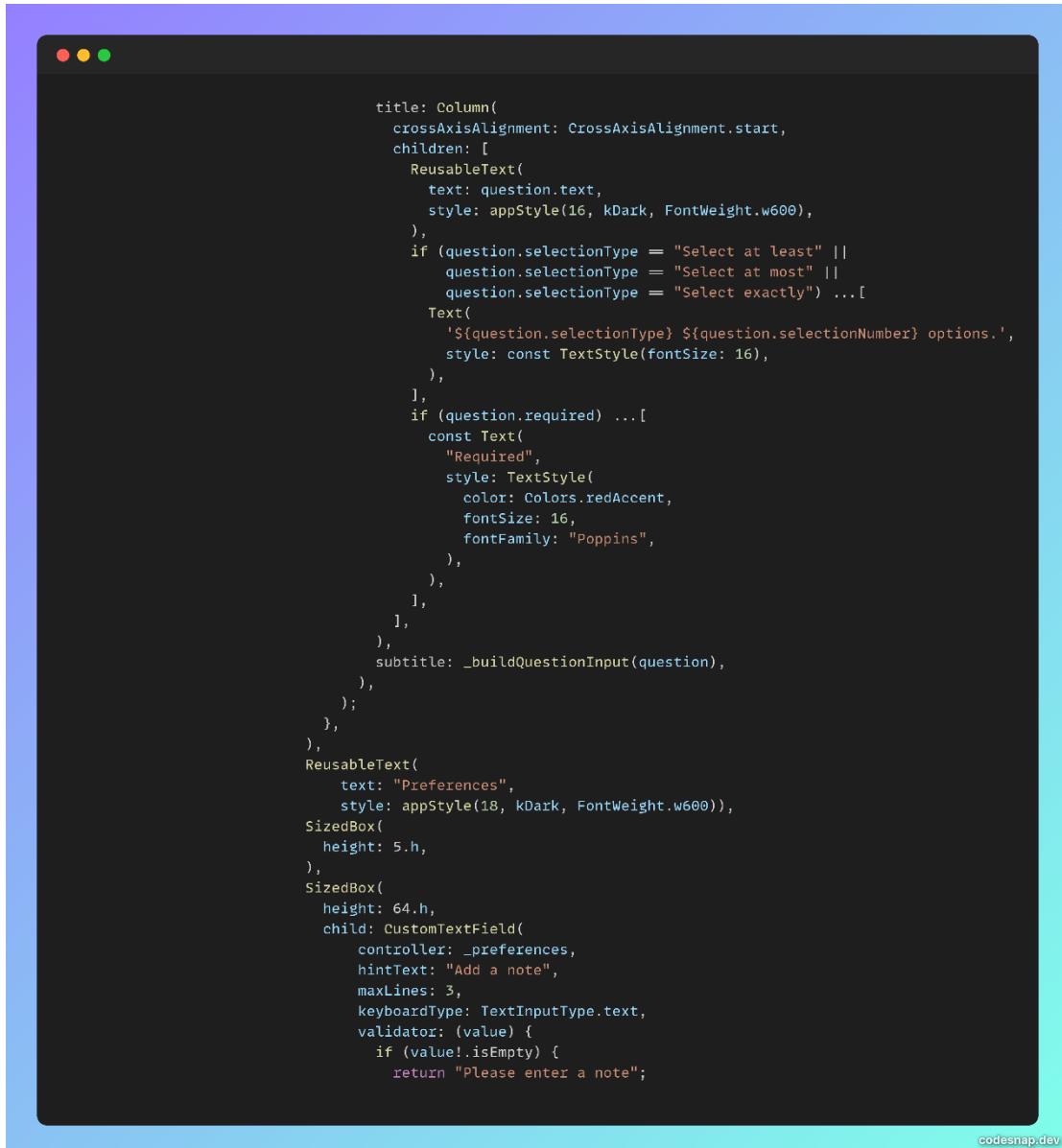
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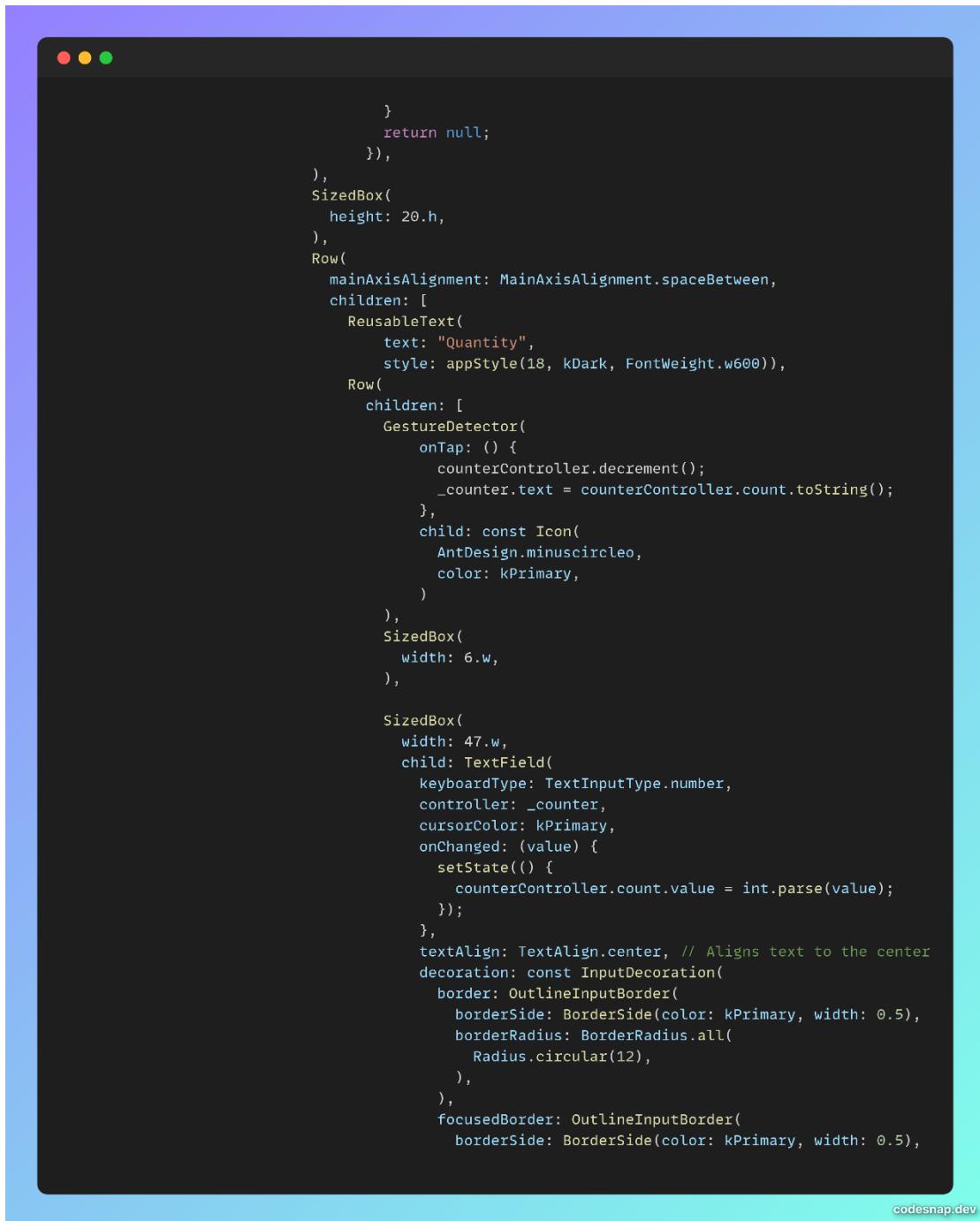




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A screenshot of a mobile application interface. At the top, there is a navigation bar with three dots. Below it is a large white area containing a UI component. This component consists of a vertical stack of elements: a top section with a light gray background, a middle section with a light blue background, and a bottom section with a light green background. The middle section contains a horizontal row of three colored dots (red, yellow, green) and a vertical stack of three colored dots (green, red, yellow). A large, semi-transparent circular progress bar is centered over the middle section. Below the progress bar is a large, light blue button with the text "CONFIRM ORDER".

```
),
    child: Obx(() => Column(
      mainAxisSize: MainAxisSize.min, // Ensures the container takes only the space it needs
      children: [
        Padding(
          padding: const EdgeInsets.all(8.0),
          child: SizedBox(
            height: 50.h,
            width: width,
            child: Row(
              mainAxisAlignment: MainAxisAlignment.spaceBetween,
              children: [
                cartController.isLoading
                  ? Expanded(
                      child: Center(
                        child: LoadingAnimationWidget.waveDots(
                          color: kSecondary,
                          size: 35,
                        ),
                      ),
                )
                  : Expanded(
                      child: Obx(() {
                        for (var cart in items) {
                          if (cart.productId.id == widget.food.id) {
                            isThisProductInCart.value = true;
                            foodPriceList.add(cart.totalPrice);
                            foodQuantityList.add(cart.quantity);
                          }
                        }
                      })
                    ),
                ElevatedButton(
                  onPressed: () async {
                    cartController.setLoading = true;

                    if (token == null) {
                      Get.to(() => const Login());
                    } else {
                      bool hasMissingRequiredAdditives = false;

                      // Check if all required custom additives have been answered
                      for (var question in foodController.customAdditivesList) {
                        if (question.required && foodController.userResponses[question.text] == null) {
                          hasMissingRequiredAdditives = true;
                          break; // Exit the loop early if any required response is missing
                        }
                      }
                    }
                  },
                ),
              ],
            ),
          ),
        ),
      ],
    ),
  );
}
```

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```

if (hasMissingRequiredAdditives) {
  Get.snackbar("Missing required additives", "Please answer all required additives before adding to cart.", icon: const Icon(Icons.warning));
} else {
  if (isThisProductInCart.value) {
    await cartController.updateCustomAdditives(widget.food.id, foodController.userResponses);
  }
}

// Handle the quantity update logic
if (counterController.count.toInt() > foodQuantityList.first) {
  await cartController.incrementProductQuantity(widget.food.id, counterController.count.toInt());
} else if (counterController.count.toInt() < foodQuantityList.first) {
  await cartController.decrementProductQuantity(widget.food.id, counterController.count.toInt());
}

cartHookResult.refetch();
widget.refetch?.call();

// Show success Snackbar if the cart is updated
if (!cartController.isSnackbarVisible) {
  Get.snackbar("Cart updated", "Your cart item has been updated.",
  icon: const Icon(Icons.check));
  cartController.isSnackbarVisible = true;
  Future.delayed(const Duration(seconds: 2), () {
    cartController.isSnackbarVisible = false;
  }));
}
}

// Proceed with adding item to cart
if (restaurant.isAvailable) {
  if (widget.food.isAvailable == true || restaurant.isAvailable) {
    if ((counterController.count.value ?? 0) <= (widget.food.stock ?? 0)) {
      if (_counter.text.isEmpty || counterController.count == '' || counterController.count.value == 0) {
        Get.snackbar("Please provide quantity",
        "Check your item quantity",
        icon: const Icon(Icons.add_alert));
      } else {
        double totalPrice = (widget.food.price + foodController.additiveTotalCustom) *
        counterController.count.toDouble();
        ToCart item = ToCart(
          productId: widget.food.id,
          instructions: _preferences.text,
          quantity: counterController.count.toInt(),
          totalPrice: totalPrice,
          prepTime: widget.food.time!,
          restaurant: widget.food.restaurant!,
          customAdditives: foodController.userResponses,
        );
        String cart = toCartToJson(item);

        await cartController.addToCart(cart);
        cartHookResult.refetch();
      }
    } else {
      Get.snackbar("Quantity exceeded the available stocks",
      "Please reduce the quantity of your items",
      icon: const Icon(Icons.add_alert));
    }
  } else {
    Get.snackbar("Item unavailable",
    "Please come and check later",
    icon: const Icon(Icons.add_alert));
  }
} else {
  Get.snackbar("Restaurant is closed for now",
  "Please come and check later",
  icon: const Icon(Icons.add_alert));
}

cartController.setLoading = false;
}

),
style: ElevatedButton.styleFrom(
  backgroundColor: isThisProductInCart.value ? kPrimary : kGray,
  padding: const EdgeInsets.symmetric(vertical: 12),
  shape: RoundedRectangleBorder(
    borderRadius: BorderRadius.circular(12.0),
  ),
  elevation: 4,
  shadowColor: Colors.grey.withOpacity(0.3),
),
child: isThisProductInCart.value
? Row(
  mainAxisAlignment: MainAxisAlignment.spaceAround,
  crossAxisAlignment: CrossAxisAlignment.center,
  children: [
    Row(
      children: [
        const Text("Cart", style: TextStyle(color: kWhite, fontSize: 16, fontWeight: FontWeight.w600)),
        const Text("      ", style: TextStyle(color: kWhite)),
      ],
    )
  ],
)

```

```

        });
    },
});
).toList(),
);
case 'Checkbox':
return Column(
  children: question.options!.map((option) {
    final optionText = option['optionName'] as String;
    final optionPrice = option['price'] != null ? '(Php ${option['price']})' : '';
    // Get the selected values from customAdditives if available
    final isChecked = (foodController.userResponses[question.text] ?? []).contains(optionText) ||
        (customAdditiveValue != null && customAdditiveValue.contains(optionText));
    return CheckboxListTile(
      contentPadding: EdgeInsets.zero,
      activeColor: kPrimary,
      checkColor: Colors.white,
      controlAffinity: ListTileControlAffinity.leading,
      tristate: false,
      visualDensity: VisualDensity.compact,
      title: Text('optionText $optionPrice'),
      value: isChecked,
      onChanged: (value) {
        setState(() {
          final currentSelections = foodController.userResponses[question.text] ?? [];
          if (value == true) {
            if (question.selectionType == 'Select at least' &&
                currentSelections.length >= question.selectionNumber!) {
              ScaffoldMessenger.of(context).showSnackBar(
                SnackBar(content: Text('Please select at least ${question.selectionNumber} options.')),
              );
            } else if (question.selectionType == 'Select at most' &&
                currentSelections.length >= question.selectionNumber!) {
              ScaffoldMessenger.of(context).showSnackBar(
                SnackBar(content: Text('You can select a maximum of ${question.selectionNumber} options.')),
              );
            } else if (question.selectionType == 'Select exactly' &&
                currentSelections.length == question.selectionNumber!) {
              ScaffoldMessenger.of(context).showSnackBar(
                SnackBar(content: Text('You can select exactly ${question.selectionNumber} options.')),
              );
            } else {

```

```
        foodController.userResponses[question.text] = [...currentSelections, optionText];
    }
} else {
    foodController.userResponses[question.text]?.remove(optionText);
}
question.toggleChecked();
foodController.getTotalPriceCustomAdditives();
});
},
),
).toList(),
);
case 'Short Answer':
return TextField(
controller: TextEditingController(text: customAdditiveValue),
onChanged: (value) {
foodController.userResponses[question.text] = value;
},
);
case 'Paragraph':
return TextField(
maxLines: 3,
controller: TextEditingController(text: customAdditiveValue),
onChanged: (value) {
foodController.userResponses[question.text] = value;
},
);
case 'Linear Scale':
return Column(
children: [
Row(
mainAxisAlignment: MainAxisAlignment.spaceAround,
children: List.generate(
question.maxScale!.toInt() - question.minScale!.toInt() + 1,
(index) => Text(
'${question.minScale!.toInt() + index}',
style: const TextStyle(fontSize: 12),
),
),
),
Slider(
value: (foodController.userResponses[question.text] ?? customAdditiveValue ?? question.minScale ?? 1.0).toDouble(),
min: question.minScale?.toDouble() ?? 1.0,
max: question.maxScale?.toDouble() ?? 10.0,
divisions: (question.maxScale! - question.minScale!).toInt(),
label: (foodController.userResponses[question.text]?.toInt() ?? customAdditiveValue?.toInt() ?? 1).toString(),
 onChanged: (value) {

```

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```
        setState(() {
            foodController.userResponses[question.text] = value;
        });
    },
),
Row(
mainAxisAlignment: MainAxisAlignment.spaceBetween,
children: [
Text(question.minScaleLabel ?? ''),
Text(question.maxScaleLabel ?? ''),
],
),
];
);
default:
return const SizedBox.shrink();
}
}
}
}
```

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APPENDIX G.
GRAMMARIAN CERTIFICATE

GRAMMARIAN CERTIFICATE

This is to certify that the undersigned has viewed and went through all the pages of the Thesis entitled “EatsEasy: A Cross-Platform Food Ordering System for Food Combinations and Customization” developed by John Francis V. Aguilar, Rowel B. Alvero Jr., Red M. Landicho and Benedict P. Solina aligned with the set of structural rules that govern the composition of sentences, phrases and words in the English Language.

Signed:

Remelyn C. Delit, LPT
Grammarian

APPENDIX H.
CURRICULUM VITAE OF RESEARCHERS

Curriculum Vitae of
ROWEL B. ALVERO JR.

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City of Caloocan, Metro Manila
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0929-498-3165

EDUCATIONAL BACKGROUND

Level	Inclusive Dates	Name of school/Institution
Tertiary	Feb 2023 - Present	STI San Jose del Monte
Vocational/Technical	Aug 2021 - 2023	New Era University
High School	June 2019 - 2021	Lagro Senior High School
Elementary	June 2015 - 2019	Pangarap High School
	June 2009 - 2015	Pangarap Elementary School

SKILLS

SKILLS	Level of Competency	Date Acquired
Mobile Development (Android Studio, Flutter, .NET MAUI)	Intermediate	September 2022 - Present
Programming (Python, Java, C++, C#, Dart, SQL)	Beginner	June 2019 - Present
Web Development (HTML, CSS and JavaScript)	Intermediate	June 2019 - Present
Troubleshooting	Intermediate	July 2017 - Present

TRAININGS, SEMINARS OR WORKSHOP ATTENDED

Inclusive Dates	Title of Training, Seminar or Workshop
June 2022	Java Foundation
January 2020	C50: Introduction in Computer Science Online Course
October 2021	Time Management and Coping with Stress Webinar
January 2020	Positive Habit I Have It Seminar
2021 - 2022	Reserve Officers' Training Corps (ROTC)

Curriculum Vitae of
JOHN FRANCIS V. AGUILAR

Blk 18 Lt 25, Green District, Phase 1, Dela Costa III,
Barangay Graceville, City of San Jose
Del Monte, Bulacan
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0977-099-8551

EDUCATIONAL BACKGROUND

Level	Inclusive Dates	Name of school/Institution
Tertiary	Feb 2021 - Present	STI San Jose del Monte
Vocational/Technical	June 2019 - 2021	Mystical Rose School of Caloocan Senior High School
High School	June 2015 - 2019	Mystical Rose School of Caloocan
Elementary	June 2009 - 2015	Mystical Rose School of Caloocan Elementary School

PROFESSIONAL OR VOLUNTEER EXPERIENCE

Inclusive Dates	Nature of Experience/Job Title	Name and Address of Company or Organization
2019 - 2022	Delivery Boy	Yana's Kitchen

SKILLS

SKILLS	Level of Competency	Date Acquired
Mobile Development (Android Studio, Flutter, .NET MAUI)	Intermediate	September 2022 - Present
Programming (Python, Java, C++, C#, Dart, SQL)	Beginner	June 2019 - Present
Web Development (HTML, CSS and JavaScript)	Intermediate	June 2019 - Present
Problem-solving	Beginner	July 2019- Present

TRAININGS, SEMINARS OR WORKSHOP ATTENDED

Inclusive Dates	Title of Training, Seminar or Workshop
June 2022	Java Foundation
October 2021	Time Management and Coping with Stress Webinar
January 2020	Positive Habit I Have It Seminar
2021 – 2022	Civic Welfare Training Service (CWTS)

Curriculum Vitae of
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EDUCATIONAL BACKGROUND

Level	Inclusive Dates	Name of school/Institution
Tertiary Vocational/Technical	Aug 2021 - Present	STI San Jose del Monte
High School	June 2016 - 2019	Paradise Farms National High School
Elementary	June 2009 - 2015	Nasugbu West Central School

PROFESSIONAL OR VOLUNTEER EXPERIENCE

Inclusive Dates	Nature of Experience/Job Title	Name and Address of Company or Organization
2019 - 2020	Computer Technician	Monrye Computer Store

SKILLS

SKILLS	Level of Competency	Date Acquired
Mobile Development (Android Studio, Flutter, .NET MAUI)	Intermediate	September 2022 - Present
Programming (Python, Java, C++, C#, Dart, SQL)	Beginner	June 2019 - Present
Web Development (HTML, CSS and JavaScript)	Intermediate	June 2019 - Present
Computer Technician	Intermediate	July 2019 - Present

TRAININGS, SEMINARS OR WORKSHOP ATTENDED

Inclusive Dates	Title of Training, Seminar or Workshop
June 2022	Java Foundation
October 2021	Time Management and Coping with Stress Webinar
January 2020	Positive Habit I Have It Seminar
2021 - 2022	Civic Welfare Training Service (CWTS)

Curriculum Vitae of
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0921-594-3949

EDUCATIONAL BACKGROUND

Level	Inclusive Dates	Name of school/Institution
Tertiary	Aug 2021 - Present	STI San Jose del Monte
Vocational/Technical		
High School	June 2011 - 2015	Kakawate National High School
Elementary	June 2005 - 2011	Kakawate National Elementary School

SKILLS

SKILLS	Level of Competency	Date Acquired
Mobile Development (Android Studio, Flutter, .NET MAUI)	Intermediate	September 2022 - Present
Programming (Python, Java, C++, C#, Dart, SQL)	Beginner	June 2019 - Present
Web Development (HTML, CSS and JavaScript)	Intermediate	June 2019 - Present

TRAININGS, SEMINARS OR WORKSHOP ATTENDED

Inclusive Dates Title of Training, Seminar or Workshop

June 2022	Java Foundation
October 2021	Time Management and Coping with Stress Webinar
January 2020	Positive Habit I Have It Seminar
2021 - 2022	Civic Welfare Training Service (CWTS)