# PalaConnect

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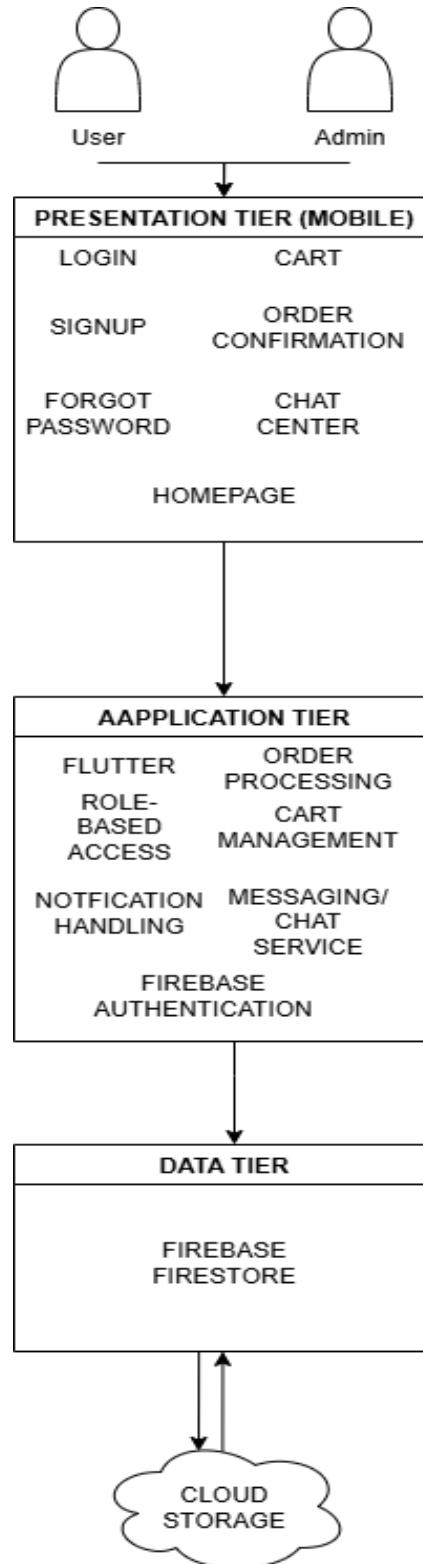
**Submitted to:**
Ms. Anjelica Castillo
October 18, 2025

# System Architecture Diagram

*(Please upload your Diagram in PNG format you may use https://draw.io/ as your tool to create it.)*



*PalaConnect System Architecture*

The diagram illustrates a three-tiered system architecture for the PalaConnect mobile app, with clear distinctions between the Presentation, Application, and Data tiers. At the top, two types of users are shown: a general User and an Admin, both interacting with the system. The first tier, the Presentation Tier, represents the mobile app interface itself. It handles all user-facing interactions, including standard functions like Login, Signup, and Forgot Password, as well as commerce-specific features such as the Cart, Order Confirmation, and a Chat Center.

The requests from this tier flow down to the Application Tier, which is the logical core of the system. This tier is responsible for processing all business rules and server-side operations. It handles complex tasks like Order Processing, Cart Management, and a Messaging/Chat Service. The diagram also highlights crucial functionalities like Role-Based Access and Notification Handling, indicating different levels of user permissions and communication capabilities. A key technology mentioned here is Firebase Authentication, which manages user logins securely.

Finally, the Data Tier sits at the bottom, acting as the system's persistent storage. This tier is powered by Firebase Firestore, a NoSQL cloud database, and is connected to Cloud Storage. This setup suggests that the app stores structured data like user profiles and product details in Firestore, while assets like product images and other media files are saved in Cloud Storage. The arrows indicate a clear flow of information from the user interface down to the database and back up, showing how requests are processed and data is retrieved.

# Objectives

This system aims to empower farmers by giving them a direct platform to sell their produce without relying on middlemen. At the same time, it supports bulk buyers by providing a centralized and convenient marketplace where they can easily access affordable and high-quality rice and other produce. The platform also promotes fair trade by ensuring transparent transactions, particularly through cash- on delivery options that build trust between buyers and sellers. Furthermore, it addresses the digital divide by offering a simple and user-friendly application designed even for users with limited technological literacy.

# Mission

Our mission is to empower farmers by providing a direct digital platform where they can sell their produce fairly and sustainability, while offering bulk buyers an accessible hub for affordable and quality agricultural products.

# Vision

We envision a future where technology bridges the gap between farmers and buyers, promoting fair trade, transparency, and inclusivity in agriculture for every community.

# SWOT ANALYSIS

| STRENGTH | WEAKNESSES |
|---|---|
| • Simple, intuitive interface suitable for low-tech users <br><br> • Direct farmer-to-buyer connection, eliminating middlemen <br><br> • Cash-on-Delivery builds trust | • Limited payment options (no digital transactions) <br><br> • Initial reliance on logistics coordination <br><br> • Narrow initial focus on rice and produce |
| **OPPORTUNITIES** | **THREATS** |
| • Expand to other crops and agri-products <br><br> • Introduce digital payments as adoption grows <br><br> • Potential partnerships with cooperatives and LGUs | • Competition from existing e- commerce platforms <br><br> • Connectivity issues in rural areas <br><br> • Resistance to digital adoption by some farmers |

# User Interface

*(Attach the screenshot of your UI eacch project specification indicating the description of it. You may add according to your list of specification)*

## User Interface 1
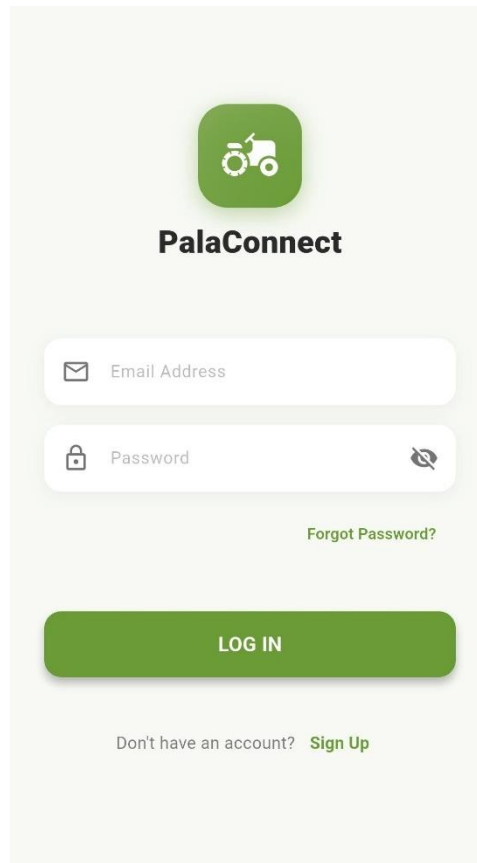


*Log In Page*

This is a screenshot of a login page for a mobile app called *PalaConnect*, displayed on an Android emulator. The app has a clean, simple design with a light green color scheme and rounded corners. At the top is the app's logo, which features two stalks of rice within a circular background.

Below the logo, the app name *PalaConnect* is displayed in large text. The main part of the screen features two input fields with rounded, dark green backgrounds: one for Email and one for Password, each with an icon. A "Forgot Password?" link is located to the right of the password field.

The screen also includes two prominent buttons: a dark green "Login" button and a white "Create an account" button with a dark green border, separated by an "or" text. The overall design suggests an app focused on a theme related to agriculture, given the rice logo and the app's name, and is designed to be user-friendly with its clear layout.

## User Interface 2



*Sign Up*

This is a screenshot of the sign-up page of the *PalaConnect* app, also displayed on an Android emulator. The app maintains the same green and white theme, creating a consistent and welcoming interface for new users.

At the top, the app logo is displayed along with the text "Create Account." Below it are input fields for the user's full name, email, password, and confirm password. These fields are evenly spaced and feature rounded borders for a neat and polished appearance.

At the bottom of the screen is a green "Create Account" button, inviting users to complete the registration process. A small text link allows users who already have an account to return to the login page. The overall layout is simple and visually balanced, designed to make account creation easy and efficient for first-time users.

**User Interface 3**



*Forgot Password*

This is a screenshot of the forgot password page of the *PalaConnect* app, designed to help users recover their account access. The page follows the same minimal and friendly color scheme used throughout the app.

At the top, there's a short message and below is the message is an input field labeled "Email Address." Once filled, the user can tap the green "Send Reset Link" button located below the field.
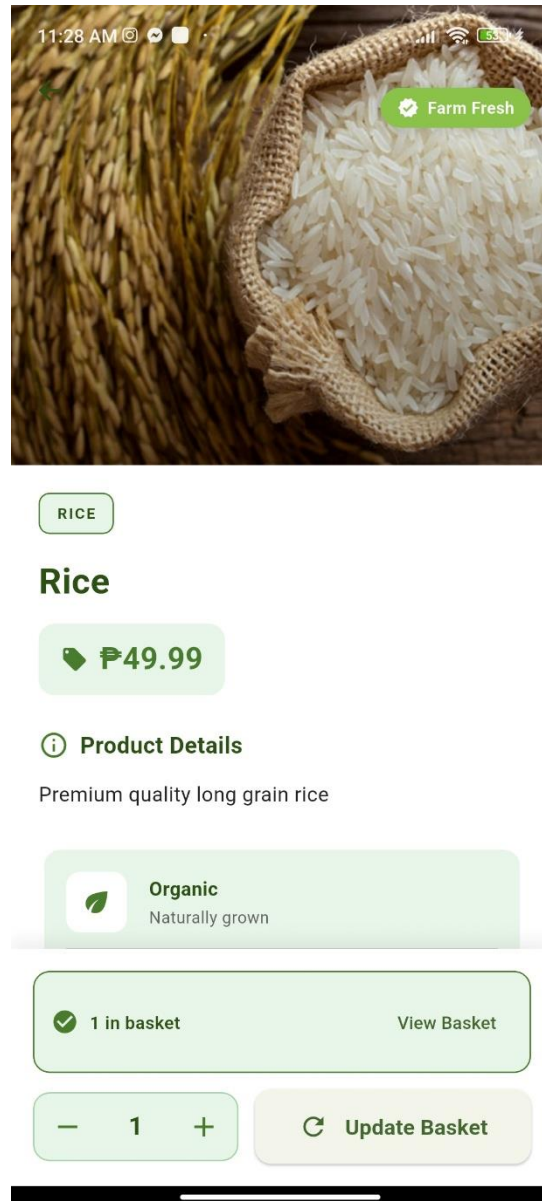
## User Interface 4
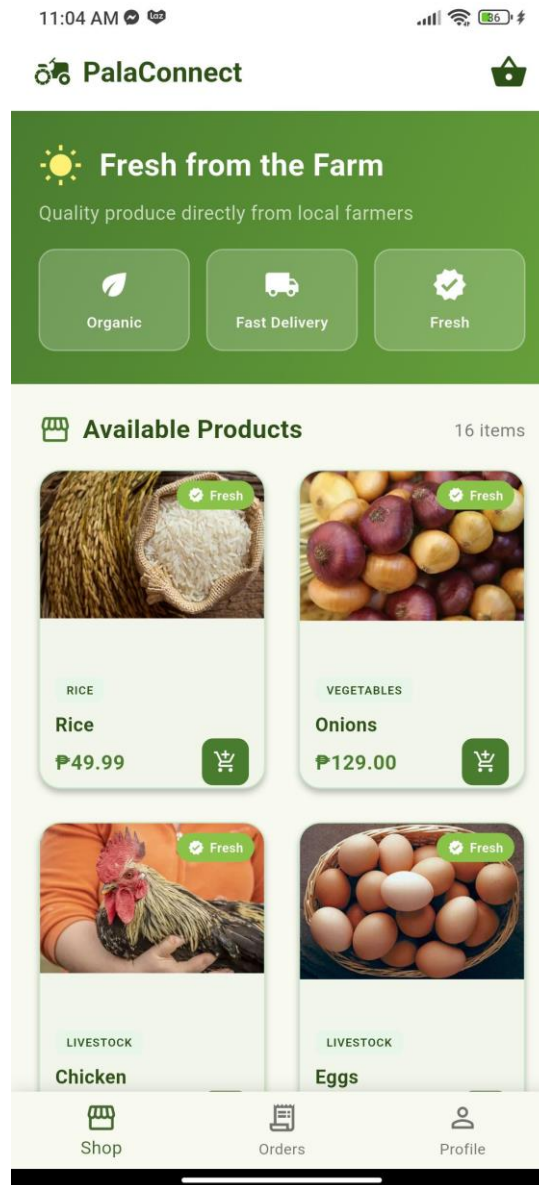


*Homepage*

This is a screenshot of the main homepage of the *PalaConnect* app, displayed on an Android emulator. The page features a fresh green color theme with a simple and clean layout. At the top is the *PalaConnect* logo beside a tractor icon, followed by the tagline *"Fresh from the Farm"* and a short description *"Quality produce directly from local farmers."*

Below this are icons labeled *Organic*, *Fast Delivery*, and *Fresh* that highlight the app's main features. The section titled *"Available Products"* displays various items such as **Rice**, **Onions**, **Chicken**, and **Eggs**, each with images, prices, and a cart icon. At the bottom, a navigation bar includes icons for *Shop*, *Orders*, and *Profile*. The overall design is simple, user-friendly, and promotes locally sourced produce.
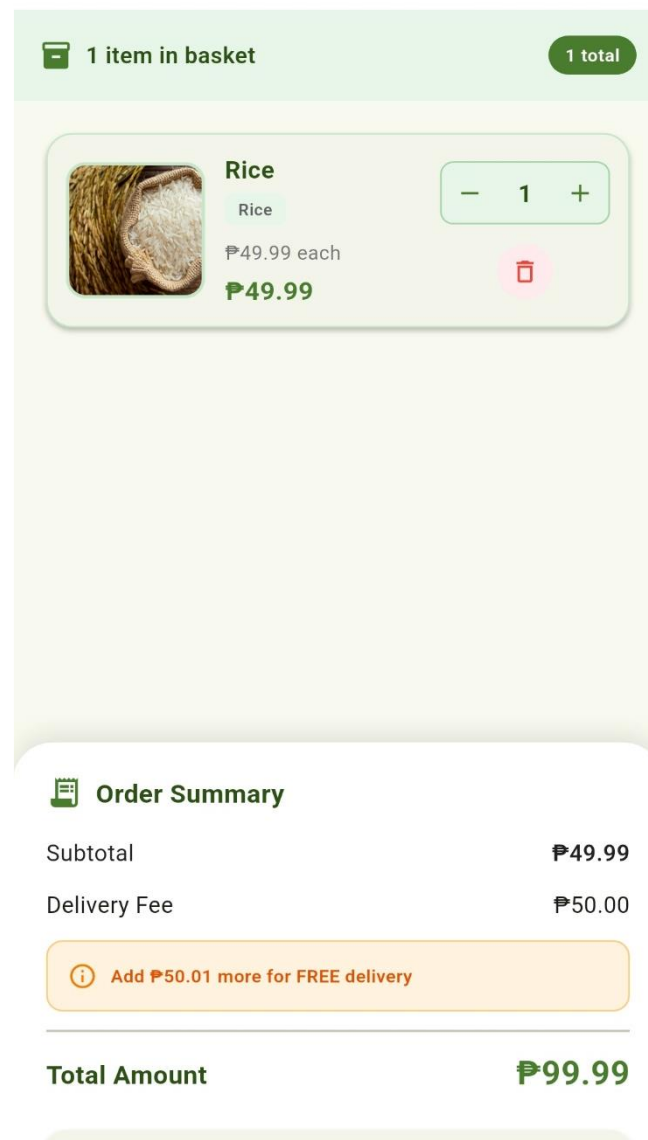
**User Interface 5**



*Product Details*

　　This is a screenshot of the product details page of the *PalaConnect* app, displayed on an Android emulator. The page features a detailed view of the selected product — in this case, *Rice*. At the top, a large image of the rice is shown with a green label *"Farm Fresh."* Below the image, the product name and price are displayed clearly, followed by a *"Product Details"* section that describes it as *"Premium quality long grain rice."*

　　Additional information such as *Organic* and *Naturally grown* is highlighted to emphasize product quality. At the bottom, users can adjust the quantity using plus and minus buttons, update their basket, or view their cart. The layout is clean and straightforward, giving users a quick overview of the product with easy access to purchase options.

# User Interface 6



1 item in basket                    1 total

**Rice**

Rice

₱49.99 each

**₱49.99**

—   1   +

**Order Summary**

| | |
|---|---|
| Subtotal | **₱49.99** |
| Delivery Fee | ₱50.00 |

ⓘ Add ₱50.01 more for FREE delivery

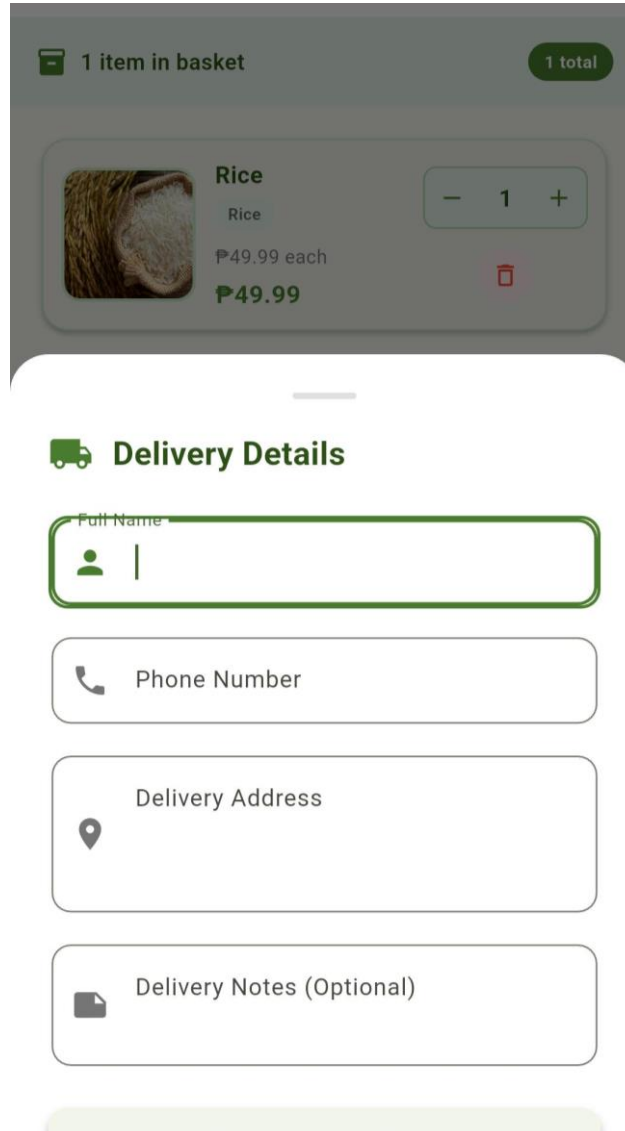**Total Amount**                    **₱99.99**

*My Basket*

This is a screenshot of the My Basket page of the *PalaConnec*t mobile app. The page serves as a summary of the user's selected products before checkout, presented in a simple and organized design.

Each listed item includes an image, product name, price, and quantity controls, allowing users to increase or decrease the number of items they wish to purchase. There is also a "Remove" option for deleting an item from the basket if needed.

At the bottom part of the page, a section summarizes the total price of all items, followed by a green "Proceed to Checkout" button. The clear and functional layout helps users easily review their cart before confirming their order.

**User Interface 7**



*Delivery Details*

This is a screenshot of the delivery details page of the *PalaConnec*t app, which collects the user's shipping information. The page has a white background with green accents that keep the design consistent with the rest of the app.

Users are prompted to enter their delivery details, including name, contact number, address, and optional delivery notes. The fields are evenly spaced and neatly labeled to avoid confusion.

At the bottom, a green "Confirm Delivery Details" button allows the user to proceed with the order. The page maintains a clear and functional layout that ensures smooth navigation during checkout.

## User Interface 8
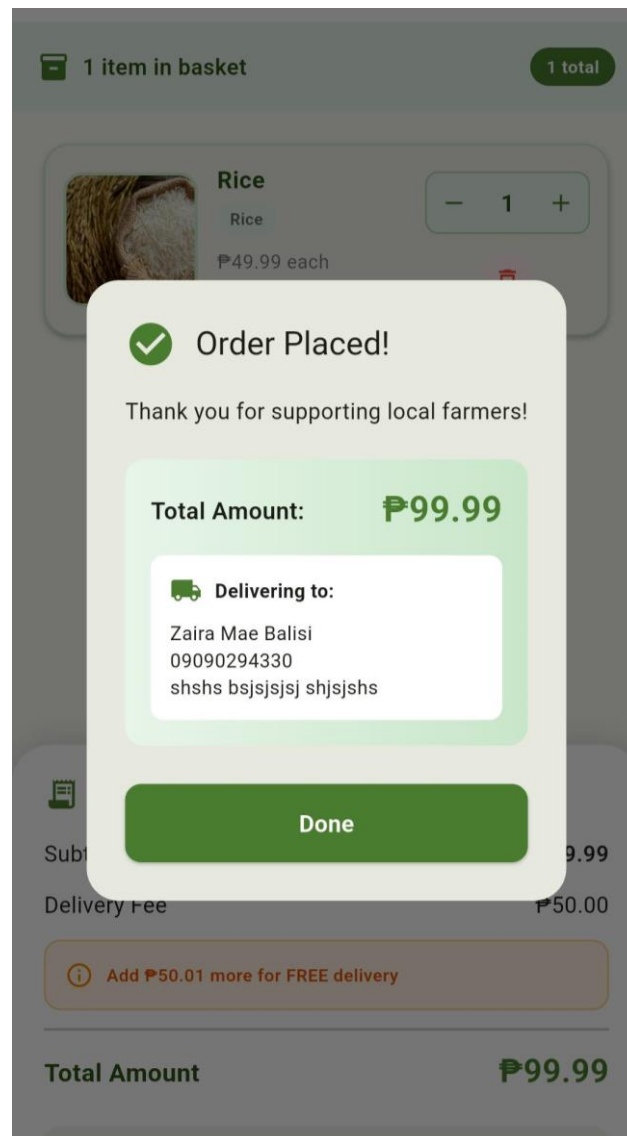


*Order Placed*

This is a screenshot of the Order Placed page of the *PalaConnect* app. It appears immediately after a successful order has been completed. The center of the screen displays a large green checkmark icon, symbolizing success, along with a short confirmation message stating "Your order has been successfully placed!"

Below the message, key order information is displayed, including the order number, estimated delivery date, and payment method used. A green "Go to My Orders" button is placed at the bottom to direct users to the order tracking section.
The overall page design communicates accomplishment and reliability, reassuring users that their order has been processed correctly.

# User Interface 9



**Order Details**
ORD-1760499476890

Processing

| Order Date | Oct 15, 2025 · 11:37 AM |
|---|---|
| Items | 2 items |
| Subtotal | ₱99.98 |
| Delivery Fee | ₱50.00 |
| **Total Amount** | **₱149.98** |

**Order Items**

Rice
₱49.99 × 2          ₱99.98

**Delivery Information**

👤 tr
📞 225
📍 ggtt
🏷️ cft

Close

*Order Details*

This is a screenshot of the *Order Details* page of the *PalaConnect* app, displayed on an Android emulator. The page provides a summary of a specific order, including the order number, date, total items, subtotal, delivery fee, and total amount. The top section also shows the current status of the order labeled as *"Processing."*

Below, there is an *Order Items* section showing product details such as the item name, quantity, and price. In this example, the product *Rice* is listed with the total cost. The *Delivery Information* section follows, displaying the recipient's name, contact number, address, and delivery notes. At the bottom, a *"Close"* button allows the user to exit the page. The layout is clear and organized, designed to make tracking order details simple and efficient.

**User Interface 10**
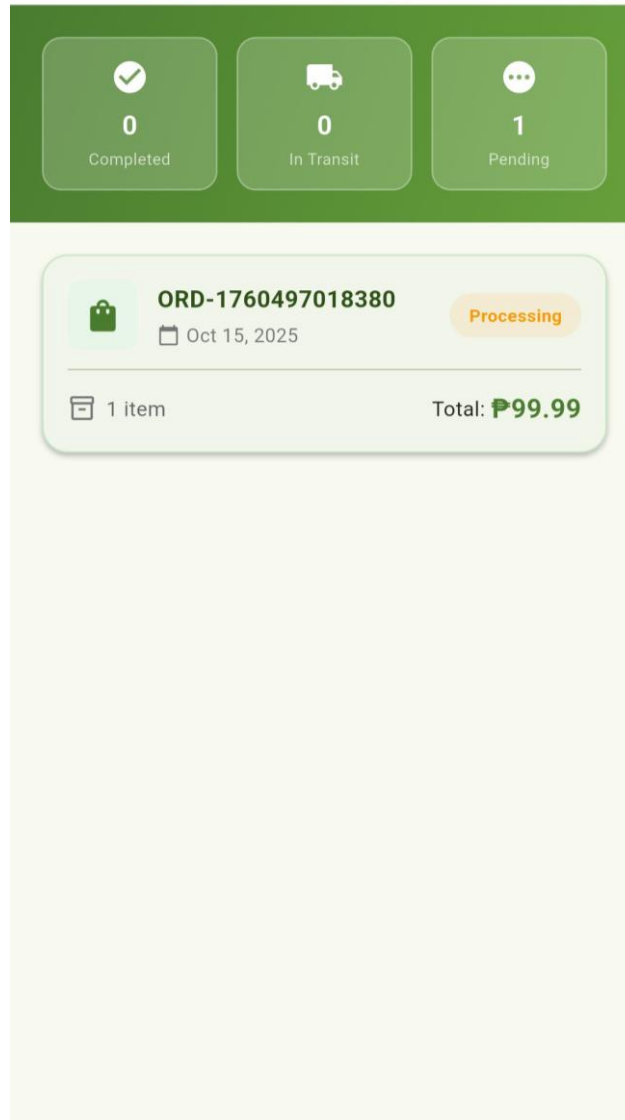


*My Orders*

This is a screenshot of the My Orders page of the *PalaConnect* mobile application. The layout displays all current and previous orders in an organized list format.

Each order card shows an order ID, product image, total price, and order status such as "Pending," "Shipped," or "Delivered." Users can tap on a "View Details" button to expand and see more information about each purchase.

The use of soft green highlights helps indicate order progress visually. The page provides users with an easy way to track their transactions and stay informed about their order history.

**User Interface 11**
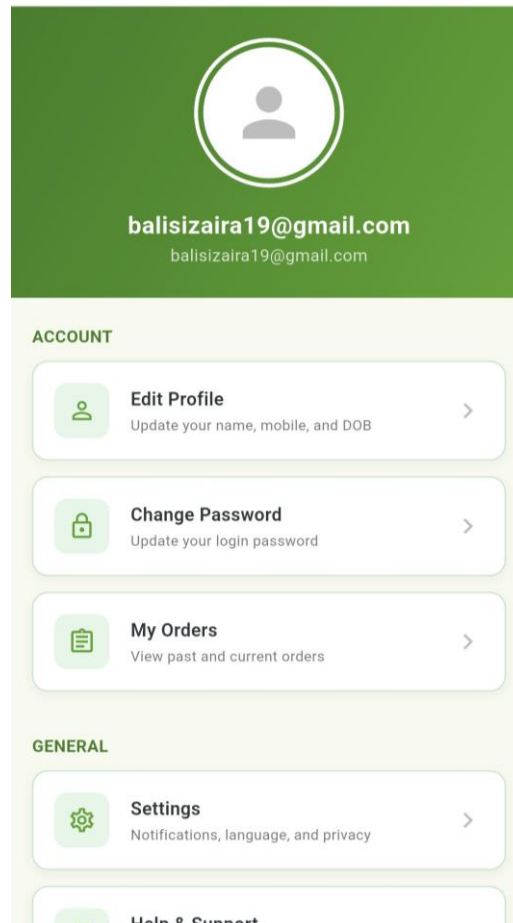


*Profile*

This is a screenshot of the Settings page of the *PalaConnec*t app. The page displays the user's account information, including their full name, email address, and contact number, presented in a clean and organized layout.

At the top is a circular avatar placeholder for the user's profile photo. Below it are several options such as Edit Profile, Change Password, My Orders, Help & Support, and Sign Out. Each section is neatly separated, making it easy for users to navigate and manage their account preferences.

The page maintains the app's consistent green color scheme and minimalist design, ensuring a professional, user-friendly experience for managing personal settings and support options.

# Code Snippet

*(Attach the screenshot of your sample Flutter user interface code snippet. **NOTE:** Just the Model itself.)*

## Code Snippet 1



*Home_screen.dart*

The image shows a dark mode coding environment, likely Visual Studio Code, displaying a Flutter app's PalaConnect Homepage code in Dart.

## Code Snippet 2



*Login_page.dart*

The image shows a dark mode coding environment, likely Visual Studio Code, displaying a Flutter app's PalaConnect login page code in Dart.

# Project Rubric

| Course Code | CTWBCOML | Course/Subject | WEB COMMERCIALIZATION AND eCOMMERCE | |
|---|---|---|---|---|
| Term/Academic Year | 1st Term – 2025-2026 | | | |
| Group Name | GFORCE | | | |
| Members | Surname, First Name MI. (Alphabetical) | | | Signature |

| | | |
|---|---|---|
| | Balisi, Zaira Mae C. | |
| | Ballesteros, John Tristan V. | |
| | Bautista, Joshua Angelo | |
| | Chiquito, Patrick Allen A. | P.Chiquito |
| | Rivera, Jermaine Deniel G. | |

| Project Component | SO | Unsatisfactory (0) | Needs Improvement (1) | Satisfactory (2) | Proficient (3) | Exceptional (4) | PTS |
|---|---|---|---|---|---|---|---|
| User Interface, Design & Navigation | SO6 | Unattractive, outdated design; inconsistent layout; non-responsive; confusing navigation. | Basic design with minor inconsistencies; limited responsiveness; partially intuitive navigation. | Visually acceptable, consistent layout; responsive on most devices; easy navigation. | Attractive, modern design; fully consistent across all pages; highly responsive; intuitive navigation. | Professional, modern UI with excellent visual appeal, seamless responsiveness, and flawless navigation experience. | |
| Functionality & Core Features | | Major features missing or non-functional (e.g., browsing, search, cart, checkout). | Some core features functional but with major bugs or incomplete implementation. | All core features functional (browsing, search, cart, checkout) with minor issues. | Fully functional features with smooth interactions and proper error handling. | Exceptional functionality with additional enhancements beyond requirements; flawless performance. | |
| Security & Data Management | | No HTTPS; weak or no authentication; poor data protection; vulnerable to attacks. | Basic security measures implemented but with noticeable vulnerabilities. | Secure authentication, basic encryption, and partial protection against attacks. | Strong security with HTTPS, encryption, and defenses against common attacks; efficient database handling. | Advanced security, full compliance with best practices, optimized database queries, high data integrity, and large dataset handling. | |
| Product & Order Management | | Admin cannot manage products/orders; product details incomplete; poor categorization. | Basic product/order management with limited functionality. | Functional product and order management with correct details and category organization. | Efficient product and order management with smooth updates and well-organized categories. | Advanced product and order management with bulk operations, automation, and optimal category/tagging. | |
| Documentation, Code Quality & Presentation | SO3 | No or poor documentation; messy, unreadable code; unclear presentation. | Basic documentation; code readable but lacks structure; weak presentation skills. | Adequate documentation; code mostly organized; clear presentation with minor gaps. | Good documentation; clean, well-structured code; confident and clear presentation. | Comprehensive technical/user documentation; excellent code quality; engaging and professional presentation with confident Q&A. | |

**Total Score and Feedback**

| | | | |
|---|---|---|---|
| ☐ Exceptional | 20 | Outstanding performance in all project components with minimal to no issues | **Total Points Earned** |
| ☐ Proficient | 16-19 | Good performance in most project components with minor issues. | |
| ☐ Satisfactory | 12-15 | Acceptable performance in basic aspects with several issues. | |
| ☐ Needs Improvement | 8-11 | Below-average performance with many issues. | |
| ☐ Unsatisfactory | 0-7 | Poor performance with critical issues in most project components. | |

| Evaluated by: | **Remarks/Comments** |
|---|---|
| _____ Name of Course Instructor/Date | |