

# **Sophali Documentation**

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# **Technical Documentation**

This technical documentation of Sophali outlines the architecture and technology stack used for the development of a multi-tier application, including a user app, merchant app, and an admin panel. The application integrates real-time communication, secure payments, and a variety of management features.

# 1. Frontend Technologies

# **User App**

- **Framework**: React Native with Expo.
- State Management: React hook (Usestate), Redux...

### **Merchant App**

- **Framework**: React Native with Expo.
- State Management: React hook (Usestate), Redux.

#### **Admin Panel**

• Framework: React.js.

# 2. Backend Technologies

• **Programming Language**: JavaScript.

• Runtime Environment: Node.js.

• **Framework**: Express.js.

• Database: MySQL.

• **ORM**: Sequelize ORM for database management.

### **Security**

- **Authentication & Authorization**: JSON Web Tokens (JWT) for secure user access.
- **API Communication**: Secure communication between frontend and backend via HTTPS.

# 3. API Integration

• **API Type**: RESTful APIs.

• Request/Response Format: JSON.

### **Key API Endpoints:**

- **User Management**: Registration, login, profile management.
- **Restaurant Management**: Menu creation, order management.
- Wallet Management: Top-up, transaction history, balance tracking.
- **Buddy Management**: Add buddies, transfer money.
- **Real-Time Messaging & Notifications**: Real-time updates for orders, messages, and events.

# 4. Real-Time Communication

- Service Provider: Pusher.
- Usage:
  - o Real-time chat between users.
  - Real-time notifications for order status, Gifts, Buddies, Coupons, Messages and Sophali Notifications.
- **Protocol**: Pusher for maintaining persistent communication between client and server.

# 5. Payment Gateway Integration

• Service Provider: Stripe.

### **Usage:**

- User App: Wallet top-ups.
- Merchant App: Withdrawal of earnings through Stripe.
- **Custom Connected Accounts**: Stripe's custom connected accounts for merchant withdrawal management.
- Admin can Manage Withdrawal through control pannel.

### Handling:

Stripe handles withdrawals and top-ups only, while order transactions, including money transfers and gift orders, are managed internally by the Sophali system.

### **Compliance:**

• Stripe ensures PCI compliance for secure payment processing.

# 6. Deployment

### **Server Environment**

- **OS**: Ubuntu server accessed via SSH.
- **Backend Deployment**: Node.js and Express.js services deployed on the server.
- Frontend Deployment:
  - o **Mobile Apps (User):** Available on the iOS App Store and Google Play Store, developed using React Native and Expo.
  - o **Mobile Apps (Merchant):** Available only on the Google Play Store.
  - o **Admin Panel**: Deployed as a web application using React.js.

### **Deployment Method**

• Deployed manually.

#### **Security**

 Access to the server is secured via SSH for all management and maintenance operations.

# **Merchant App**

# **Overview**

The Sophali Merchant App is platform designed to help restaurant owners manage their business operations efficiently and effectively. It offers a comprehensive set of features, including menu management, order processing, coupon management, real-time order alerts, sales tracking, analytics, and sub-merchant management.

With its robust functionality, merchants can focus on growing their business while easily tracking performance and managing customer relationships. Additionally, multiple subscription plans provide flexibility, enabling merchants to choose the plan that best suits their operational needs and budget.

# **Registration Process**

# 1. Owner or Manager Details

The merchant provides personal details such as:

- Name
- Contact information (email, phone, Bank details etc)
- Identity verification (upload ID)

#### 2. Restaurant Details

Required details include:

- Restaurant name
- Address
- Contact information

#### 3. Owner Bank Account Details

Bank account details for payment processing:

- Bank name
- Account number
- Transit/Branch Number

## 4. Admin Approval Process

Admin must verify:

- Bank details
- Merchant identity
- Menu submission
- Subscription activation

# **Restaurant Setup**

# 1. Opening and Closing Times

Merchants can set the restaurant's operational hours.

# 2. Menu Management

- Categories: Group products by types (e.g., appetizers, main course).
- **Products**: Individual items (e.g., pizza, burger).
- **Sub-products**: Variants of a product (e.g., small, medium, large pizza).

#### 3. Add-ons

Merchants can define additional options for products, such as extra toppings or sauces.

#### 4. Modifiers

Merchants can offer choices for customers to personalize their orders. These choices could include things like selecting a spice level, choosing extra ingredients, or picking a side dish. Modifiers can be set as optional or required based on the product.

### **5. Product Preparation Time**

Merchants can set the preparation time for each product.

#### 6. Discounts

Apply discounts on specific product in the menu.

#### 7. Taxes

Merchants can set taxes on specific products.

# **Order Management**

## 1. Order Acceptance and Rejection

Merchants can receive various types of orders, such as "Pick Now," "Pick Later," gift orders, and transfer orders. They have the option to view then accept or reject each order.

#### 2. Order Alerts

Merchants app send alerts to customers about their orders (e.g., delays, decline).

# 3. Order History

The system maintains a detailed history of all accepted and rejected orders.

# **Sales History**

### 1. Daily, Weekly, Monthly, Custom Reports

Merchants can access sales reports for the above mention specific time periods to track performance.

### Accounts

#### 1. Total Earnings

Displays total revenue generated by the merchant.

#### 2. Withdrawal Details

Displays withdrawal amounts and dates. Withdrawal tracking can be done using the charge ID through Stripe. Sophali has a different withdrawal fee structure, which is managed through the control panel.

#### 3. Subscription Fees

Details of subscription charges.

#### 4. Current Balance

Displays the current available balance.

#### 5. Last Withdrawal

Shows the last withdrawal transaction and its details.

# **Analytics**

### 1. Sales Analytics

Provides data on sales performance, including order times, peak hours, and late orders.

### 2. Product Analytics

Displays insights into product performance, including best-selling and least popular items.

# **Sub-merchant Management**

#### 1. Sub-merchant

Merchants can add sub-merchants for the staff with the specific mentioned permissions:

- Menu Access
- KOB (Kitchen Order Board) Access
- Coupon Management

# **Coupons**

### 1. Coupon Templates

Coupon templates allows merchant to create quick discounts or to repeat old offers for the Sophali users (checked In):

### 2. Types of Coupons

Merchants can create the following types of coupons:

- Amount Off
- Percentage Off
- Buy One Get One Free
- Deals

### 3. Coupon Application

Coupons can be applied at cart level or product level, depending on configuration.

# **Subscription Plans**

#### **Bronze Plan**

- **Price:** \$75.00 per month
- Features:
  - o 30-day free trial
  - Ability to sell products remotely
  - o Offer your services to Sophali users
  - o Receive and accept orders digitally
  - o View the number of users in your area
  - Detailed business reports
  - Queue orders when busy

#### Silver Plan

- **Price:** \$100.00 per month
- Features:
  - o 30-day free trial
  - All features included in the Bronze Plan
  - Ability to send E-coupons to customers and Sophali users
  - o Engage with customers through digital E-coupons

#### **Gold Plan**

- **Price:** \$125.00 per month
- Features:
  - o 30-day free trial
  - o All features included in the Silver Plan
  - Added delivery capabilities
  - Ability to see the driver details
  - Ability to move drivers to different zones
  - Ability to pool drivers with other merchants
  - Ability to see breakdown of delivery charges
  - o Ability to login or logout the driver

# Sophali User App

The **Sophali User App** provides users with a seamless experience for managing their accounts, interacting with restaurants, placing orders, and utilizing social features such as gifting and buddy management. With an intuitive interface, users can easily navigate through a range of functions, including wallet management, order history, notifications, and more.

# **Account Management**

### 1. User Registration and Login

- New Registration: Users can register by providing name, email, and password.
- · Verify account
- Login: Users log in using email and password.
- **Password Reset**: Users can reset their password through the "Forgot Password" feature.

### 2. Profile Management

- **View Profile**: Users can view and edit personal details like name, email, and profile picture. User can not change his username (Unique for each user).
- **Manage Payment Methods**: Users can manage their payment methods, and we charge them through Stripe payment gateway for wallet top-ups.

# Wallet Management

# 1. Top-Up Wallet

Users can add money to their wallet using Stripe Payment gateway:

- Select the top-up amount.
- Complete payment via Stripe.
- Sophali applies a fee on every top-up, and the fee can be managed through the control panel.
- Updated balance is reflected in the wallet.

#### 2. Transaction History

Users can view their wallet transaction history of top-ups.

### **Restaurant Interaction**

#### 1. Browse and Search for Restaurants

Users can search and filter restaurants by:

- Products
- Restaurants name

#### 2. Restaurant Check-In

Users need to check in at the restaurant by Swiping the check-in option. Only users who are checked in can place orders, while checked-out users cannot place orders at that restaurant but will be able to see the menu of that restaurant.

# **Ordering & Payments**

#### 1. Place Orders

- Users can browse restaurant menus and place orders for immediate pick now or pick later, with the option to add add-ons or modify items.
- Users can place order with special instructions as well.

### 2. Apply Coupons

• Users can apply available coupons before completing an order if offered by the merchant to that user.

#### 3. Payment via Wallet

• Payments can be made using wallet money, and users receive a confirmation notification once the order is placed.

# **Social Features**

### 1. Buddy Management

- **Add Buddies**: Users can add friends by searching for their username or by scanning their profile QR.
- **Chat Buddy:** Users can communicate with their buddies using the chat feature.

### 2. Gift Money Transfers

• Users can transfer money as a gift from their wallet to a buddy's wallet.

### 3. Gifting Orders

• Users can send transfer or (pick later) order as a gift to their buddies.

# **Chat & Messaging**

Users can chat in real-time with buddies (using **Pusher** for messaging).

# **Notifications**

#### 1. Order Notifications

Real-time notifications for order updates include: order placed, order being prepared, order prepared, ready for pickup, order picked up, order closed, and order canceled.

#### 2. General Notifications

Notifications for important events like chat notification, coupons, gifts, Merchant, sophali system.

# **History & Order Management**

### 1. Order History

Users can view a detailed history of their orders, in the orders tab regardless of the orders were accepted or rejected.

# **Purchased Item Details and Pickup Orders**

This section allows users to review details of their purchased items, specifically for orders that are intended to be picked up later. The system provides comprehensive information about each transaction, including payment status, expiration details, and product information. Users can also manage and share their orders through various actions.

- 1. **Date**: Displays the date and time of the purchase.
- 2. **Transfer** #: A unique identifier (Transfer ID) for the purchase transaction.
- 3. **Payment Status**: Indicates the payment status of the order, which is marked as "Paid" when the transaction is successful.
- 4. **Expire By**: Shows the deadline for picking up the item or redeeming the order.
- 5. **Product Detail**: A description of the purchased product.
- 6. Actions:
- 7. **Redeemed/Add to Cart**: Indicates the redemption status or allows users to add items to their cart for future redemption.
- 8. **To Buddy**: Provides an option to send or share the purchased item with a friend or buddy.

# Sophali Admin Panel

The **Sophali Admin Panel** is a comprehensive, centralized platform designed to provide super administrators with full control over the activities and operations of the Sophali ecosystem. Its intuitive user interface and structured navigation make it easy for admins to manage merchants, users, transactions, financial operations, and systemwide settings.

# 1. Admin Panel Overview

#### 1.1 Introduction

The **Sophali Admin Panel** is a central hub designed for super administrators to manage and oversee the activities and functionalities of the Sophali platform. The panel allows admins to control merchants, users, transactions, and financial operations. It is designed to provide a simple, intuitive interface with easy navigation between sections.

### 1.2 Navigation Structure

The **Sophali Admin Panel** consists of the following key areas, accessible through the top navigation bar and sidebar menu:

- **Dashboard**: A high-level overview of platform performance.
- Merchant: Full control over merchant accounts and restaurant details.
- **Analytics**: Detailed insights into the platform's performance.
- **Billing**: Manage orders, subscriptions, top-ups, and withdrawals.
- Users: View and manage user accounts.

The **Sidebar Menu** (located on the left) provides access to additional administrative controls, including account settings, subscription management, delivery options, and withdrawal processing.

### 2. Dashboard

The **Dashboard** serves as the primary page in the admin panel, displaying key performance metrics of the platform.

### 2.1 Key Metrics Overview

The dashboard provides a quick glance at the overall performance:

- **Total Revenue**: The total amount of revenue generated on the platform from all sources.
- **Orders**: The total number of orders processed.
- **Merchants**: The number of active restaurants or food merchants currently registered.
- Users: The number of active users registered on the platform.

#### 2.2 Total Revenue Breakdown

The **Total Revenue Breakdown** section displays a pie chart representing the user distribution:

- **Merchants**: The percentage of users who are merchants.
- Users: The total number of platform users.
- Active Users: The percentage of users actively using the platform.
- **Inactive Users**: The percentage of users who are inactive.

### 2.3 Transaction Revenue Graph

This graph provides a visual representation of the platform's monthly sales progress. The line graph shows:

- Sales over Time: This tracks the number of sales throughout the month.
- **Revenue Growth**: This represents the monthly growth in sales, helping admins monitor trends and make informed decisions.

# 3. Merchant Management

The **Merchant Management** section allows the admin to oversee and manage all registered merchants on the platform.

#### 3.1 Merchant List Overview

The list displays key details about each merchant:

- Username: The unique username of the merchant.
- **Restaurant Name**: The name of the restaurant or food business.
- **Email**: The merchant's contact email address.
- **Phone Number**: The merchant's contact phone number.
- **Total Revenue**: The total revenue generated by the merchant on the platform.

#### 3.2 Merchant Actions

From the merchant list, the admin has several management options:

- **View**: Open a detailed profile of the merchant, including their revenue, transactions, and account details.
- Menu: View or manage the merchant's food menu directly from the list.
- **Delete**: Remove the merchant from the platform if they violate terms or fail to meet platform standards.
- Approval: Toggle merchant approval status. Approved merchants are visible to users, while disapproved ones are not.

# 4. Analytics

The **Analytics** section will provide detailed insights into the platform's performance, helping the admin make data-driven decisions. This section is currently under development and will provide more robust features in future updates.

# 5. Billing

The **Billing** section provides an overview of all financial transactions happening on the platform, including orders, top-ups, subscriptions, and withdrawals.

#### **5.1 Billing Metrics Overview**

Key financial figures are displayed at the top of the billing section:

- **Orders**: Total revenue from food orders.
- **Topups**: The amount of money users or merchants have added to their accounts
- **Gifts**: Revenue generated from gift purchases.
- **Subscriptions**: Money collected from merchant or user subscriptions.
- Withdrawals: Amounts withdrawn by merchants or users.

#### **5.2 Transaction Details**

The **Transaction Details** table provides detailed information about each transaction, including:

- **Purchase ID**: A unique identifier for tracking the transaction.
- **Username**: The user who performed the transaction.
- Merchant Name: The associated merchant.
- **Date/Time**: When the transaction occurred.
- **Amount**: The total value of the transaction.
- **Fee**: Any applicable fees on the transaction.
- Action: Admins can click "View" to see more details about the transaction.

# 6. User Management

The **User Management** section is where administrators can oversee and manage user accounts, ensuring that users comply with platform policies.

#### **6.1 User List Overview**

Admins can view a table that lists all registered users, displaying the following information:

- First Name/Last Name: The user's full name.
- **Username**: The username chosen by the user.
- **Email**: The email address associated with the user account.
- **Mobile Number**: The contact number provided by the user.

#### **6.2 User Actions**

For each user, admins can perform the following actions:

- View: Review detailed account information, including the user's activity and order history.
- **Delete**: Remove a user from the platform if they violate terms of service.
- **Status Indicators**: See if the user is currently active and whether they've verified their account.

# 7. My Account

The **My Account** section allows administrators to configure platform-wide settings related to fees and transactions. The settings include:

- **Set Global Tax Rate**: Control the tax rate applied across all orders placed on the platform.
- **Sophali Fee on Every Order**: Set a flat fee charged on every order placed through the platform.
- **Transaction Fee for Money Gifts**: Control the percentage fee for gift amount. (Buddy to Buddy)
- **Percentage Fee on User Wallet Top-ups**: Set the percentage charged when users add money to their accounts.
- Withdrawal Day Limit: Set the number of Limit of days for processing withdrawals.
- **Withdrawal Fee for Merchants**: Define withdrawal fees for merchants after limited days.

Admins can update these values and apply changes by saving the settings.

# 8. Subscriptions

The **Subscriptions** section allows admins to manage subscription plans available to merchants. This section includes:

- **View Plans**: A list of all subscription plans, showing their pricing and duration.
- Add New Plan: Admins can add new subscription plans with customizable prices and features upon the request of a specific merchant. These plans are not visible to all users and are exclusively available to the designated merchant.
- Edit/Delete Plans: Modify or remove existing subscription plans as needed.

# 9. Delivery

The **Delivery** section is currently marked as "Coming Soon." Once launched, it will allow the admin to manage delivery-related settings such as delivery partners, rates, and schedules for food deliveries.

# 10. Withdrawal

The Withdrawal section in the Sophali control panel is dedicated to managing and processing withdrawal requests related to Sophali's earnings from the platform.

#### 10.1 Withdrawal Metrics Overview

This section provides a comprehensive overview of the financial data specifically related to Sophali's earnings and withdrawal processes:

- **Total Balance**: Reflects the total available earnings for withdrawal on the platform..
- **Total Withdrawal**: Displays the cumulative amount withdrawn by Sophali from the platform's earnings.
- **Last Withdrawal**: Provides the date and amount of the most recent withdrawal made from Sophali's earnings.
- **Stripe Balance**: Shows the available and pending balances within the Stripe account that are relevant for processing Sophali's withdrawal requests.

## 10.2 Manual Withdrawal Processing

Admins are able to process manual withdrawal requests for Sophali's earnings by inputting the following details:

- **Email**: The email associated with the withdrawal request.
- **Password**: The admin's password for authenticating the transaction and ensuring security.
- **Withdrawal Amount**: The specific amount of earnings that Sophali is requesting to withdraw.