Wellness-Kart: A FULL-STACK E-COMMERCE PLATFORM FOR PERSONALIZED WELLNESS PRODUCTS

(Scents & Fragrances)

Name: S.K.DEVANAND

Register Number: 43130366

Department: Electronics and Communication Engineering

INTRODUCTION:

The Wellness-Kart project is a comprehensive web-based application designed to automate and digitize the management of health and wellness products. Developed as a modern e-commerce solution, it provides a centralized platform for customers to browse a curated selection of wellness bottles and customized fragrances, assess their options, and place secure orders.

The primary objective of this system is to bridge the gap between users and health products by providing an intuitive user interface and a robust administrative backend. It replaces manual record-keeping with an automated database that tracks student registrations, business revenue, and order statuses in real-time. By leveraging the Spring Boot framework and MySQL database, Wellness-Kart ensures a secure, scalable, and efficient experience for both customers and administrators.

ABOUT THE PROJECT:

Wellness-Kart is a high-performance web application designed to simplify the purchasing and management of wellness-related goods. The system is built using a **Client-Server Architecture** to ensure data is processed securely

and efficiently between the user's browser and the database.

Key Technical Features:

- **Role-Based Security:** The system implements separate authentication modules for **Users** and **Admins** to ensure that sensitive business data is only accessible to management.

- **Dynamic Data Management:** Using **Spring Data JPA**, the application automatically maps Java objects (Entities) to MySQL tables, enabling seamless data persistence for user profiles and product orders.

- **Real-Time Analytics:** The Admin Dashboard performs live calculations on the database to track total revenue and active customer counts.

- **Automated Fulfillment Tracking:** Every order is assigned a unique ID and tracked through various statuses (e.g., "Placed", "Processing"), providing transparency for both the buyer and the seller.

Core Modules:

- **Admin Module:** This is the control center where administrators can log in to view business metrics,

manage the customer directory, and update the status of incoming orders.

- **User/Student Module:** Allows customers to register an account, upload a profile image, and browse the product catalog.

- **Order Module:** Handles the checkout process, including the selection of bottle sizes and fragrance combinations, and calculates the final amount based on the user's choices.

ER DIAGRAM (ENTITY-RELATIONSHIP):

- The **ER Diagram** represents the logical structure of the **Wellness-Kart** database. It illustrates how different data entities—such as Users, Admins, and Orders—relate to one another to ensure data integrity and seamless application performance.

Entity Breakdown

User Entity:

  - Acts as the primary entity for customers.

  - Contains attributes: id (Primary Key), username, password, email, phone, address, and profile_image.

Admin Entity:

- Stores administrative credentials for system management.

- Contains attributes: id (Primary Key), username, password, and role (e.g., SUPER_ADMIN).

Order Entity:

- Records transaction details initiated by users.

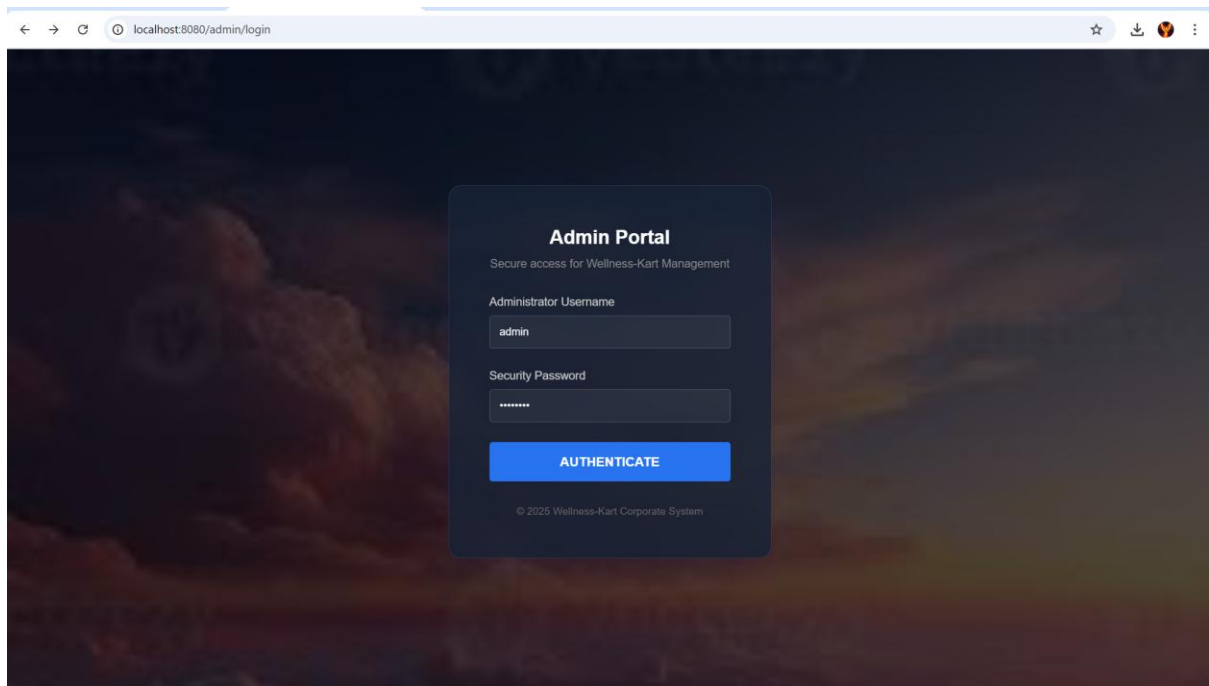- Contains attributes: id (Primary Key), bottle_type, fragrances, total_amount, status, order_date, and payment_mode.

Relationships

- **User to Order (One-to-Many):** One user can place multiple orders, but each order belongs to only one specific user. This is mapped via a Foreign Key (user_id) in the orders table.

- **Admin to User/Order (Management):** While not always a direct database link, the Admin entity "manages" the data records of both users and their associated orders through the administrative controllers.

Wellness-Kart E-Commerce System Architecture
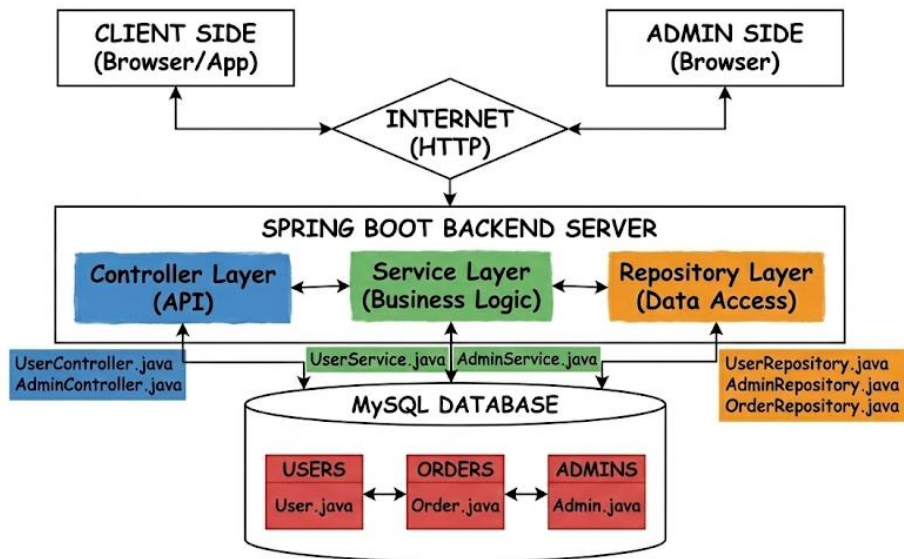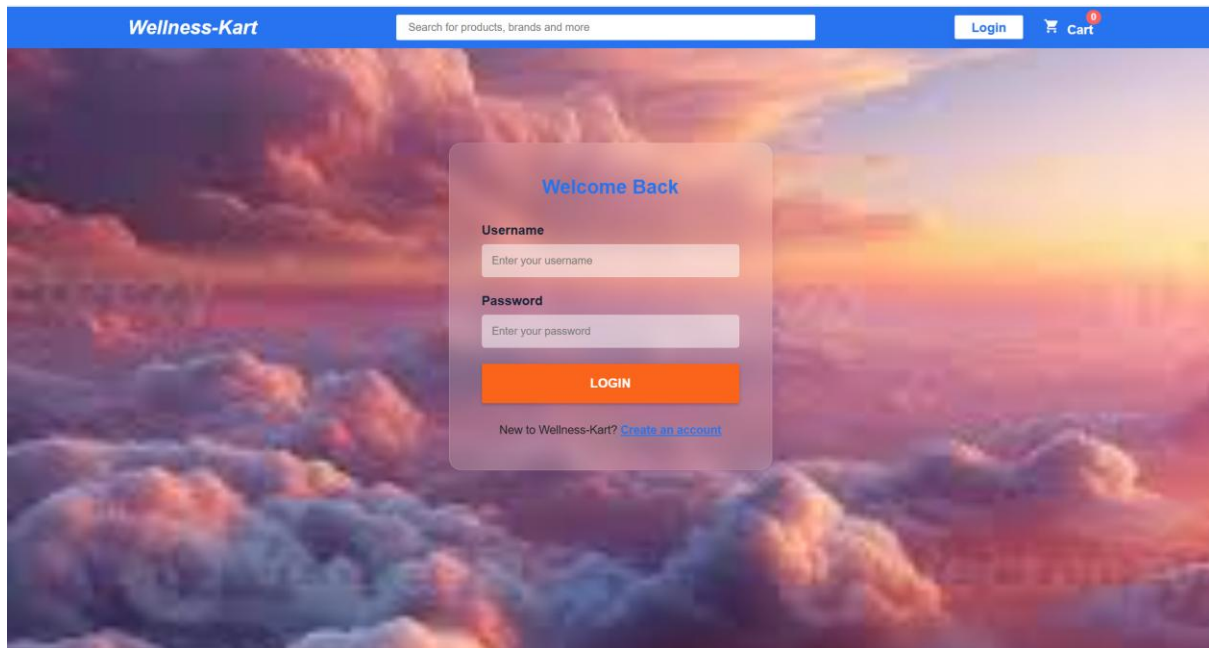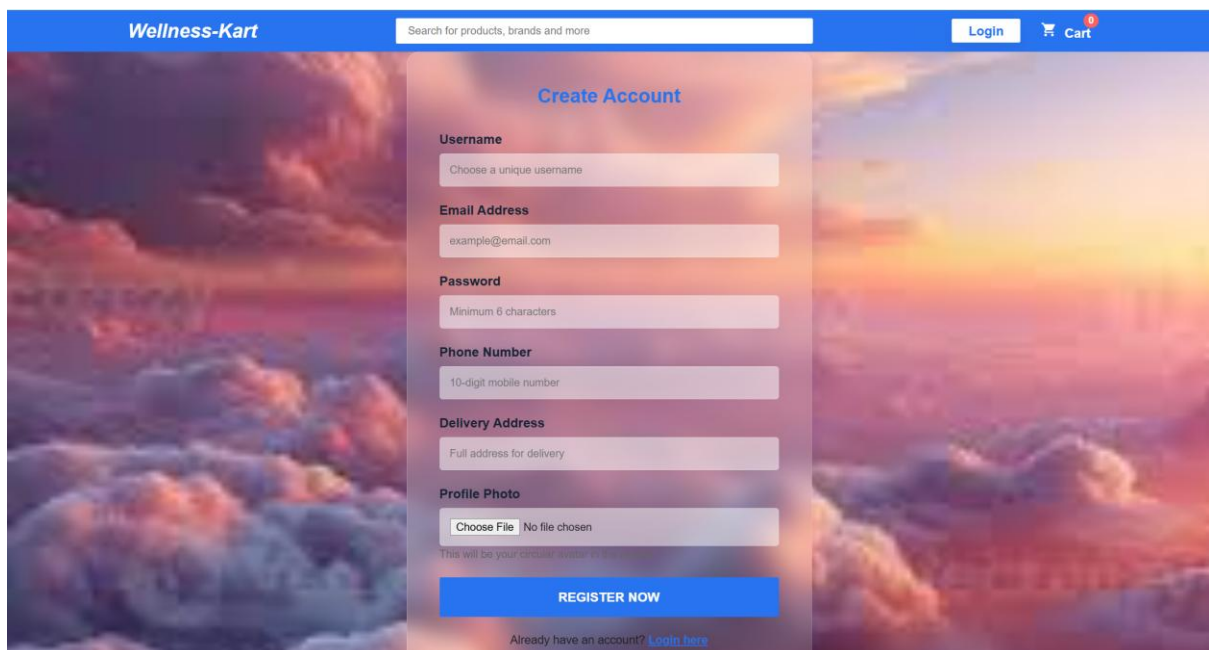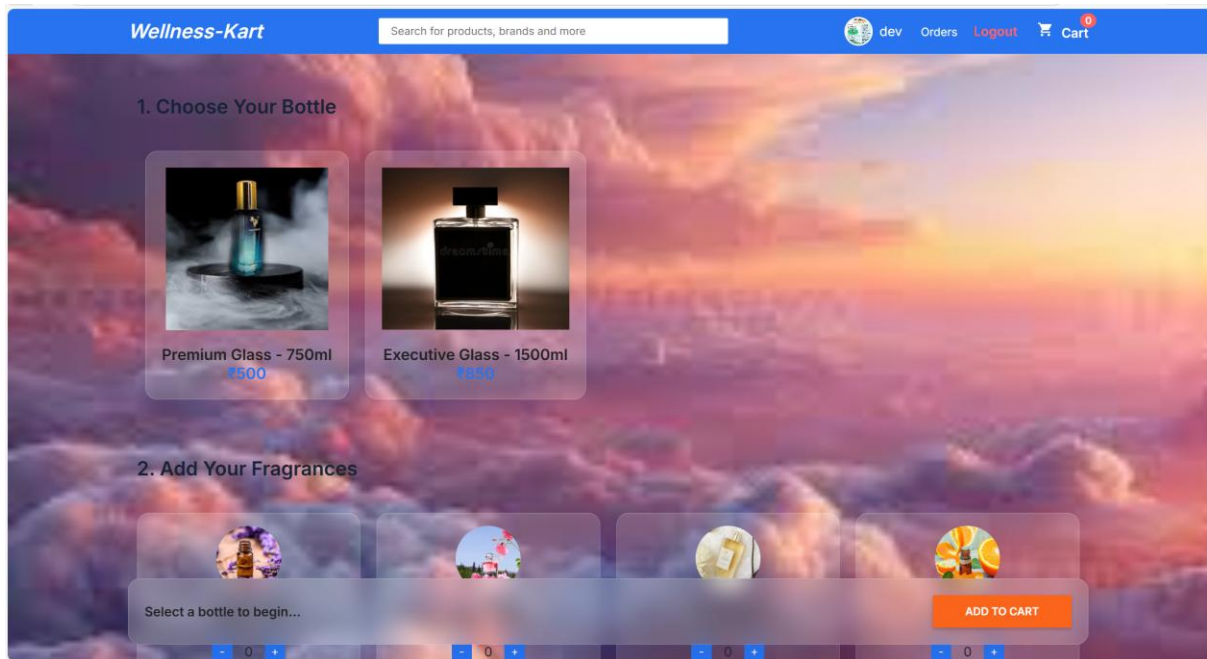
OUTPUT OF THE PROJECT:

ADMIN LOGIN PORTAL

WK Admin Panel

Business Overview

TOTAL REVENUE	TOTAL ORDERS	TOTAL CUSTOMERS
₹0.0	0	0

Recent Orders

Order ID	Customer	Details	Amount	Date	Status Action

ADMIN PANNEL

WK Admin Panel

Customer Directory

Total Registered Users: **0**

Profile	Username	Email	Phone	Address	Actions

localhost:8080/admin/dashboard
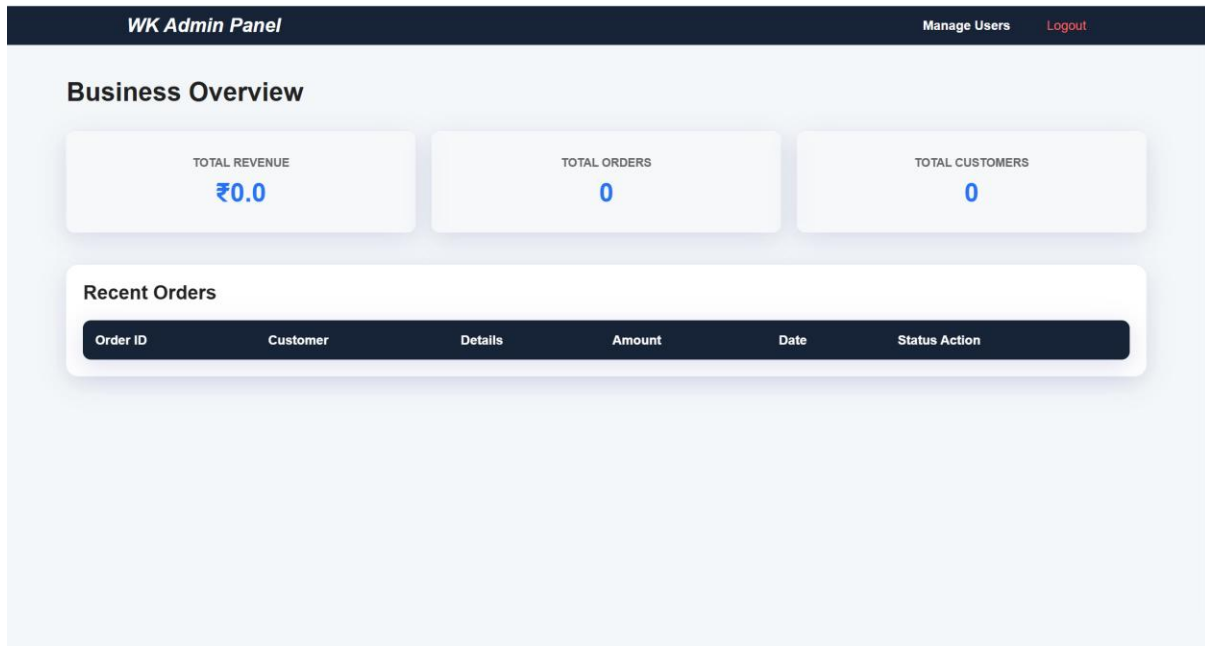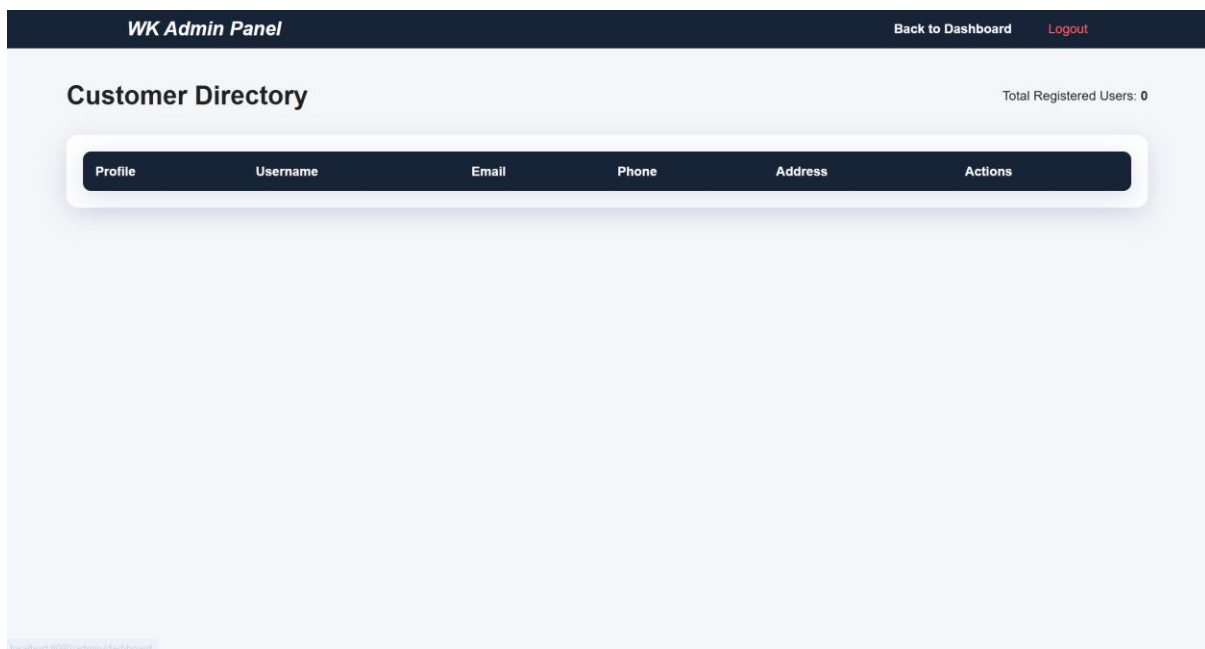
CUSTOMER DETAILS

CUSTOMER LOGIN PAGE

CUSTOMER REGISTER PAGE

SHOPPING PAGE
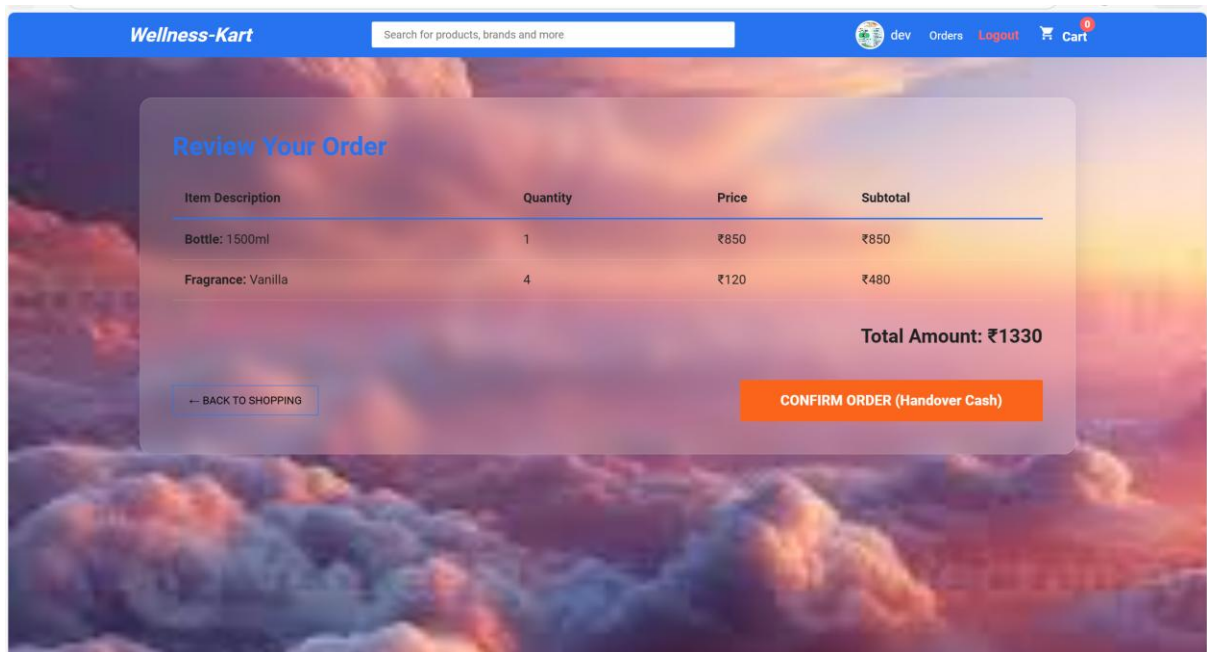
CART PAGE
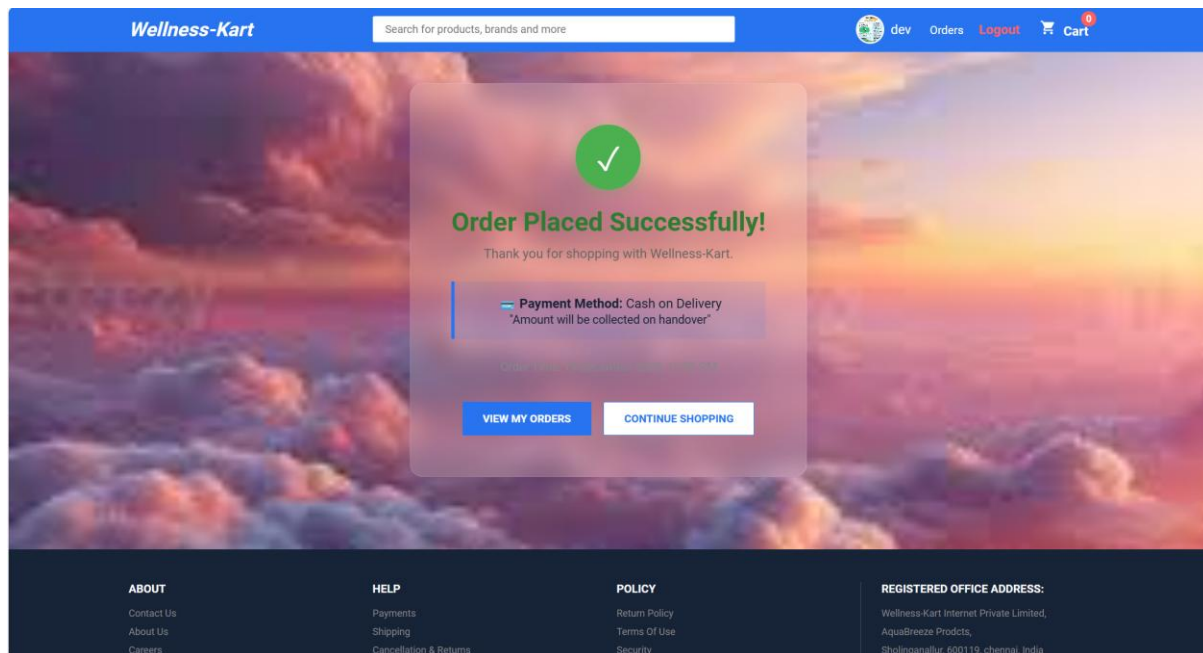
PAYMENT AND ORDER CONFIRMATION PAGE

SQL TABLE AFTER ORDER CONFIRMED BY CUSTOMER
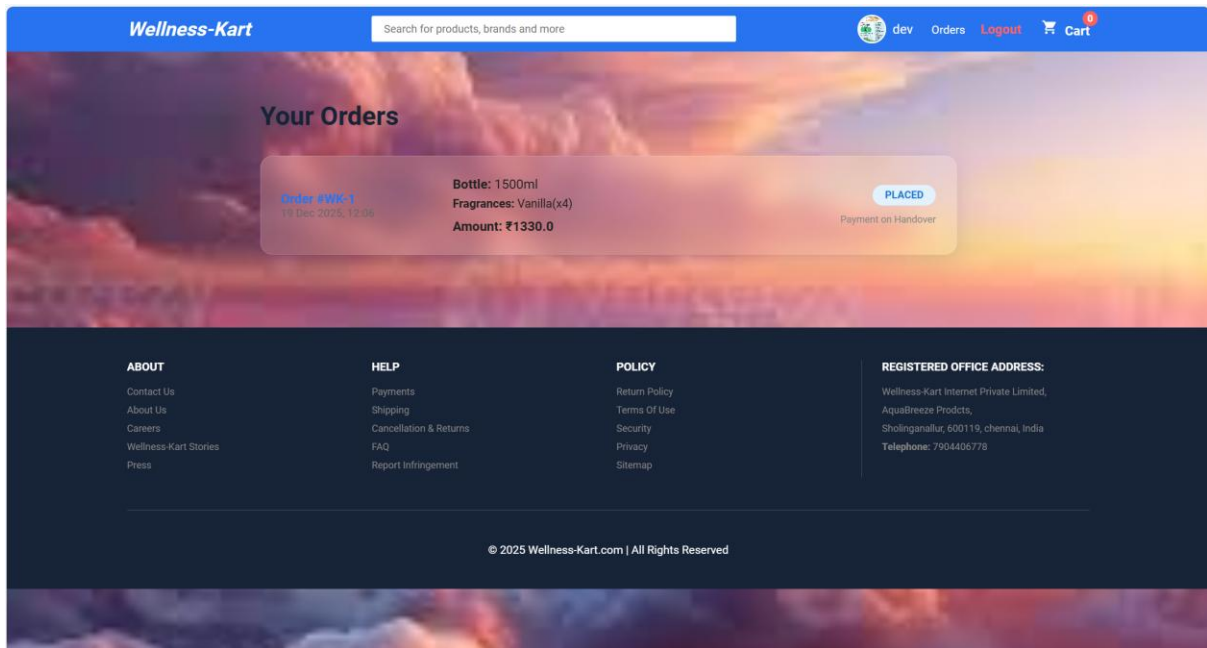
ORDER HISTORY PAGE
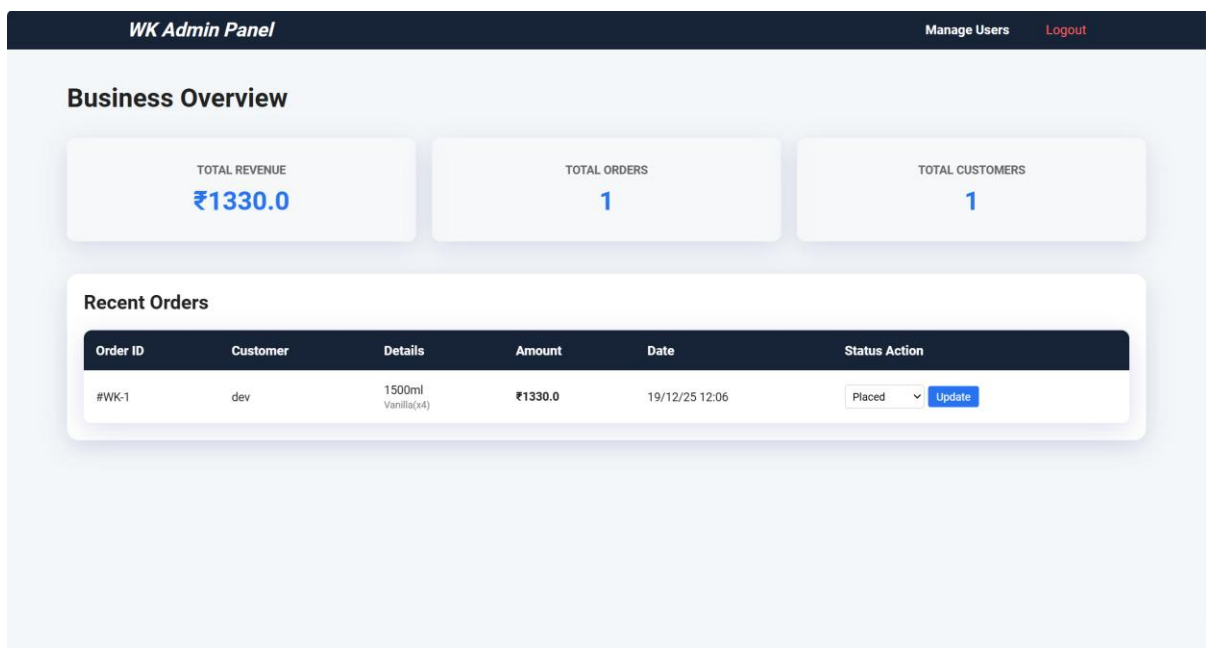
BUISNESS OVERIVEW UPDATED AFTER CUSTOMER PLACED ORDER

ORDER STATUS UPDATION

CUSTOMER DETAILS UPDATED AFTER ORDER CONFIRMED BY CUSTOMER