Online Grocery Store

Software Requirements Specification

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- **Objective and Scope**

The purpose of this document is to provide a detailed specification for the development of an online grocery store. This system aims to provide a convenient platform for customers to browse, select, and purchase groceries online, as well as for administrators to manage the inventory and orders.

The online grocery store will be a web-based application accessible to customers through their web browsers. It will include features such as user registration, product browsing, shopping cart, payment integration, order tracking, Offers, Quotes and inventory management for administrators.

2 Overall Description

- Product Perspective:

The online grocery store will act as a standalone system that interacts with customers and administrators. It will interact with webapi jwt Token for authentication and authorization.

- Product Features:

User Registration and Login: Customers can register and log in to the system to access personalized features.

- Product Browsing:

Customers can browse products by categories and search for specific

items.

- Shopping Cart:

Customers can add products to their shopping carts, update quantities, and proceed to checkout.

- Payment :

Implemented upi payment ,card payment, and cash on delivery

- Order Tracking:

Customers can track the status of their orders.

- Inventory Management:

Administrators can manage product inventory, including adding, updating, and deleting products.

3 Modules

.1 Home Page

In home page Listed categories and brands available in webpage and some carousel effect and customer's feedbacks.

.2 User Sign In / Sign Up

To view and add products to cart user has to login . Used JWT token based authentication . login page have user credentials like email id and password .while Registering collected user credentials like username, password ,email id and mobile number.

.3 User Profile

Login user can view they profile with some basic details and there is wallet where the refunded amount will be credited and user can them to purchase further.

.4 Product List Page

List of products that contains product id, product name, product image, Product details, product price, and product quantity. Customer can view the product page once logged in.

.5 Add To Cart Page

Add to cart page have product details and there is min max buttons to increase quantity of product and a proceed button for payment.

.6 Product Details Page

View Product details page have products detailed description and other products of same category.

.7 My Orders Page

My Order page display all placed orders details along with there status like paid, shipped, delivered , returned or cancelled etc.

.8 Check Out Page

Checkout page includes details like purchased product list, payment mode, delivery address etc.

.9 Feedback Page

Customer can enter feedback about the product and site at end of payment

and delivery which can be viewed by admin.

.10 Admin Dashboard

Admin Dashboard has features like add product , edit product , add quotes , add offers and view feedbacks etc.

- **Hardware Requirement**

Processor: Multi-core processor (e.g., Intel Core i5 or above) for handling concurrent requests.

RAM: At least 8 GB of RAM for smooth server performance.

Storage: Sufficient storage space for database storage and application files.

Network: High-speed internet connection with sufficient bandwidth.

- **Software Requirements**

  - Backend Framework:

Dot Net : For server-side development and handling API requests (webapi - swagger).

  - Frontend Framework:

Angular: For building the user interface and providing a rich user experience.

  - Database Management System:

SQL Server: As a relational database management system for storing product and

user data.

- **Functional Requirements**

- User Registration and Login:

✓ Users can register by providing necessary details like name, email, and password.

✓ Users can log in using their registered email and password.

- Product Browsing:

✓ Products should be categorized based on type (e.g., fruits, vegetables, dairy).

✓ Users can search for products by name or keywords.

- Shopping Cart:

✓ Users can add products to their cart and view the cart's contents.

✓ Users can update quantities or remove items from the cart.

✓ The cart should display the total amount to be paid.

- Order Tracking:

✓ Users can view the status of their orders (e.g., processing, shipped, delivered).

✓ The Order status should be sent to users for order status updates.

- Inventory Management:

✓ Administrators can add new products with details like name, description, price, and stock quantity.

- ✓ Administrators can update product information and stock quantities.
- ✓ Administrators can remove products from the inventory.

• Non Functional Requirements

Usability:

The user interface should be intuitive and easy to navigate.

The system should be responsive and accessible on various devices.

Performance:

The system should handle a large number of simultaneous users without significant performance degradation.

Response time for actions like adding to the cart and checking out should be fast.

Security:

User passwords should be stored securely using encryption techniques.

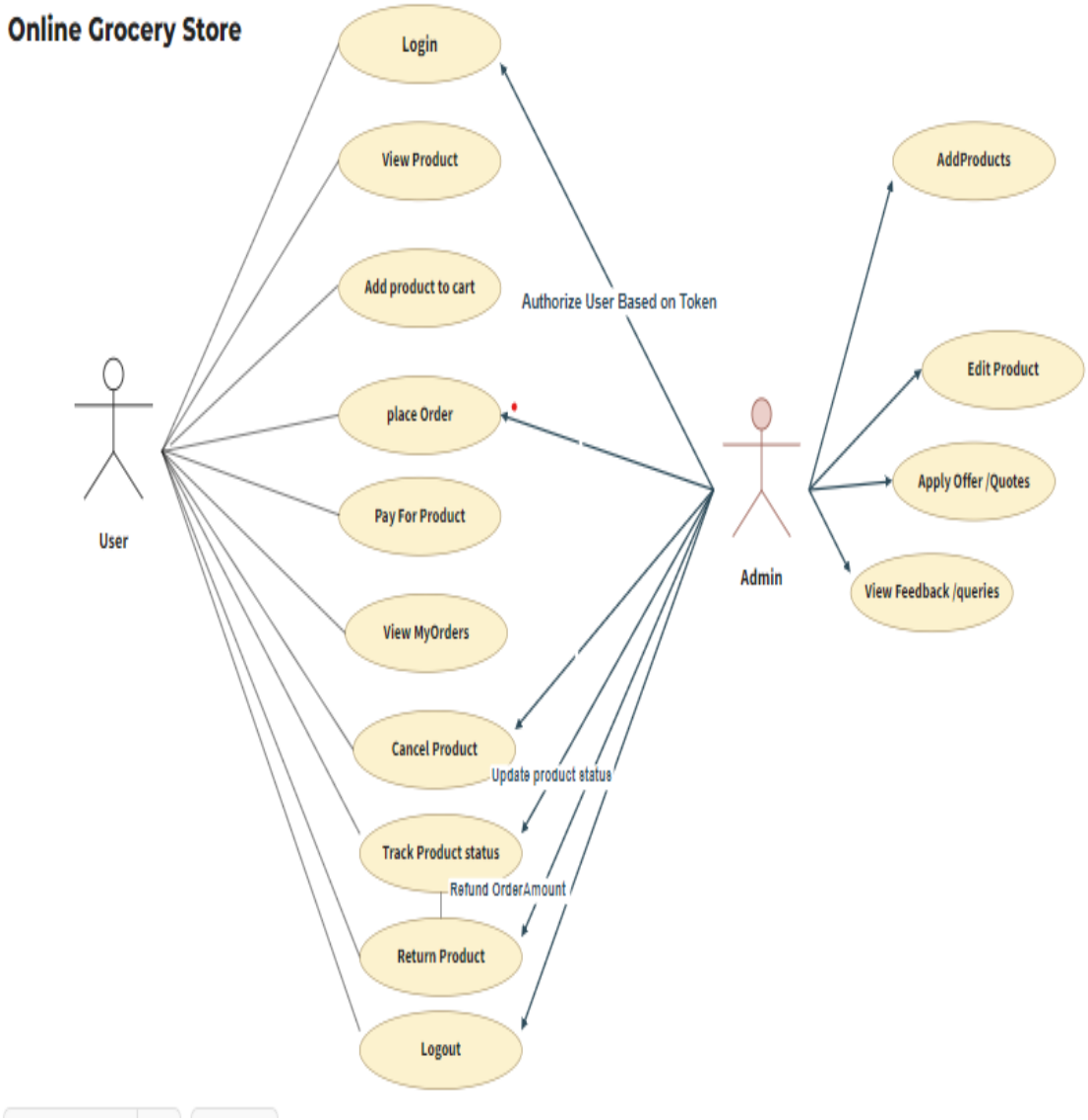
Used JWT token authorization and authentication to authorize user.

Reliability:

The system should be available and operational 24/7 with minimal downtime.

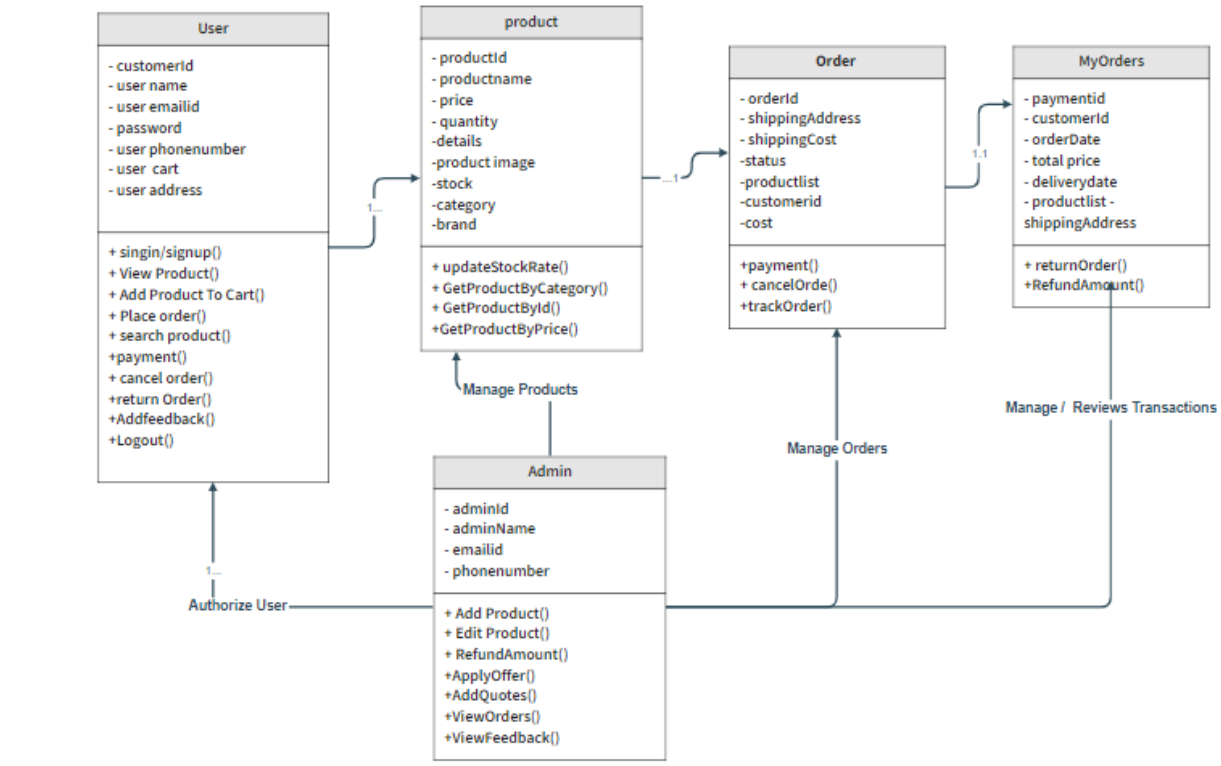
• UML Diagrams

.1 Use Case Diagram

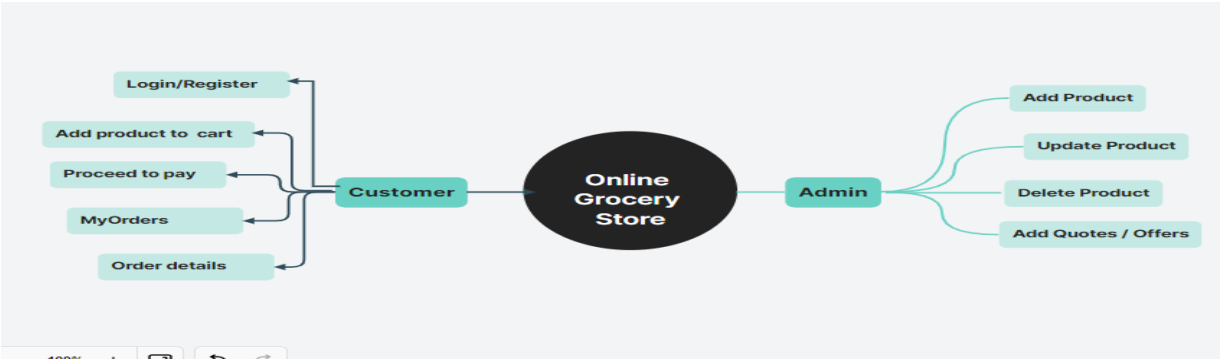


.2 Class Diagram

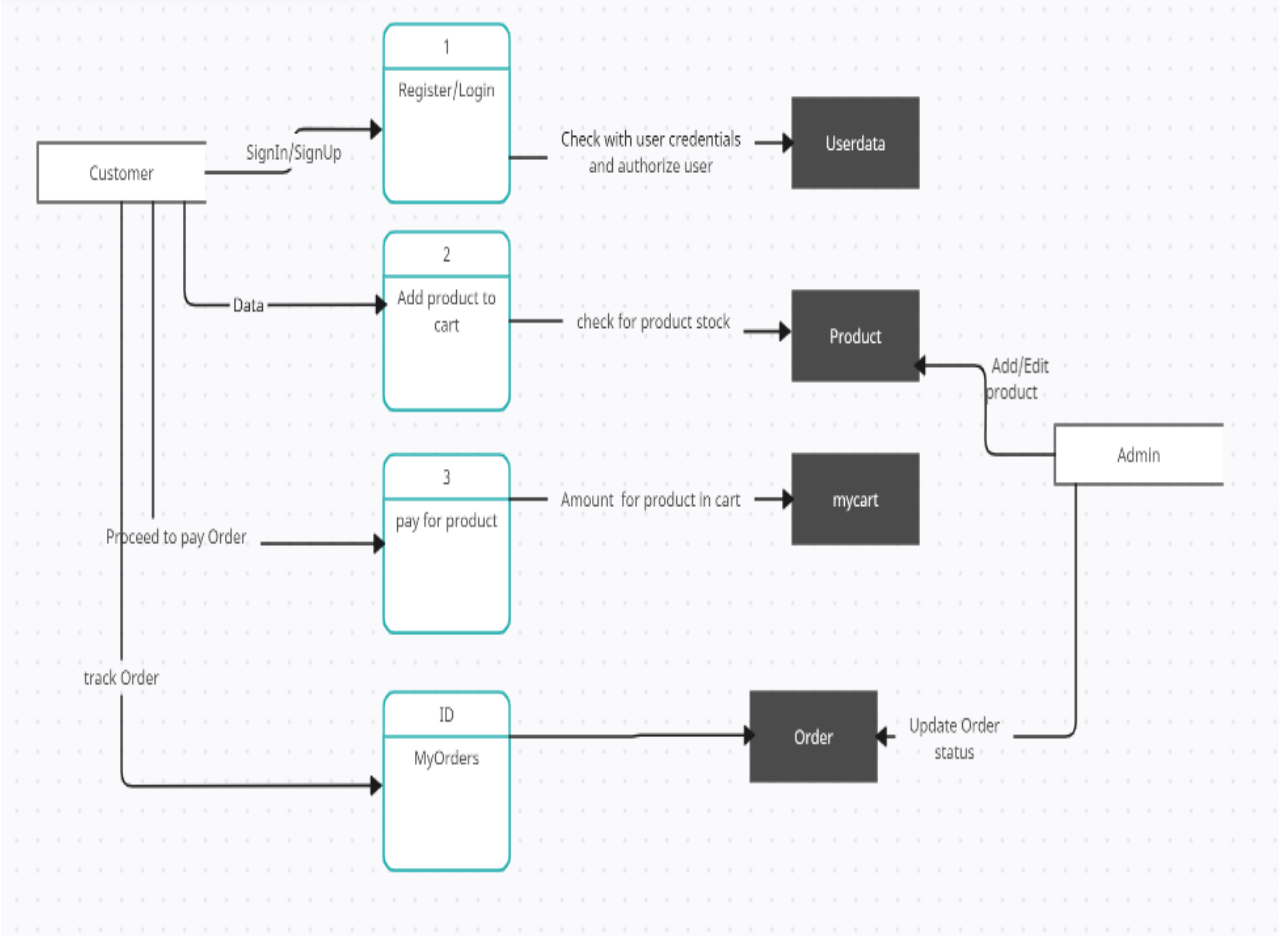
UML Class Diagram



Dataflow Diagram

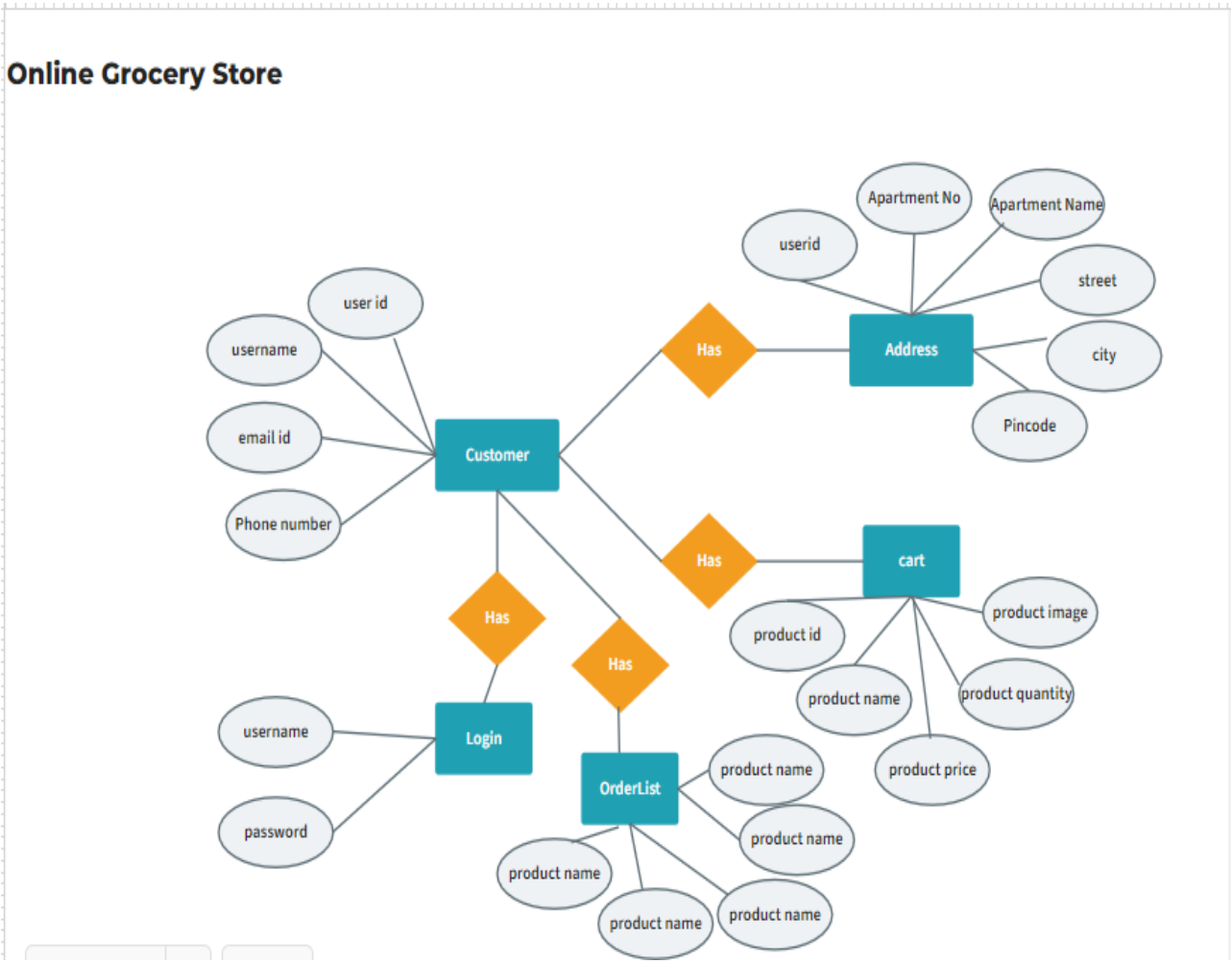


Data Flow Level 1

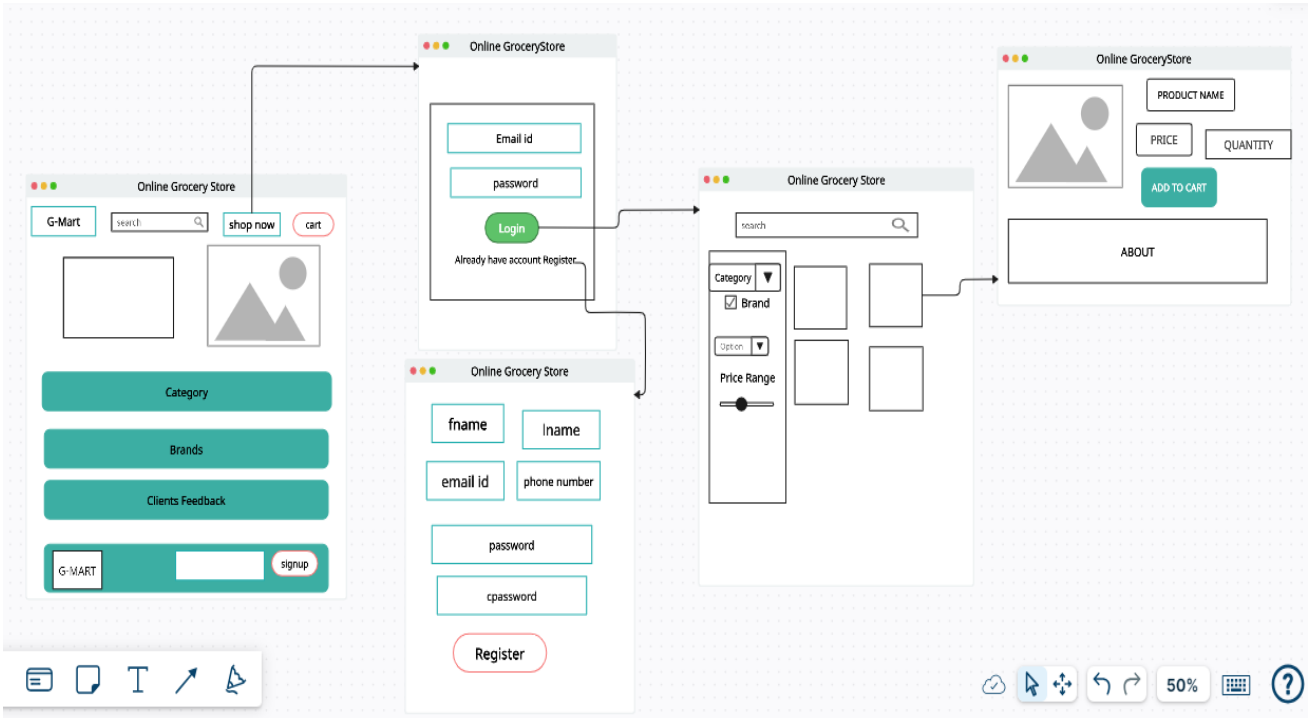


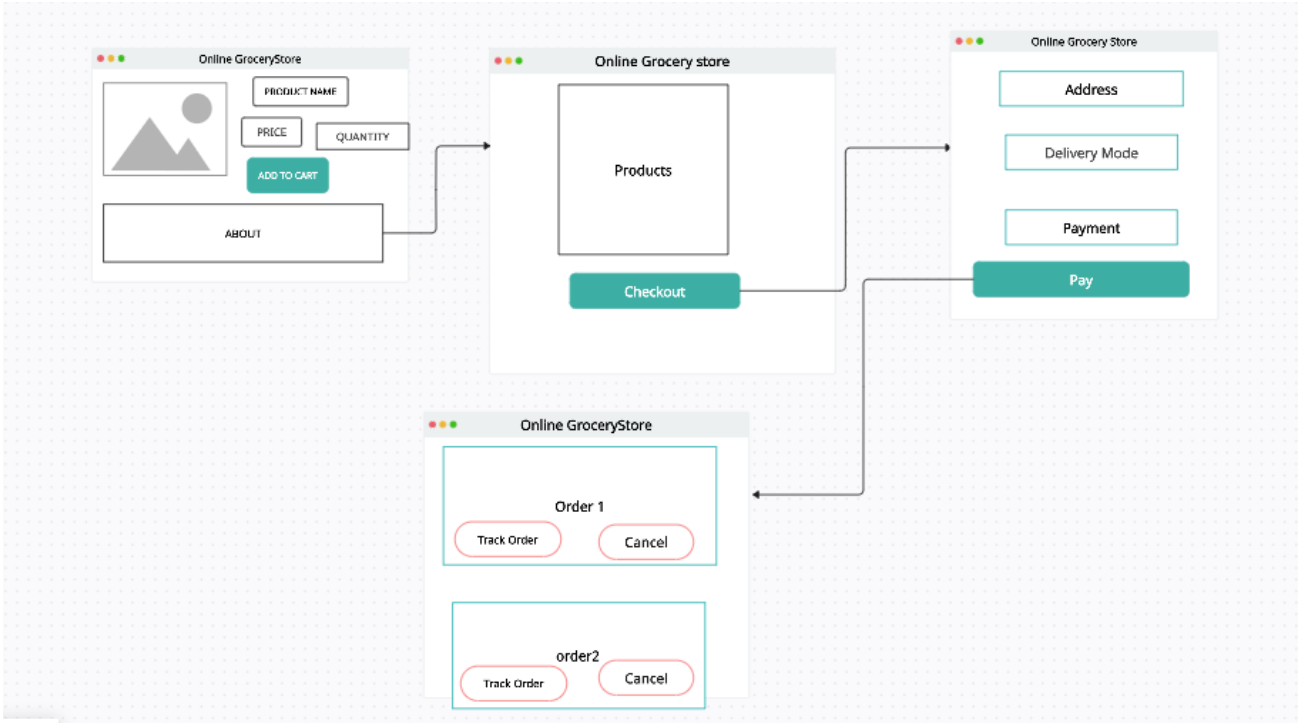
Data Flow level 2

E-R Diagram



Wireframe Design

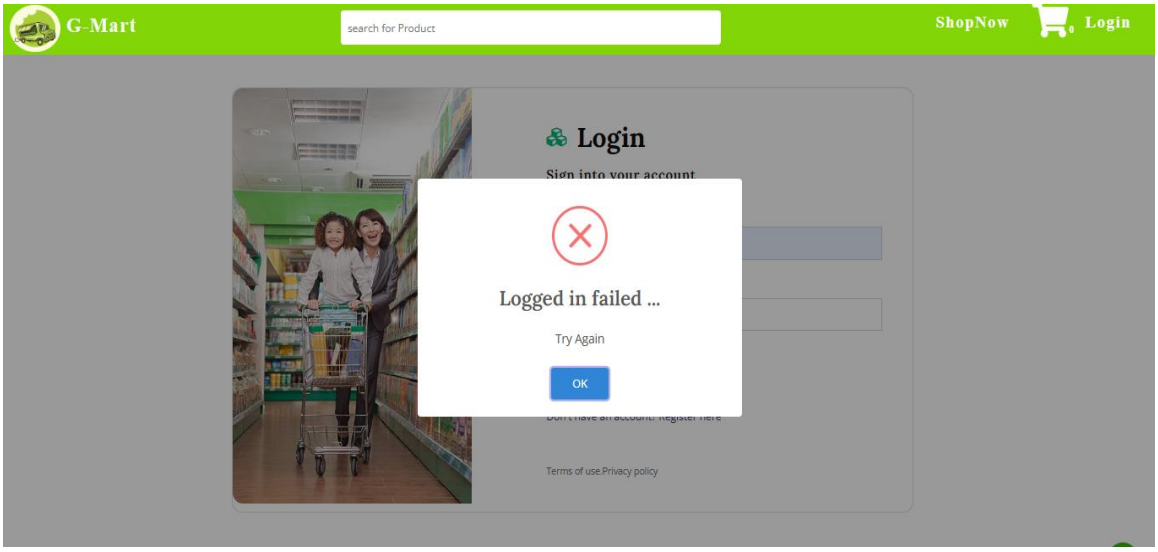

Online GroceryStore
Email id
password
Login
Already have account Register
Online Grocery Store
G-Mart
search
shop now
cart
Category
Brands
Clients Feedback
G-MART
signup
Online Grocery Store
fname
lname
email id
phone number
password
cpassword
Register
Online Grocery Store
search
Category
Brand
Option
Price Range
Online GroceryStore
PRODUCT NAME
PRICE
QUANTITY
ADD TO CART
ABOUT
50%


Online GroceryStore
PRODUCT NAME
PRICE
QUANTITY
ADD TO CART
ABOUT
Online Grocery store
Products
Checkout
Online Grocery Store
Address
Delivery Mode
Payment
Pay
Online GroceryStore
Order 1
Track Order
Cancel
order2
Track Order
Cancel

Test Cases

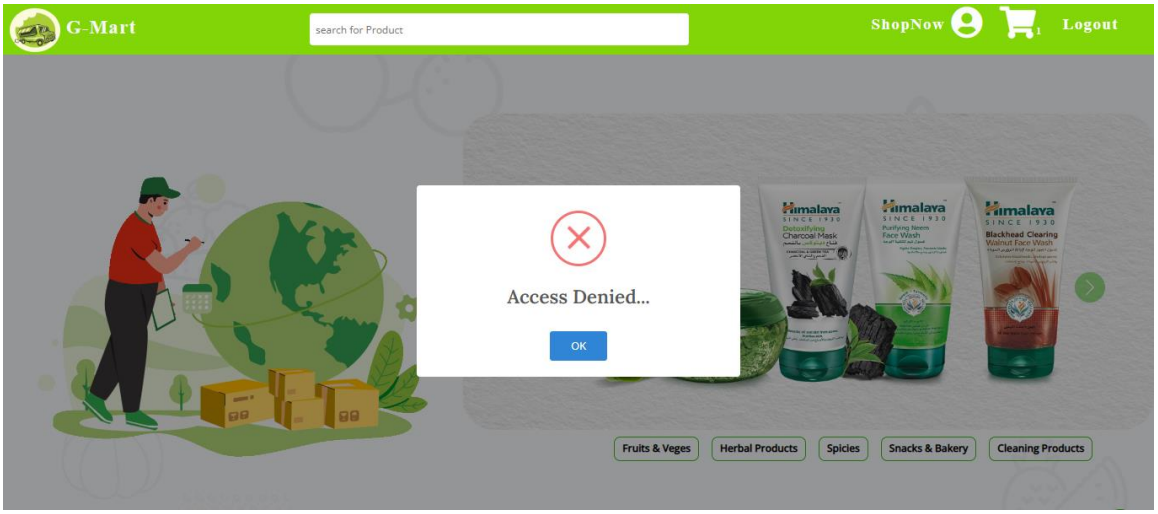
Test case 1 : Only Registered user can login and incorrect user credentials throws invalid user popup.

Status: Success



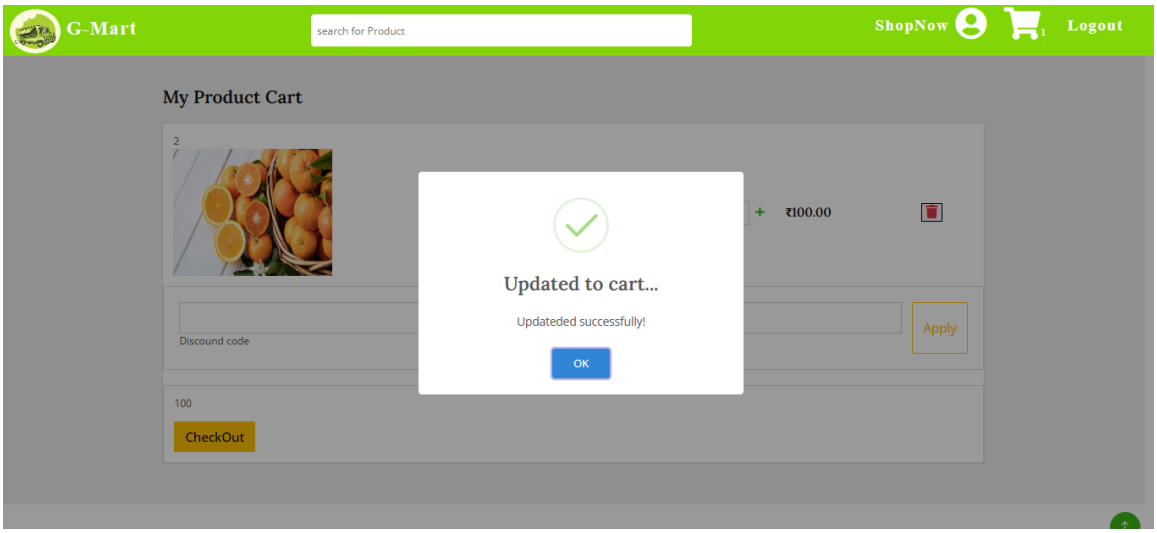
Test case 2 : Jwt Token Authentication/Authorization based On User Role [Customer cannot view Edit product page.

Status: success



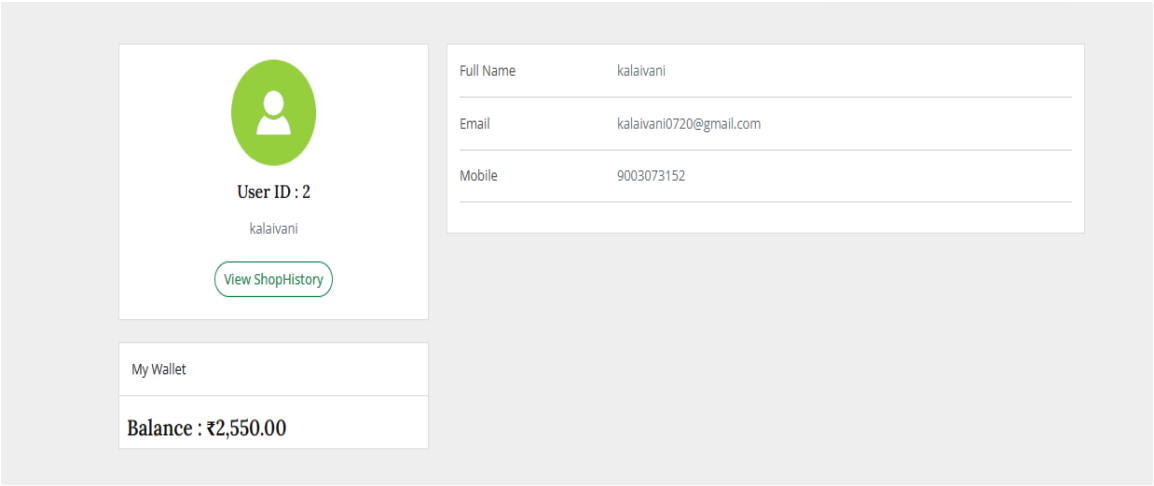
Test Case 3: Proper increment and decrement of quantity and cart with selected product of Logged in user

Status: success



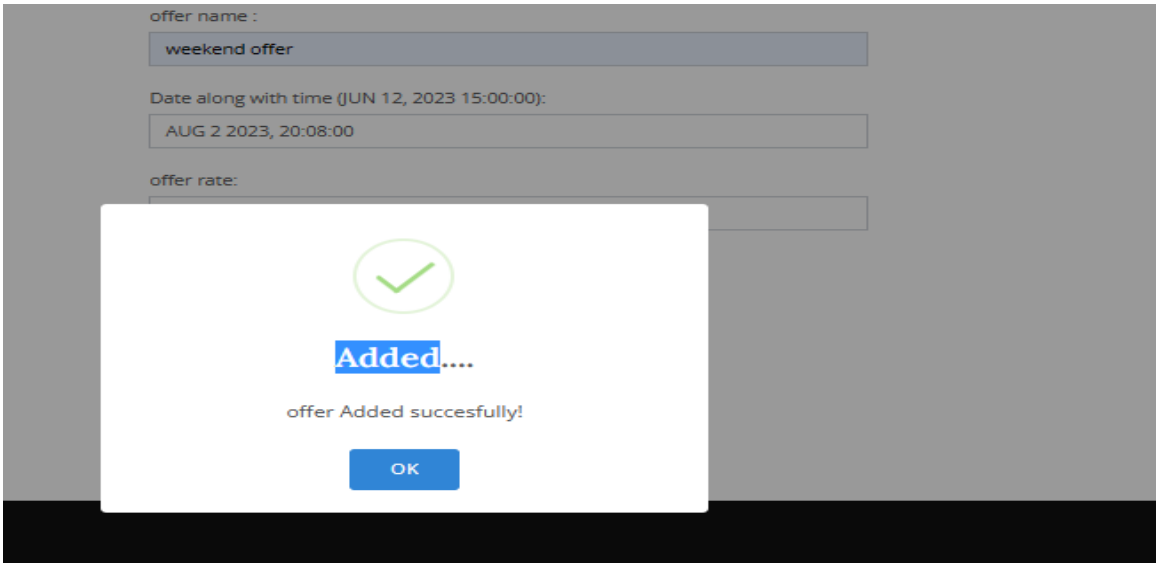
Test case 4: Amount credited to logged in user who returns product based on time limits.

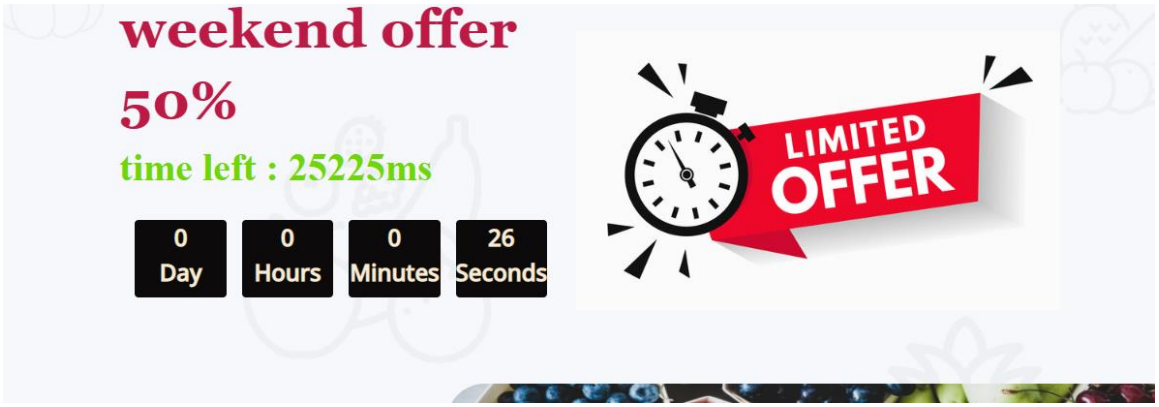
Status :success

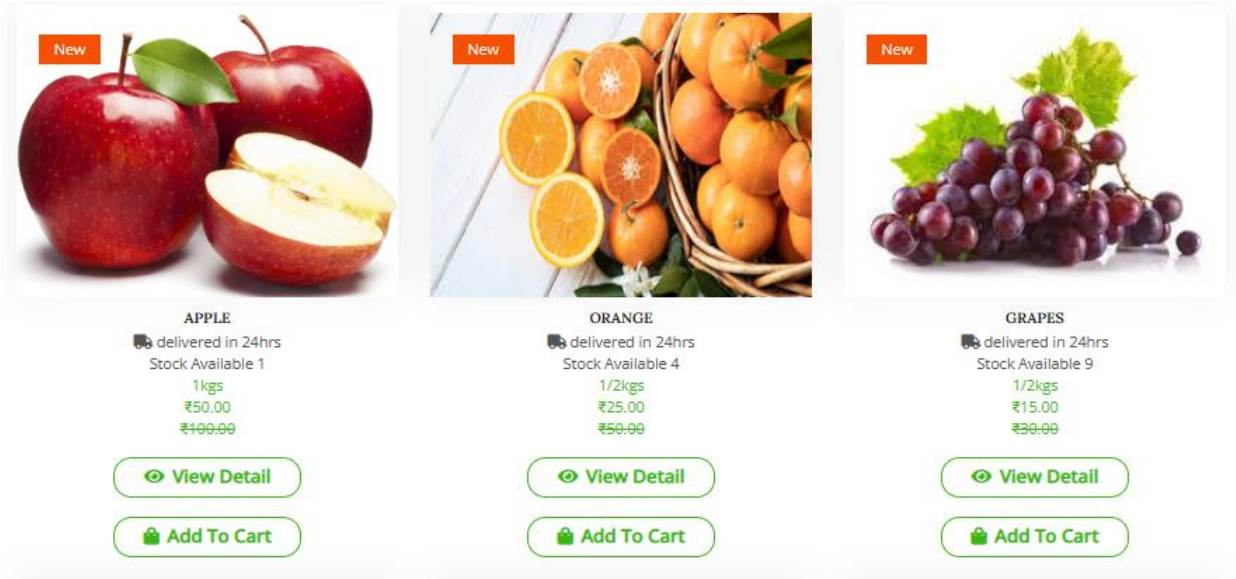


Test case 5: Offer price of each products once offer is applied by the Admin (calculated offer price based on applied offer rate eg.50%) and back to original price once offer ends

Status: success

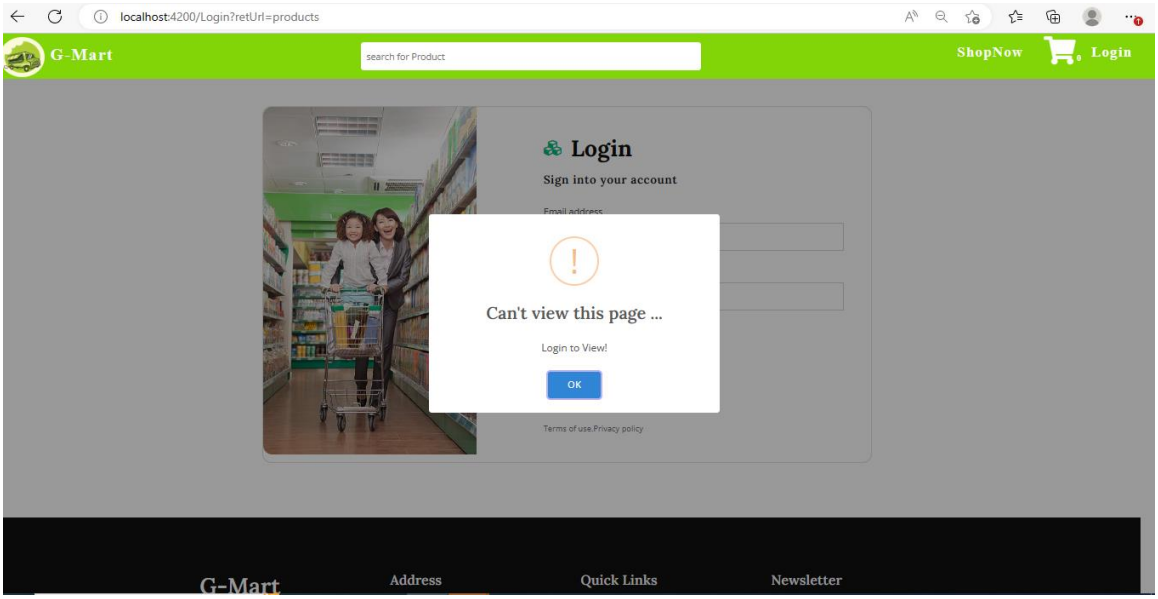






Test case 6: without Login user cannot view product page [used Router and queryparams]

Status : success



Validation:

Email ,phone number and password validation with regular expression

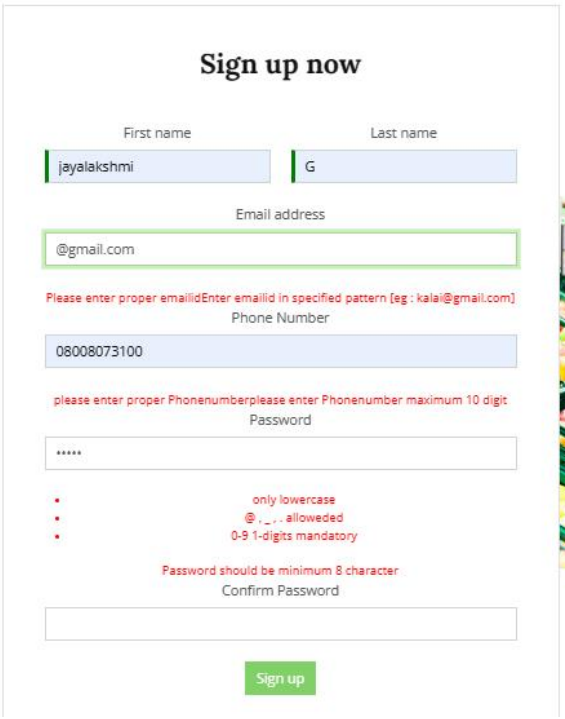
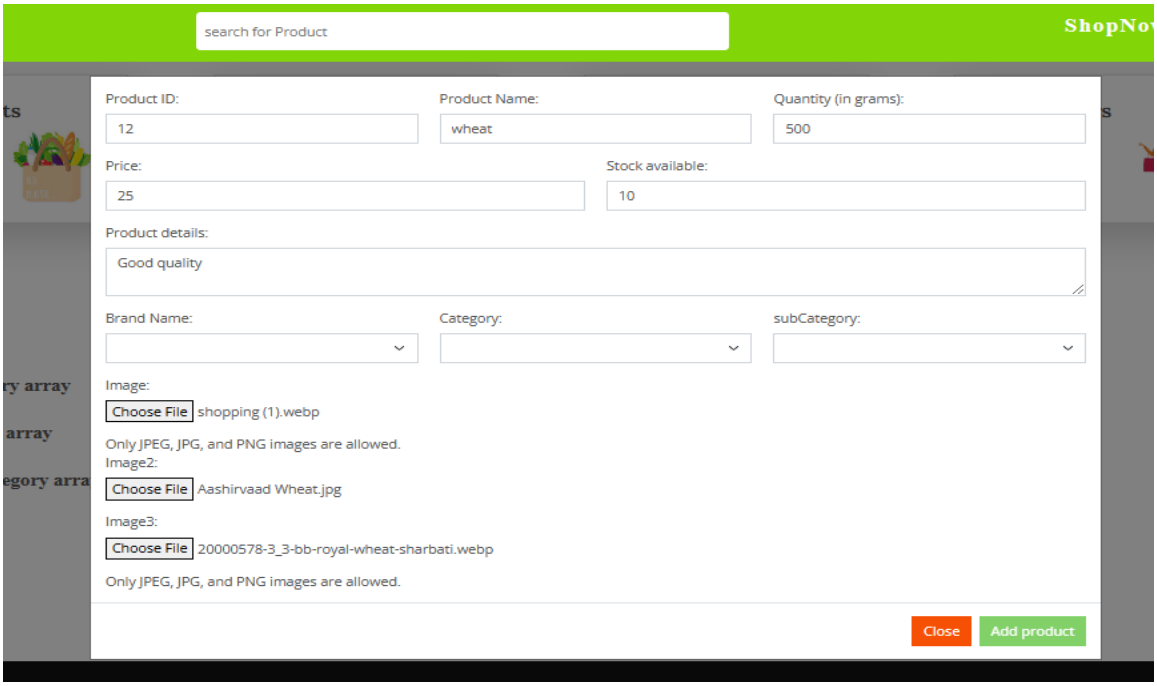
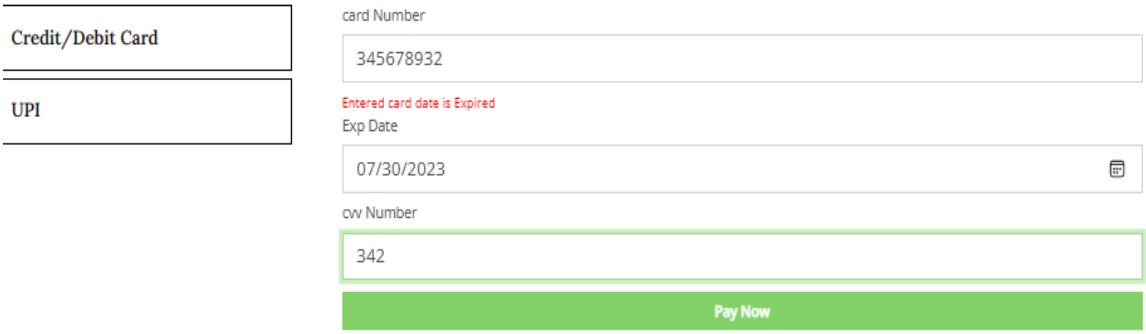


Image validation (only jpeg, png, jpg)



Expiry date validation



JWT Token: