



Daffodil
International
University

SRS

Course Code: CSE-236

Course Title: Software Project II

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Topics Name:Flash Sale

1.Introduction

In today's competitive e-commerce landscape, consumers are constantly seeking opportunities to save money on their favorite branded products. Flash sales have emerged as a popular and effective way to provide consumers with substantial discounts while generating excitement and urgency. This project proposal outlines the development of a Flash Sale E-Commerce Platform that will offer consumers exclusive deals on branded products.

2. Purpose

The purpose of this Software Requirements Specification (SRS) document is to define the functional and non-functional requirements for the development of a Flash Sale E-Commerce Platform. This platform will provide consumers with significant discounts on branded products while offering vendors a channel to promote their products through flash sales.

3.Scope

The Flash Sale E-Commerce Platform will include the development of a website and mobile applications (iOS and Android) to facilitate flash sales. It encompasses user registration, product catalog, shopping cart, checkout, payment processing, vendor onboarding, inventory management, and consumer engagement features.

4.functional overview:

4.1 User Registration and Authentication:

User Registration: Users should be able to create accounts easily, providing essential information like name, email, and password.

Authentication: Implement robust authentication mechanisms to secure user accounts, prevent unauthorized access, and protect user data

4.2 Product Management:

1. Product Uploading: Sellers should be able to upload products quickly, including product descriptions, images, and pricing.

2. Flash Sale Settings: Sellers should be able to specify flash sale details, including the duration of the sale and the discount percentage.

Inventory Management: Real-time tracking of product stock to ensure accurate availability information is displayed to users.

3. Countdown Timer: Display a countdown timer for each flash sale product to create a sense of urgency among customers.

4.3 Search and Navigation:

Advanced Search: Implement filters and sorting options to help users find flash sale products efficiently.

Categories and Tags: Categorize products and use tags for easy browsing.

Quick View: Allow users to view essential product details without leaving the search results page.

4.4 Shopping Cart:

Add to Cart: Users should be able to add flash sale items to their shopping carts.

Cart Management: Allow users to easily edit and update their carts before proceeding to checkout.

4.5 Checkout Process:

Streamlined Checkout: Simplify the checkout process to minimize friction and encourage quick purchases.

Multiple Payment Options: Support various payment methods, such as credit cards, digital wallets, and buy now, pay later options.

Address Management: Enable users to save multiple shipping addresses for faster checkout.

4.6 Notification System:

Real-time Alerts: Send notifications to users when flash sales start or when products they are interested in are about to go on sale.

Email and Push Notifications: Utilize both email and mobile push notifications to keep users informed and engaged.

4.7 Security:

Secure Transactions: Implement robust security measures, including SSL encryption, to protect user data and payment information.

Rate Limiting: Prevent misuse and abuse of the platform by implementing rate limits on user actions.

4.8 Scalability:

Handle High Traffic: Ensure the platform can handle a surge in users during flash sales without experiencing performance issues.

Load Balancing: Distribute incoming traffic evenly across servers to maintain platform stability.

4.9 Reporting and Analytics:

1.Sales Tracking: Provide sellers with real-time sales data and comprehensive reports.

User Behavior Analytics: Gather data on user interactions to improve the platform's usability and customer experience.

4.10 Customer Support:

Live Chat or Chatbot: Offer instant support to users with questions or issues during flash sales.

Help Center: Create a comprehensive knowledge base to address common user queries.

4.11 Mobile Responsiveness:

Develop a mobile app and ensure the platform is responsive, offering a seamless experience on various devices, including smartphones and tablets.

4.12 Order Tracking:

Order History: Enable users to track their flash sale orders and view their order history.

Shipment Tracking: Integrate with shipping carriers to provide real-time shipment tracking information.

4.13 Reviews and Ratings:

Allow users to leave reviews and ratings for products to build trust and credibility among potential buyers.

4.14 Social Sharing:

Encourage users to share flash sale products on social media platforms to increase visibility and attract more buyers.

4.15 Feedback and Suggestions:

Provide a mechanism for users to submit feedback and suggestions for platform improvements, helping to enhance the overall user experience.

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5. Non-Functional Requirements

5.1 Performance

Response Time: The platform should have fast response times, even during peak traffic.

Scalability: The system should be scalable to accommodate increased user and vendor loads.

5.2 Security

1.Data Protection: User data and payment information should be stored securely and encrypted.

2.Authentication: Secure authentication mechanisms should be implemented to protect user accounts.

5.3 Usability

1.User-Friendly Interface: The platform should have an intuitive and user-friendly design.

2.Mobile Responsiveness: The website and mobile apps should be responsive and work seamlessly on various devices.

5.4 Availability

1.Uptime: The platform should have high availability with minimal downtime for maintenance.

5.5 Compliance

Payment Compliance: Ensure compliance with payment card industry (PCI) data security standards.

5.6 Backup and Recovery

Data Backup: Regularly backup user and transaction data for disaster recovery.

6 .Constraints

Budget: Development and operational costs should align with the allocated budget.

Timeline: The project should be completed within the specified timeline.

7. Glossary

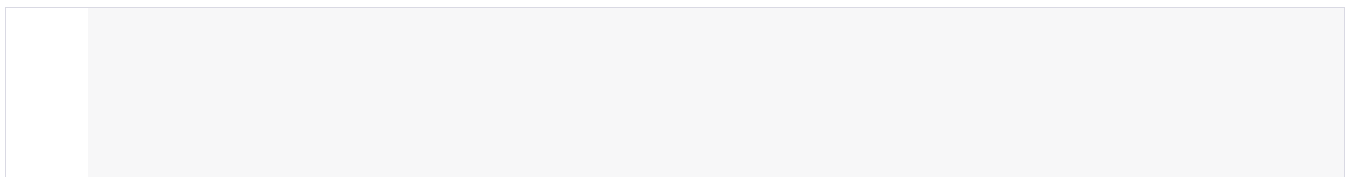
Flash Sale: A limited-time sale offering significant discounts on branded products.

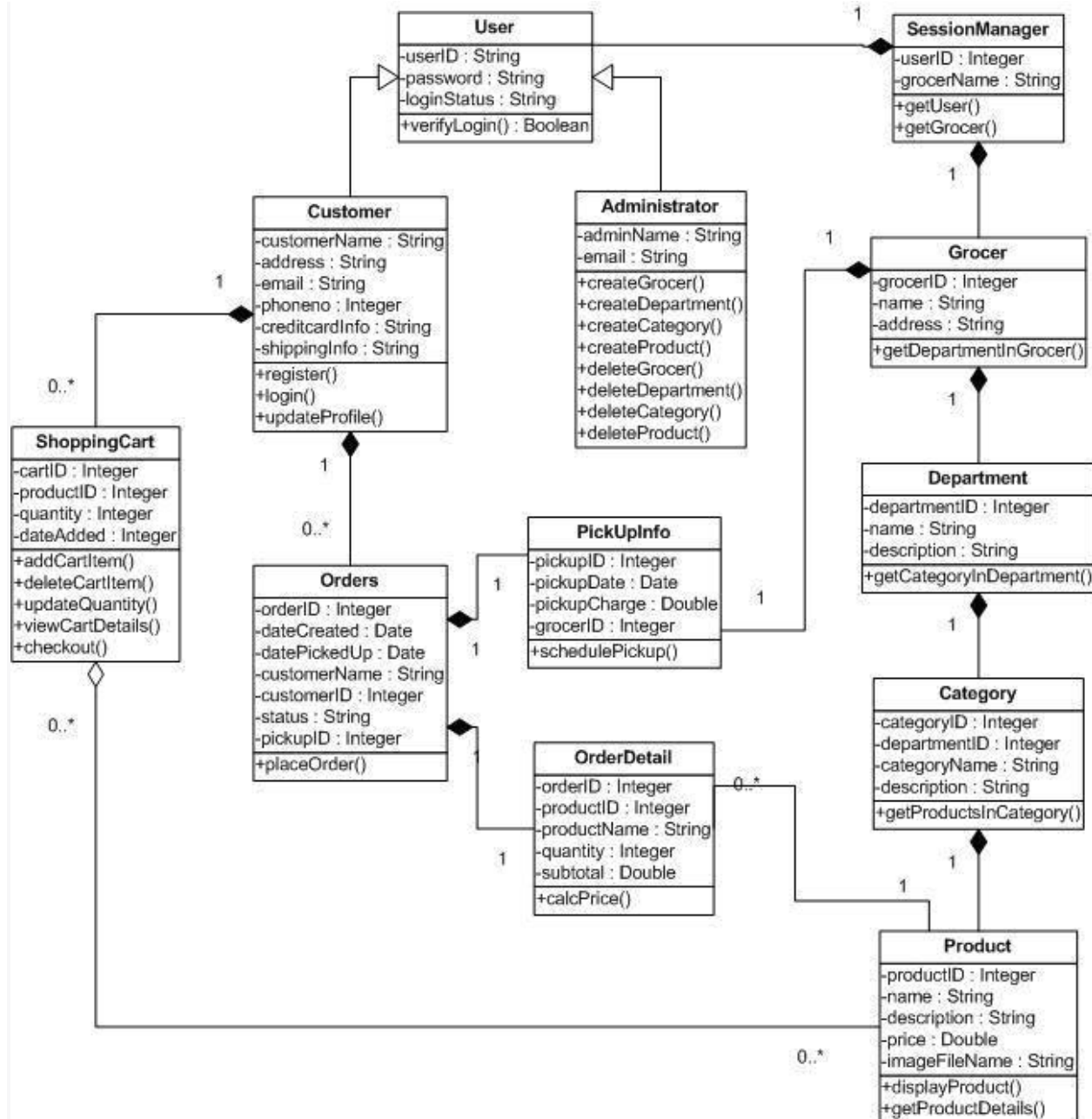
User: A registered individual using the platform to browse and purchase products.

Vendor: A brand or seller partnering with the platform to list and sell products.

Admin: An administrator with privileges to manage the platform, users, and a ven

6.Class Diagram:





The E-Commerce Platform class represents the overall platform and contains lists of products, customers, and orders. It also has methods for adding and removing products and customers, as well as placing orders. The Product class represents the products available for sale on the platform. It includes attributes like `productId`, `name`, `price`, and `description`. The Customer class represents the platform's customers. It includes attributes like `customerId`, `name`, `email`, and `address`. Customers can view

products, add them to their cart, remove items from their cart, and create orders.

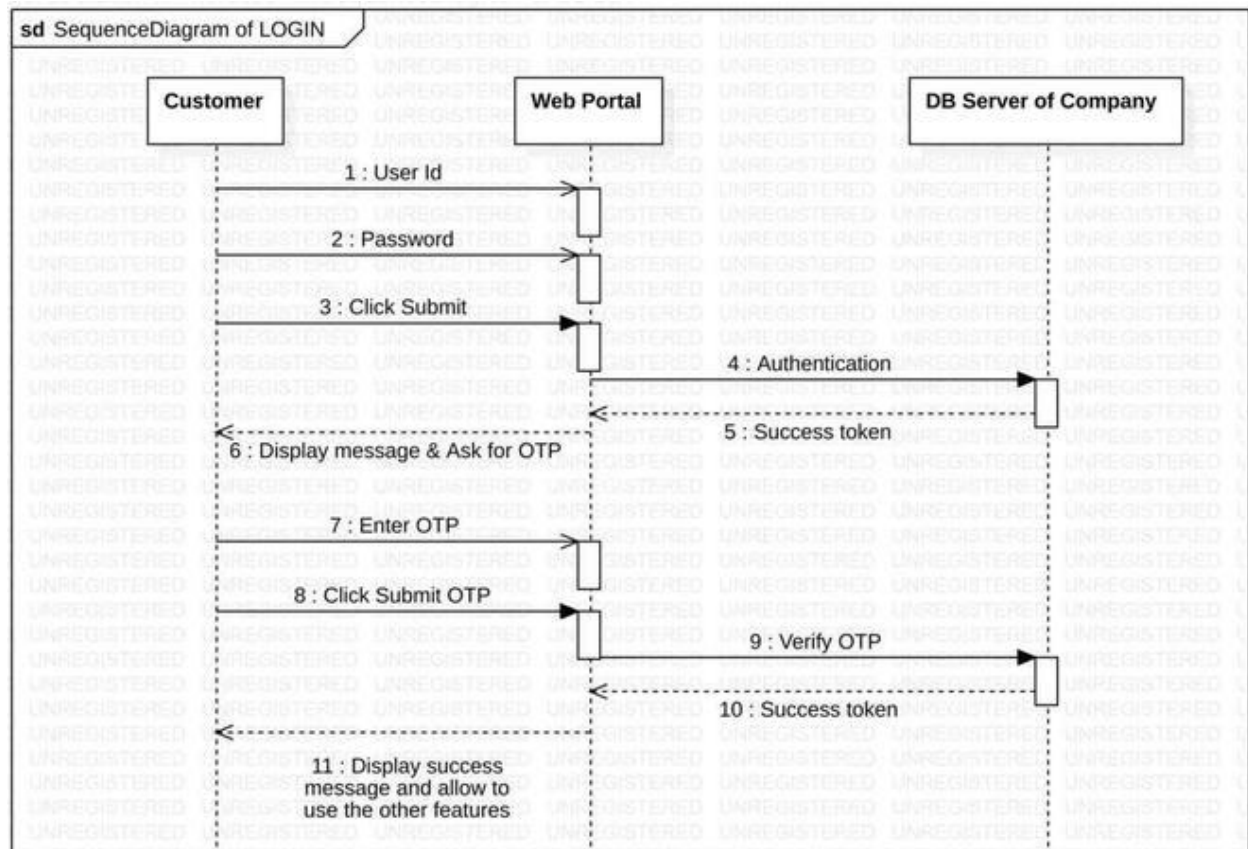
The Order class represents individual orders placed by customers. It includes attributes like orderId, orderDate, status, customer, and a list of OrderItem objects. Orders can be canceled or marked as shipped.

The OrderItem class represents individual items within an order. It includes attributes like orderItemId, product, quantity, and subtotal. It has a method to calculate the subtotal for that item.

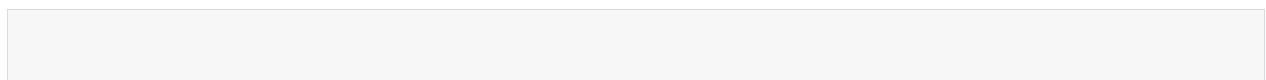
Please note that this is a simplified representation, and real-world e-commerce systems are typically more complex and may involve additional classes and relationships. The above diagram provides a basic structure to get you started.

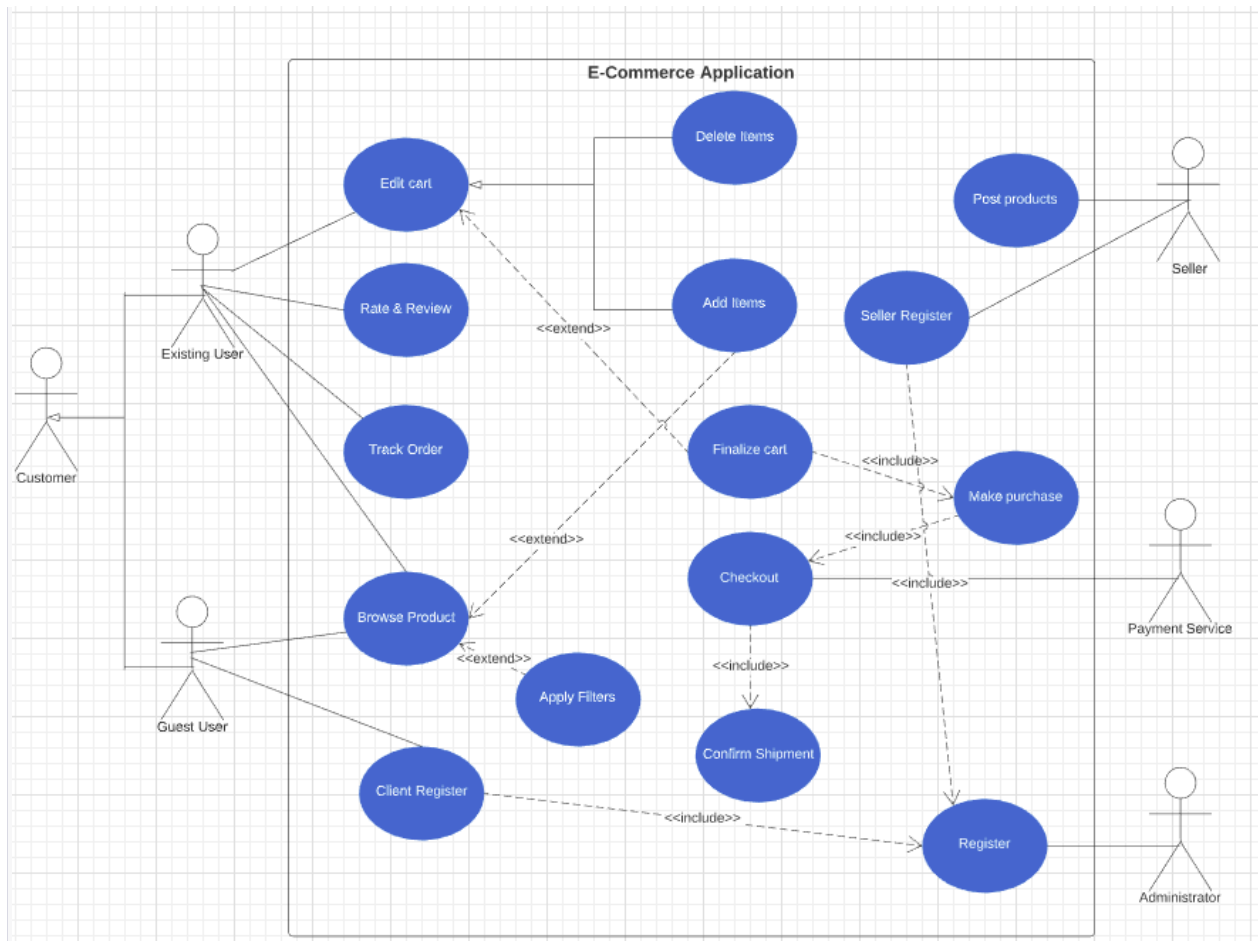
Sequence Diagram: Sequence Diagrams for an E-commerce Firm can be broken into 5 main functionalities:

1. Sign Up Functionality
2. Login Functionality
3. Add to Cart Functionality
4. Product Order Functionality
5. Customer Care Functionality



9.Case Diagram:





In this use case diagram:

The "Customer" actor interacts with various use cases related to browsing, shopping, and placing orders. The "Admin" actor interacts with use cases related to managing products and orders. The "Payment Gateway" actor interacts with the "Process Payment" use case to handle payment processing.

9. Conclusion: This Software Requirements Specification document outlines the functional and non-functional requirements for the development of the Flash Sale E-Commerce Platform. These requirements serve as the foundation for the design and development of the platform, ensuring that it meets the needs of users, vendors, and administrators while adhering to security and performance standards.