Software Requirements Specification Document

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KrushiKart

1. Introduction:

The KrushiKart project aims to develop a secure online platform for the sale of seeds, fertilizers, and machinery from store owners to farmers and consumers. It provides a convenient way for farmers and users to purchase agricultural products while enabling store owners to expand their reach to remote areas. This web-based shopping system allows users to browse products, make purchases, and have them delivered to their desired location.

1.1 Project Objective:

The objective of the KrushiKart project is to develop a web-based online shopping platform that enables farmers and general users to conveniently purchase a wide range of agricultural products such as seeds, fertilizers, and machinery. The project aims to provide the following benefits:

Accessibility: The project seeks to provide farmers and users with the ability to access and purchase agricultural products

from anywhere, eliminating the need for physical travel to specific stores or locations.

Product Variety: The platform aims to offer a diverse range of products, including seeds, fertilizers, machinery, and tools, thereby providing farmers with a comprehensive selection to meet their specific agricultural needs.

Convenience: By leveraging an online platform, the project aims to simplify the purchasing process for farmers and users. They can easily search for products, view detailed information, add items to their shopping cart, and place orders conveniently from the comfort of their homes or farms.

Cost Efficiency: The project aims to promote cost-effective purchasing by allowing farmers and users to compare prices, select the desired quantity of products, and make informed decisions based on their budget and requirements.

Expanded Market Reach: By facilitating online transactions, the project aims to enable store owners to reach a broader customer base, including farmers in remote areas. This provides an opportunity for store owners to increase their sales and expand their business beyond their local vicinity.

Order Management and Tracking: The project seeks to incorporate order management functionalities, allowing users to track the status of their orders and receive notifications regarding delivery dates and times. This enhances transparency and ensures a seamless customer experience.

Administration and Supplier Management: The project includes an administrative module that empowers administrators to manage the platform effectively. They can add, update, and delete products, suppliers, and delivery personnel, ensuring the accuracy and availability of products on the platform.

2. Functional Requirements:

2.1 User Registration and Authentication

★Users should be able to register an account with the system.

★The system should authenticate users during login to ensure secure access.

2.2 Product Listing and Search

★Store owners should be able to list their products on the platform, including seeds, fertilizers, machinery, and tools.

★Users should be able to search for products based on categories such as Fertilizers, Seeds, Machinery, and Tools.

★The search functionality should allow users to find specific products based on their names or keywords.

2.3 Product Details and Selection

★Users should be able to view detailed information about a product, including its description, price, and availability.

★Users should be able to select the desired quantity of a product and add it to their shopping cart.

2.4 Shopping Cart Management

★Users should be able to view the contents of their shopping cart, including the selected products, quantities, and total price.

★Users should be able to modify the quantities or remove items from their shopping cart.

★The system should calculate and display the updated total price when modifications are made.

2.5 Order Placement and Payment

★Users should be able to place an order for the products in their shopping cart.

★The system should collect the necessary information from the user, such as name, address, and contact details.

★Users should be provided with a secure payment gateway to complete the transaction.

2.6 Order Tracking and Notifications

★Users should receive notifications about the estimated delivery date and time of their orders.

★The system should provide a tracking mechanism for users to monitor the status of their orders.

2.7 Administrator Functionality

★An administrator should have the ability to manage the system, including adding, updating, and deleting products.

★The administrator should be able to add and delete suppliers and delivery boys.

★The administrator should have access to reports and analytics related to sales and customer activity.

3. Non-functional Requirements:

3.1 User Interface:

★The user interface should be intuitive, user-friendly, and responsive across different devices and screen sizes.

★The design should follow modern web design principles to provide an aesthetically pleasing experience.

3.2 Security:

★The system should employ appropriate security measures, including data encryption, to protect user information and transactions.

★User authentication and authorization mechanisms should be implemented to ensure secure access.

3.3 Performance:

★The system should be able to handle a large number of concurrent users without significant performance degradation.

★Response times for search queries, product listings, and other interactions should be optimized for a smooth user experience.

3.4 Technology Stack:

★The front-end of the system will be developed using React.
★The back-end will be built using Java Spring Boot.
★The system will utilize a MYSQL database for data storage and retrieval.

3.5 Constraints:

★The system must be compatible with modern web browsers and mobile devices.
★The development team should adhere to the allocated budget and timeline for the project.

3.6 Assumptions and Dependencies:

★The system assumes a reliable internet connection for users to access and utilize the platform.
★The availability and accuracy of product information depend on the store owners' inputs and updates.

4. Use Cases:

4.1 User Registration:

★**Actors:** User

★**Description:** The user wants to create an account on KrushiKart to access the online shopping platform.

★**Main Flow:**

★User opens the KrushiKart website or app.

★User selects the registration option.

★User provides the required details such as name, email, and password.

★User submits the registration form.

★System validates the information and creates a new user account.

★User receives a confirmation message and can now log in to the system.

4.2 Product Search and Selection:

★**Actors:** User

★**Description:** The user wants to search for a specific product and add it to their cart.

★**Main Flow:**

★User enters relevant keywords or selects a category to search for products.

★System retrieves matching products and displays them to the user.

★User selects a specific product to view its details.

★System shows the product description, price, and availability.

★User selects the desired quantity and adds the product to their cart.

4.3 Cart Management:

★**Actors:** User
★**Description:** The user wants to manage the contents of their shopping cart.

★**Main Flow:**
★User navigates to their cart page.
★System displays the list of products in the user's cart along with their details.
★Users can update the quantity of a product or remove it from the cart.
★Users can view the total price of the items in the cart.
★Users can proceed to checkout or continue shopping.

4.4 Order Placement and Payment:

★**Actors:** User
★**Description:** The user wants to place an order for the selected products and make a payment.

★**Main Flow:**
★User initiates the checkout process.
★System prompts the user to provide their delivery address and contact details.

★User enters the required information.
★System displays the available payment methods.
★User selects a payment method (e.g., credit card, cash on delivery).
★User provides the necessary payment details.
★System verifies the payment and confirms the order.
★User receives an order confirmation with the expected delivery date and time.

4.5 Administrator Management:

★**Actors:** Administrator
★**Description:** The administrator wants to manage the system, including suppliers and delivery boys.

★**Main Flow:**
★Administrator logs in to the system with their credentials.
★System authenticates the administrator's access.
★Administrators can add new suppliers or delete existing ones.
★Administrators can add new delivery boys or remove them from the system.
★Administrators can monitor the overall system functionality and perform necessary administrative tasks.

5. User Interface Design:

5.1 Landing Page:

★The landing page serves as the entry point for users and provides an overview of the KrushiKart system.

★It typically includes a logo, a search bar to search for products, and featured products or promotions.

5.2 Registration and Login:

★The registration page allows new users to create an account by providing their name, email, password, and other necessary information.

★The login page allows registered users to authenticate themselves by entering their credentials.

5.3 Product Listing and Search:

★The product listing page displays a grid or list of available products.

★Each product is represented by an image, title, price, and brief description.

★Users can filter and sort products based on categories, price range, or other criteria.

★A search bar is available to allow users to search for specific products by entering keywords.

5.4 Product Details:

★Clicking on a product from the product listing page opens a detailed product page.

★The detailed product page provides more information about the product, including a larger image, detailed description, specifications, customer reviews, and available quantity.

★Users can select the desired quantity and add the product to their cart from this page.

5.5 Shopping Cart:

★The shopping cart page displays the list of products that the user has added.

★It shows the product image, title, price, quantity, and total price.

★Users can modify the quantity or remove products from the cart.

★The cart page also displays the subtotal, applicable taxes, and any discounts.

★Users can proceed to checkout from this page.

5.6 Checkout Process:

★The checkout process involves multiple steps and forms to collect user information.

★Users are prompted to enter their delivery address, contact details, and preferred payment method.

★Payment options may include credit card, debit card, net banking, or cash on delivery.

★Users review the order summary, apply any coupon codes or

discounts, and confirm the order.

5.7 Order Confirmation and Tracking:

★After completing the checkout process, users receive an order confirmation with a unique order ID.

★Users can track the status of their order, including estimated delivery date and time.

★Order history and details are accessible from the user's account or profile section.

5.8 User Account or Profile:

★The user account or profile section allows users to manage their personal information, including name, email, and delivery addresses.

★It also provides access to order history, tracking, and any saved payment methods.

★Users can update their account settings, change passwords, and manage communication preferences.

6. Business Requirements:

6.1 User Registration and Authentication:

★The system should provide user registration functionality, allowing users to create an account with their personal information.
★Users should be able to authenticate themselves through a login process using their credentials.

6.2 Product Listing and Search:

★The system should display a comprehensive list of available products categorized into sections like seeds, fertilizers, machinery, and tools.
★Users should be able to search for products based on keywords, categories, or specific criteria.

6.3 Product Details and Description:

★The system should provide detailed information about each product, including images, descriptions, specifications, and customer reviews.
★Users should be able to view the availability of products, prices, and any applicable discounts or promotions.

6.4 Shopping Cart and Checkout:

★Users should be able to add products to their shopping cart and manage the contents of the cart.
★The system should calculate the total price, apply any discounts or taxes, and provide a summary before proceeding to checkout.
★Users should be able to select a preferred payment method and provide necessary details for order processing.

6.5 Order Management and Tracking:

★The system should generate a unique order ID for each successful order and provide confirmation to the user.
★Users should be able to track the status of their orders, including estimated delivery dates and times.
★The system should send notifications to users regarding order updates or changes.

6.6 User Account Management:

★Users should have the ability to manage their account information, including personal details, delivery addresses, and contact information.
★Users should be able to view their order history, manage saved payment methods, and update their account settings.

6.7 Administrator Dashboard:

★An administrator should have access to a dashboard or backend system to manage product listings, suppliers, and delivery boys.
★The administrator should be able to add, update, and delete products from the system.
★The administrator should have the capability to manage supplier information and assign delivery boys to orders.

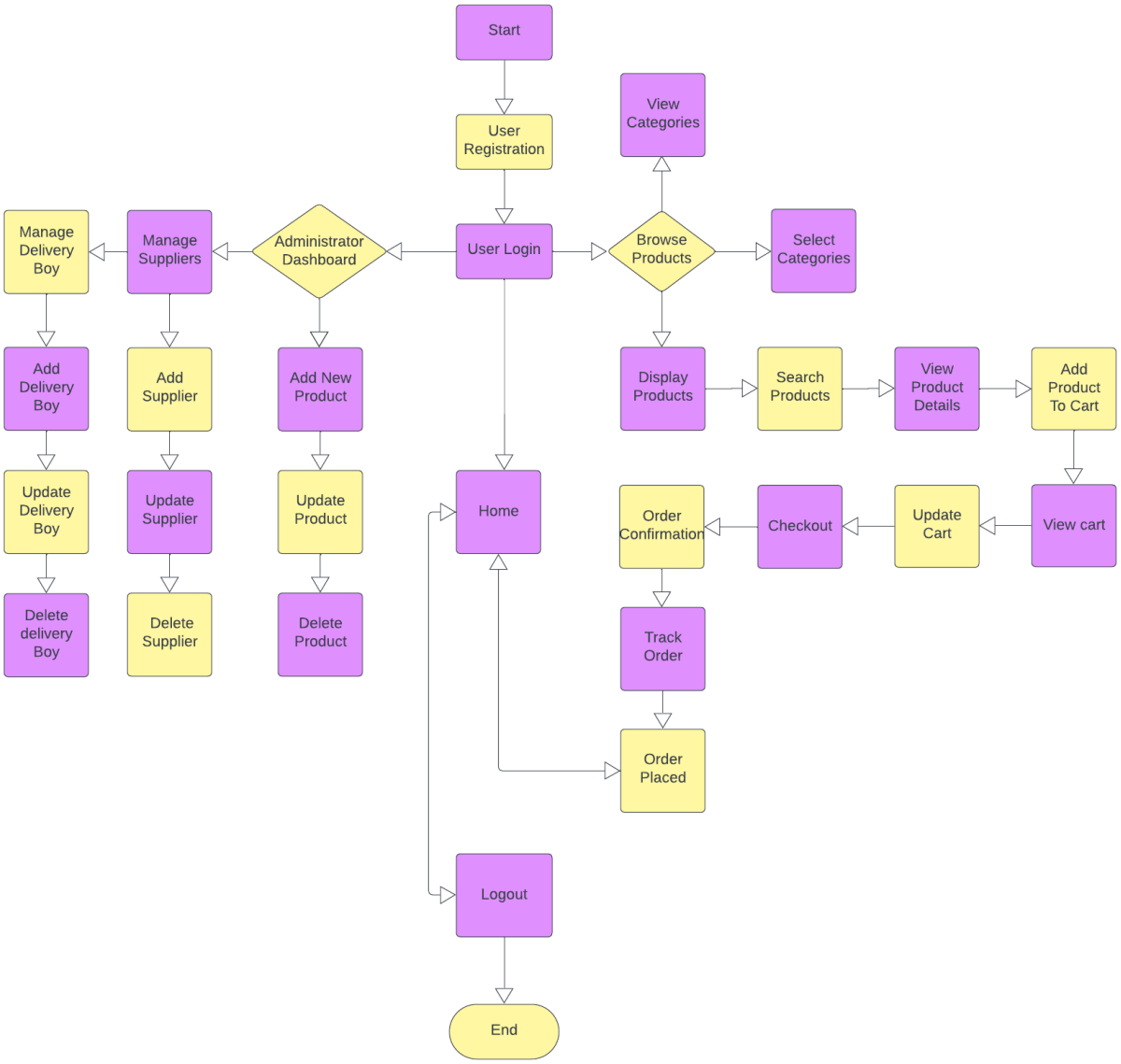
6.8 Security and Privacy:

★The system should ensure the security of user data, including encryption of sensitive information like passwords and payment details.
★Users' personal information and order history should be kept confidential and protected.
★Compliance with data protection regulations, such as GDPR, should be considered and implemented.

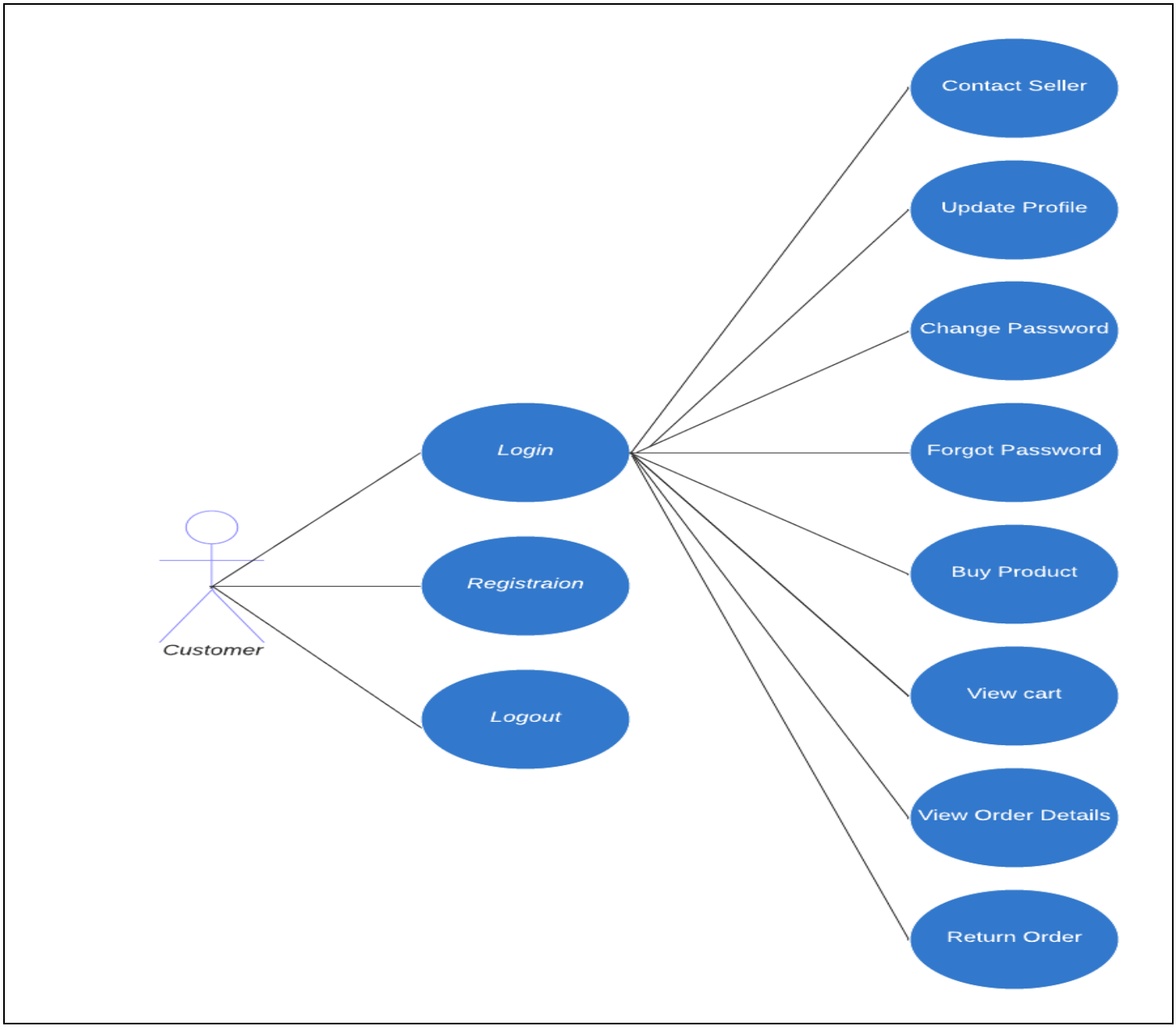
6.9 Scalability and Performance:

★The system should be designed to handle a large number of users, product listings, and concurrent transactions.
★It should be scalable to accommodate future growth and handle increased user loads.
★Performance optimizations should be implemented to ensure fast response times and smooth user experience.

7. Flowchart:


Start
User Registration
View Categories
Manage Delivery Boy
Manage Suppliers
Administrator Dashboard
User Login
Browse Products
Select Categories
Add Delivery Boy
Add Supplier
Add New Product
Display Products
Search Products
View Product Details
Add Product To Cart
Update Delivery Boy
Update Supplier
Update Product
Home
Order Confirmation
Checkout
Update Cart
View cart
Delete delivery Boy
Delete Supplier
Delete Product
Track Order
Order Placed
Logout
End

8. Use Case Diagram:
8.1 Customer:



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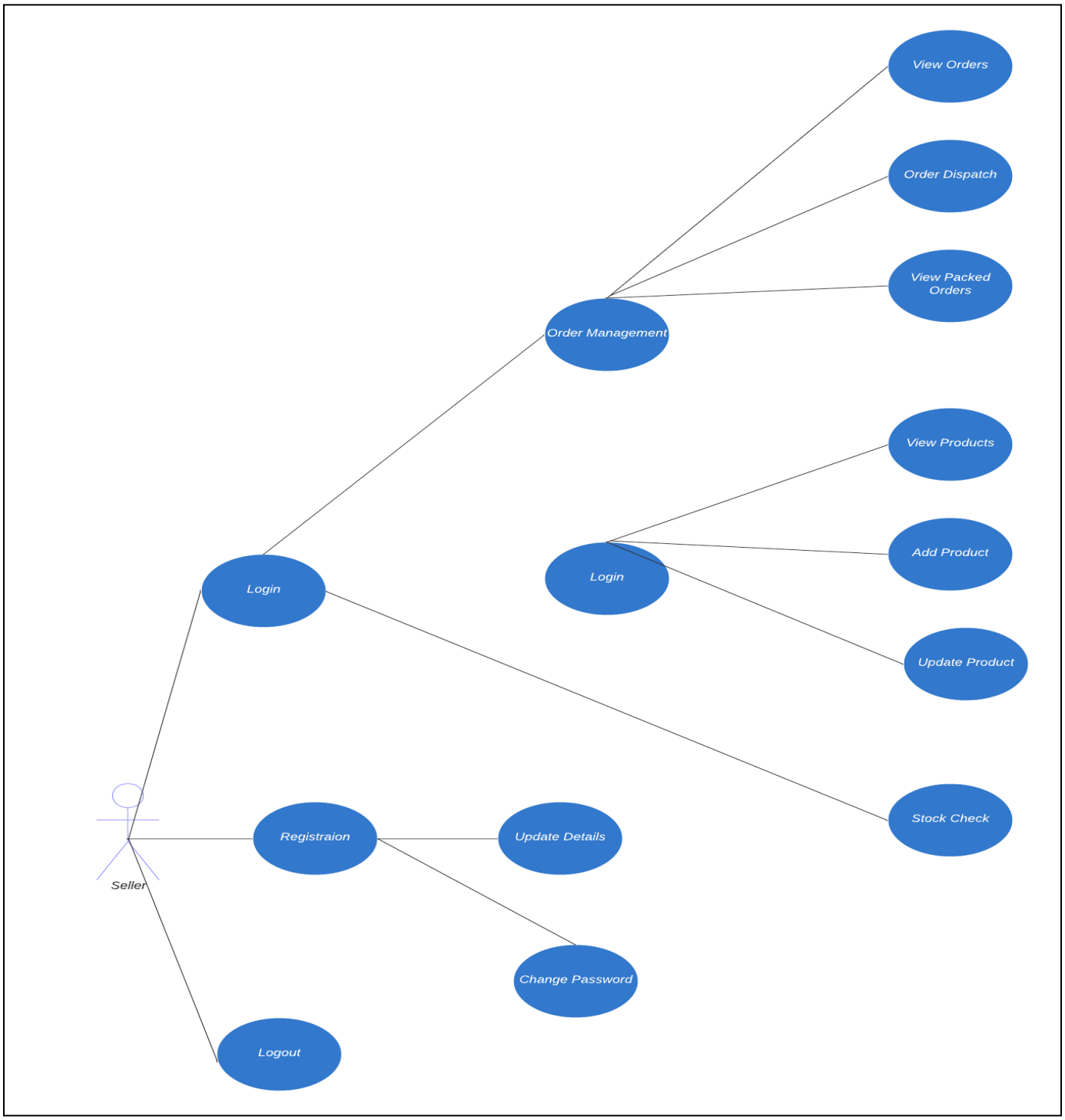
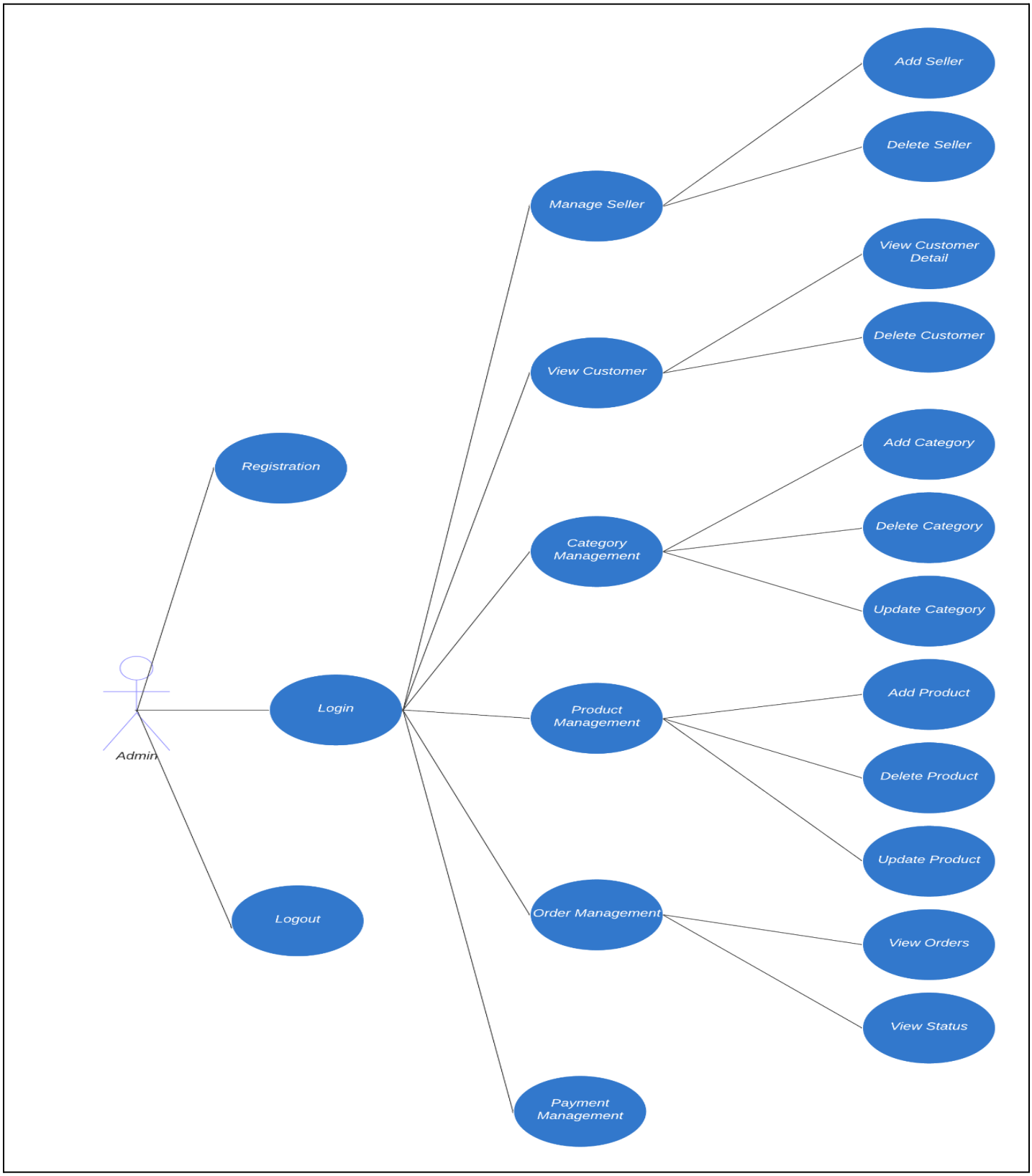

View Orders
Order Dispatch
View Packed Orders
Order Management
View Products
Add Product
Update Product
Login
Login
Stock Check
Seller
Registraion
Update Details
Change Password
Logout

8.3 Admin:


Add Seller
Delete Seller
Manage Seller
View Customer Detail
Delete Customer
View Customer
Registration
Add Category
Delete Category
Update Category
Category Management
Login
Product Management
Add Product
Delete Product
Update Product
Admin
Logout
Order Management
View Orders
View Status
Payment Management