



# SOFTWARE REQUIREMENTS SPECIFICATION

## ***INFINITI STORE (A-ECOMMERCE STORE)***

Version 1.0

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29-NOV-2023

# TABLE OF CONTENTS

## 1. Introduction

- 1.1 Purpose
- 1.2 Document Conventions
- 1.3 Intended Audience and Reading Suggestions
- 1.4 Product Scope
- 1.5 References

## 2. Overall Description

- 2.1 Product Perspective
- 2.2 Product Functions
- 2.3 User Classes and Characteristics
- 2.4 Operating Environment
- 2.5 Design and Implementation Constraints
- 2.6 User Documentation
- 2.7 Assumptions and Dependencies

## 3. External Interface Requirements

- 3.1 User Interfaces
- 3.2 Hardware Interfaces
- 3.3 Software Interfaces
- 3.4 Communications Interfaces

## 4. System Features (8 features with their requirements).

## 5. Other Nonfunctional Requirements

- 5.1 Performance Requirements
- 5.2 Safety Requirements
- 5.3 Security Requirements
- 5.4 Software Quality Attributes
- 5.5 Business Rules

## 6. Other Requirements

Appendix A: Glossary

Appendix B: Analysis Models

Appendix C: To Be Determined List

Revision History:

Name	Date	Reason for changes	Version

# SOFTWARE REQUIREMENTS SPECIFICATION

## 1. Introduction:

### **1.1 Purpose:**

The purpose of the "Infiniti" e-commerce webstore's Software Requirements Specification (SRS) document is to clearly lay out what the development team needs to do. It's like a detailed guide that lists everything the webstore should be able to do, both in terms of functions (like user accounts and product searches) and other important aspects (like security and how fast it should be). This document helps everyone involved, like the developers and testers, to understand what's expected. It's a roadmap that guides the design, building, and testing of the Infiniti webstore. The goal is to make sure everyone understands what needs to be done, avoid confusion, and create a webstore that is strong, easy to use, and full of features.

### **1.2: Document Conventions:**

- Heading Style: Bold and 14 font size.
- Font and Size: Text font size is 12 and Main heading size is 18 and subheading is 14.
- Language and Tone: English and formal.
- Version Control: 1.0. Changes will be handled in decimal values I.e: 1.1.
- File Naming Conventions: SRS [V-1.0] INFINITI STORE.
- Numbering and Bullet Points: Hierarchical convention will be followed.
- Font Style: Times New Roman.

### **1.3: Intended Audience and Reading suggestions:**

This document about the "Infiniti" online store is for different people like developers, testers, managers, designers, business analysts, and stakeholders. Developers get tech details, testers learn about testing, managers can plan well, designers get design needs, business analysts align with business goals, and stakeholders see how the project affects the business.

To quickly understand, begin with the main summary. The start explains the problems and how we plan to solve them. The goals of the project are in scope, and details about what the webstore should do are in features, functional requirements, and non-functional requirements. Performance and security standards are highlighted in quality attributes. Business requirements connect the webstore with business goals. The end summarizes the good things that can happen.

### **1.4: Product Scope:**

The e-commerce website project involves creating a complete online store with a wide range of products in different categories. This project will include features like allowing users to sign up, managing the list of products, letting customers add items to a cart, ensuring safe payment, and giving users a personalized shopping experience. The goal is to make a website that works well on different devices, keeps customer information safe, and is easy for people to use. It will also follow all the rules about protecting customer data and will offer many useful shopping features. The project includes user registration, product catalog management, shopping cart functionality, secure checkout, and personalized user experiences. The project aims to deliver a responsive, secure, and user-friendly e-commerce website that complies with data protection regulations and provides a feature-rich shopping experience for customers.

## 1.5: References:

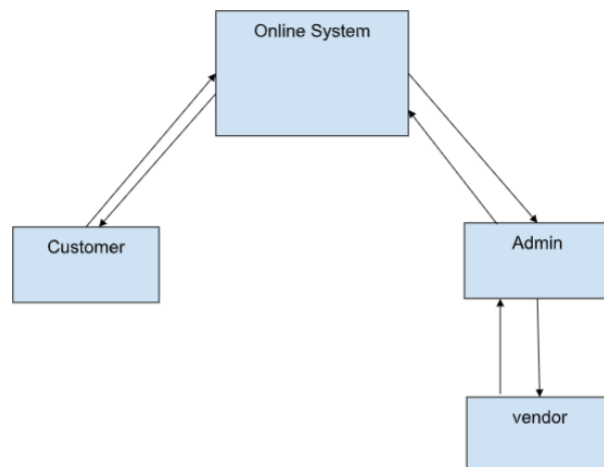
- [1] "Alibaba's Taobao vs. Amazon: The E-Commerce Business Model" by Yishi Zhang.
- [2] "A Comparative Analysis of E-commerce Platforms in Building an Online Store" by Abhijeet Vats.
- [3] "The Alibaba Group: A Case Study" by John E. Spillan, Man Zhang, and Niv Haresh.
- [4] "Amazon's Business Strategy & Leadership in Online Retailing" by MBA Skool Team.
- [5] Garcia, M. (2021). Effective E-commerce SEO Strategies.
- [6] Smith, J. (2023). E-commerce Website Design Trends.
- [7] Johnson, A. (2022). Payment Gateway Integration in E-commerce.

## 2. Overall Description:

### 2.1: Product Perspective:

Our Ecommerce drop shipping website has two main parts: one for admins and one for customers. It's like a virtual store where customers can shop online without going to physical stores. This part is made to be easy to use and secure, providing a smooth online shopping experience with lots of different products.

Apart from the customer side, there's also a part for admins who connect with vendors. Admins are like supervisors, making sure everything works well, following the rules, and handling any issues that come up during transactions. They act as go-betweens, helping customers talk to vendors. This way, the website becomes a well-regulated place for online shopping, building trust and openness among everyone involved. The sketch given below explains the product:



### 2.2: Product Functions:

Listed below are all the major functions supported by the online shopping system

- Register: for customers and admin
- Login: for customers and admin
- View Account Details: for customers and admin
- Edit Account Details: for customers and admin
- Search item: for customers
- View item: for customers
- Add item to cart: for customers
- View shopping cart: for customers
- Change items in cart: for customers
- Proceed to buy: for customers
- Delivery & payment: for customers
- Place order: for customers
- Cancel order: for customers
- Return item: for customers
- View orders and returns: for customers
- Review item: for customers
- View sales: for admin

## **2.3: User Classes and Characteristics:**

**[1] User Class 01: Age 10 to 20 (non-Earners). Name: Young Shoppers.**

Characteristics:

- Typically, students or dependents do not earn an income.
- Tech-savvy and active on social media.
- Value affordability and discounts.

Behavior:

- Frequent online shoppers for personal items and gifts.
- Likely to explore budget-friendly options.
- Interested in products related to hobbies, fashion, and entertainment.

**[2] User Class 02: Age 20 to 30 (Earners). Name: Working Professionals.**

Characteristics:

- Employed and earning a regular income.
- Comfortable with online transactions and mobile apps.
- Seek convenience and quality in products.

Behavior:

- Regularly shop online for a variety of needs, including clothing, electronics, and groceries.
- May show interest in premium products and personalized shopping experiences.
- Value time-saving features and fast delivery options.

## **2.4: Operating Environment:**

The online shopping system is designed to adapt to various environments, providing users with flexibility and convenience in their choice of platforms and browsers. The Internet is a necessity for the system to be accessed. The Website operates in a versatile environment to ensure accessibility across various platforms. It is primarily designed as a web application, compatible with popular web browsers such as Google Chrome, Mozilla Firefox, Internet Explorer, and Microsoft Edge. Additionally, on Mac OS X, the system is compatible with Apple Safari.

## **2.5: Design and Implementation Constraints:**

The website is designed to be user-friendly by allowing customers to pay only after logging in and adding items to their cart, preventing checkout with an empty cart. To ensure ethical practices, the website strictly sells legal and appropriate products in the target market, ensuring a responsible online shopping experience. It's important to note that a stable internet connection is necessary to access the system, and continuous internet access is required for a smooth experience.

## **2.6: User Documentation:**

The Ecommerce website, being inherently intuitive and user-friendly, does not require extensive user documentation such as manuals, tutorials, or specific guides. Given the widespread familiarity with online shopping platforms, users are expected to navigate the website effortlessly without the need for detailed instructions. The aim is to prioritize an intuitive design, allowing users to engage with the Ecommerce website effortlessly, irrespective of their level of technological expertise.

## **2.7: Assumptions and Dependencies:**

The successful execution of the project assumes a clear distinction between the roles of administrators and customers, where only administrators interact with vendors. Here admin is Dependent on Vendor. This assumption is critical for maintaining a well-regulated and organized online shopping environment.

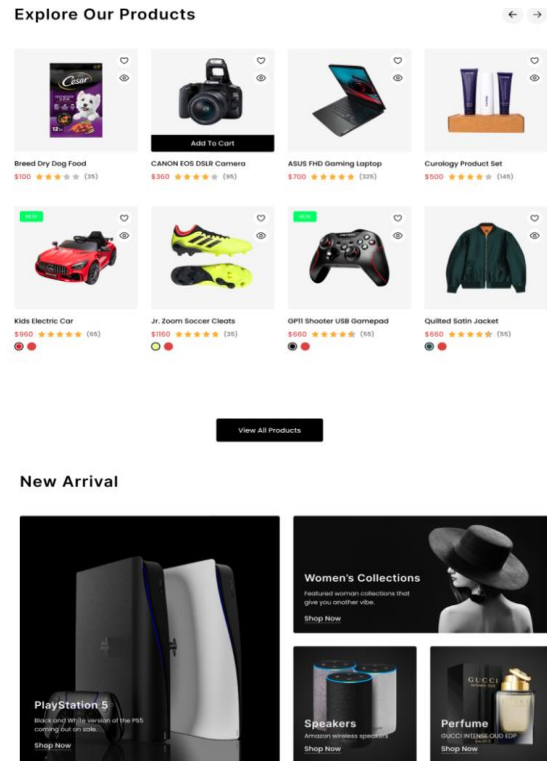
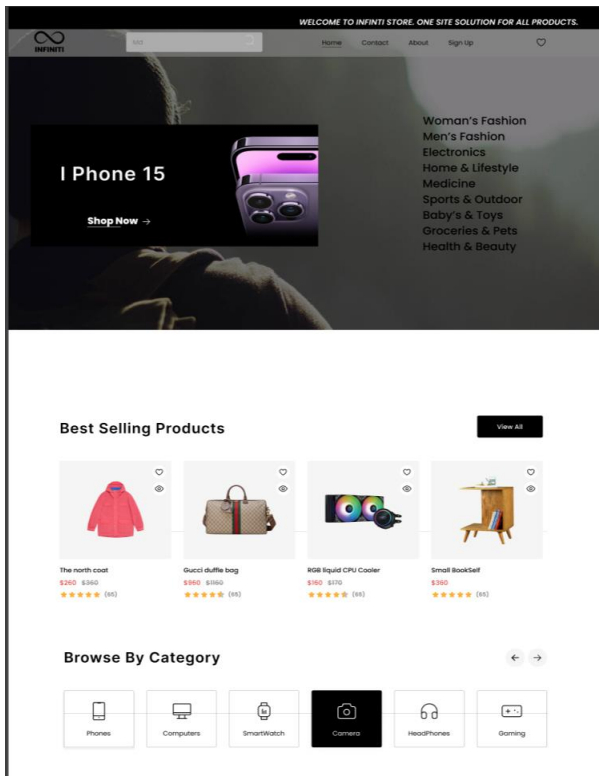
Additionally, the project relies on API integration for user authentication during the login process. Assumptions regarding the stability and compatibility of these external APIs are inherent in the seamless functioning of the login feature

# **3. External Interface Requirements:**

## **3.1: User Interfaces:**

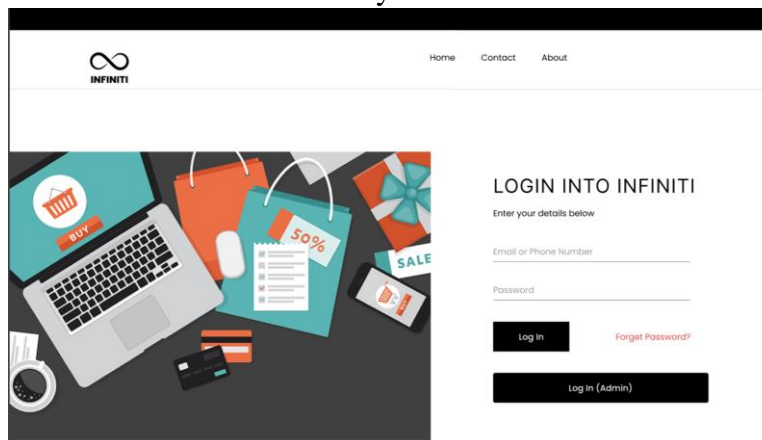
### **3.1.1: Home Page:**

- The home page of this online shopping system is designed to be attractive and user friendly.
- The top bar consists of a search option, Home, Contacts, and About buttons account options. The top selling product is displayed on top, this is led by other top selling products, then browse by category is displayed.
- The Explore Products randomly displays a number of products.



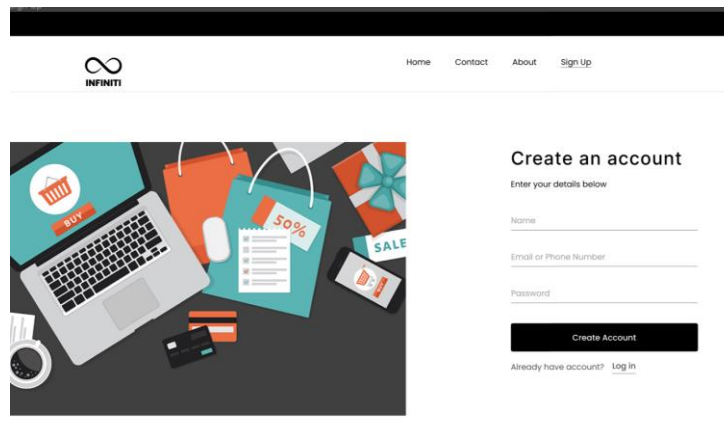
### 3.1.2: Sign up and Login:

- This page allows the users with an account under this online shopping system to Sign into their account. They can Log in to the system by entering their credentials and the respective password
- This Page also allows the user to go to Home, Contacts or About page.
- The Admin Login option can be used to enter the system as the admin.



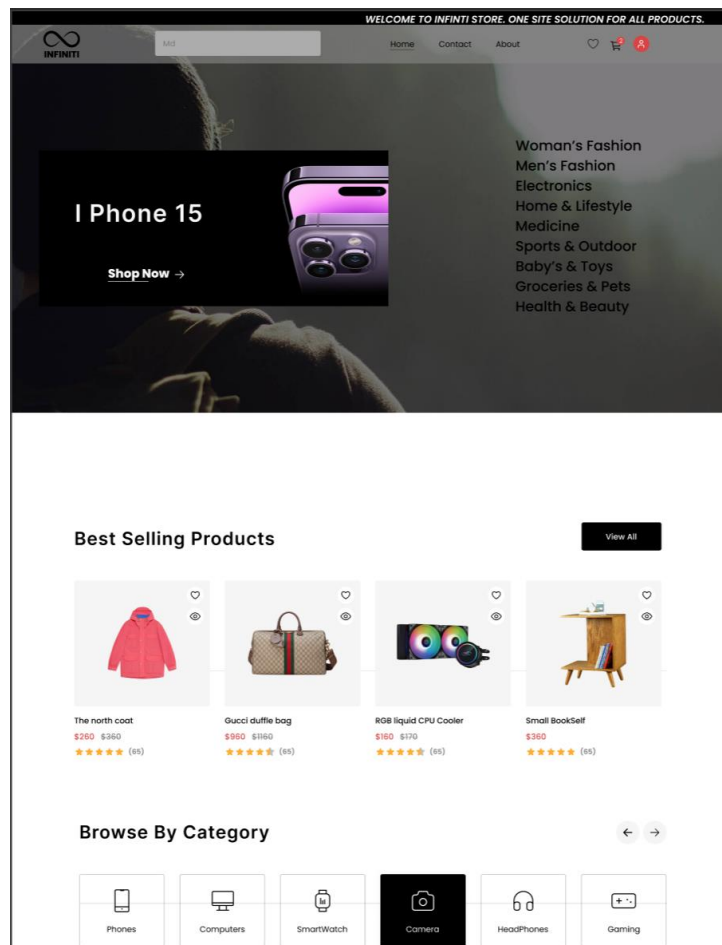
- This page allows the users to create an account by entering specific information.
- Apart from that the user can go to Home, Contacts or About Page.
- If User's account already exists, he/she can directly login through the login page.





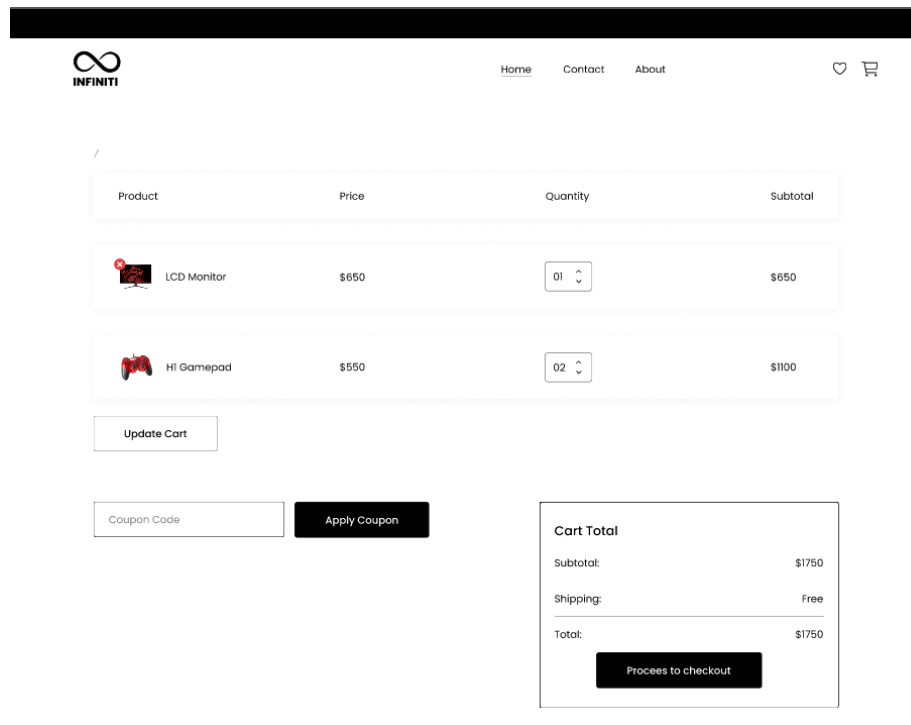
### 3.1.3: After Login Home Page:

- Upon successful login, users will be seamlessly directed to the home page, where an enhanced layout awaits.
- The top bar now encompasses essential functionalities, including the search option, Home, Contacts, and About buttons, alongside the newly added Cart and Account info options.



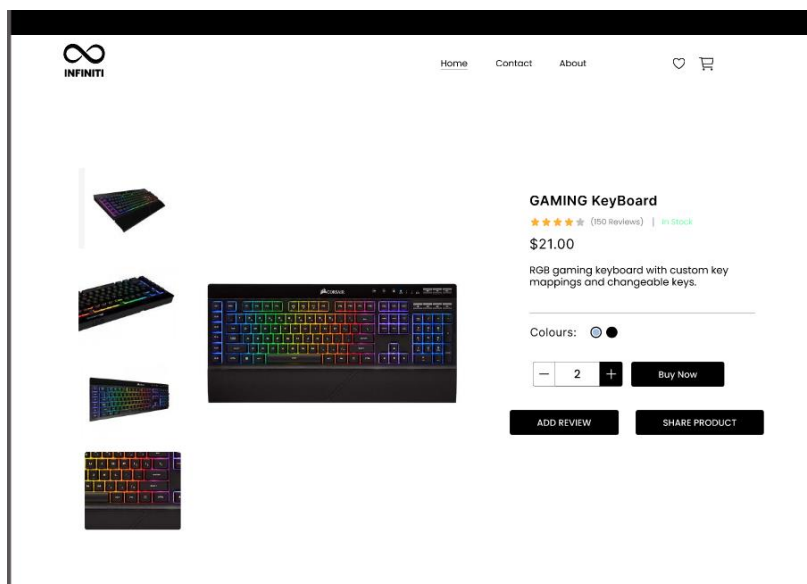
### 3.1.4: User Cart:

- The Cart options leads to a page comprising of multiple features such as update cart, apple coupon, proceed to checkout.
- The Cart displays the products added by user, and their features such as price, quantity, and subtotal.



### 3.1.5: Product Display Page:

- This Page is highly interactive and user friendly.
- This usually includes one or more images of the product, product's name, features, price, brand that is selling it etc.
- The user after viewing the product details, can then add the product to cart.



### 3.1.6 User Account:

- This Page comprises User's information such as first and last names, email, address, passwords, etc. The main feature is to change these details.
- Moreover, a hamburger is given on the left-hand side which can navigate user to his orders, returns and cancellations.

The screenshot shows the 'Edit Your Profile' page. On the left is a sidebar with navigation links: 'Manage My Account' (My Profile, Address Book, My Payment Options), 'My Orders' (My Returns, My Cancellations), and 'My WishList'. The main content area has a title 'Edit Your Profile' and several input fields: 'First Name' (Bopinder), 'Last Name' (jogi), 'Email' (bopinderjogi@gmail.com), and 'Address' (Bopinder Jogi(US)). Below these are 'Password Changes' fields: 'Current Passwod', 'New Passwod', and 'Confirm New Passwod'. At the bottom right are 'Cancel' and 'Save Changes' buttons.

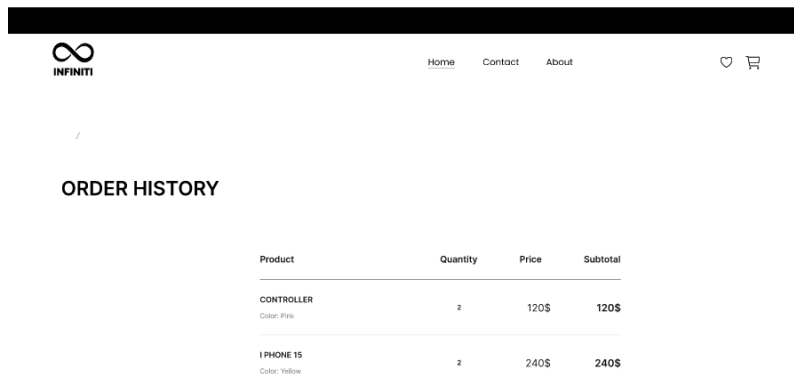
### 3.1.7 Return Order Page:

- This Page allows the user to return their order. Each order is displayed with their quantity and total amounts as well as the date of order.
- On the left-hand side, a hamburger is provided to see past orders, cancellations and manage account.

The screenshot shows the 'ORDER RETURNS' page. The sidebar is identical to the previous page. The main content area has a title 'ORDER RETURNS'. It lists two orders: one ordered on 19 Aug for a 'CONTROLLER' (quantity 2, price 120\$, total 120\$) and another ordered on 29 Aug for a 'KEYBOARD' (quantity 2, price 120\$, total 120\$). Each order entry includes a 'Color: Pink' label and a 'Choose a reason' dropdown menu. Below each order entry is a 'MAKE A RETURN' button.

### 3.1.8 Order History:

- This page neatly displays the details of any past orders of the user.
- The order details comprise of the product's color family, price, quantity, total price, etc.



### 3.1.9: Billing:

- This Page displays payment related details such as shipping fee, subtotal payment options.
- It asks for user details such as name, address, city, contact info. And email, etc.

INFINITI

Home Contact About

Billing Details

First Name\*

Company Name

Street Address\*

Apartment, floor, etc. (optional)

Town/City\*

Phone Number\*

Email Address\*

Subtotal: \$1750

Shipping: Free

Total: \$1750

☐ Bank

☒ Cash on delivery

Place Order

### 3.1.10: Product Review:

- The user can write his review along with giving a rating.
- The reviews of other customers along with their names can be seen by the user.

## Customer Reviews

★★★★☆ 11 Reviews

 [Write Review](#)

### 15 Reviews

Bophinder Jodi, Punjab USA

★★★★★

VERY GOOD QUALITY. LOVED IT.

[Like](#) [Reply](#)

Arshad Bhai, Sargodha Pakistan

★★★★★

papa liked it too much.


[Like](#) [Reply](#)

## ADMIN UI:

### 3.1.11: Admin Login:

- Upon accessing the Login page, users can seamlessly transition into the admin login interface.
- Here, administrators can securely log in by entering their designated credentials, ensuring a secure and controlled access point to the administrative functionalities

**INFINITI STORE**
**ADMIN CONTROL**



**LOGIN AS ADMIN**

Enter your details below

Email or Phone Number

Password

[Log in](#)

### 3.1.12: Admin Dashboard:

- Upon successful login, administrators are directed to the comprehensive Admin Dashboard—a centralized hub offering a holistic overview of key metrics. It contains total sales, expenses and income, explained with a graph.
- Options to add and delete products are provided on one side.

### **3.1.13: Add product to Store:**

- By clicking on add product on dashboard, user is taken to a new page, where he/she can add new product by giving specific details of that product.
- The details consist of the product's images, price, a short description, etc.

### **3.1.14: Delete product from Store:**

- Clicking on the "Remove Product" option within the Admin Dashboard seamlessly redirects administrators to a dedicated page designed for the removal of certain products.
- The admin can remove the product of his desire by simply selecting it.

## **3.2: Hardware Interfaces:**

Typically, websites of this nature do not require explicit hardware interfaces. However, compatibility with Google Chrome is essential. The Ecommerce website is designed to seamlessly adapt to a diverse range of devices, encompassing desktops, laptops, tablets, and smartphones, with a responsive layout catering to varied screen sizes. The hardware prerequisites for a basic Ecommerce website are uncomplicated, necessitating a minimum of 2GB to 4GB of RAM for optimal performance.

## **3.3: Software Interfaces:**

- All the webpages of this online shopping system are majorly built using development tools like HTML, CSS, JavaScript, Nodejs.
- This online shopping system is accessible through the internet on any Operating System like Linux, Mac, Windows.
- The online shopping system shall communicate with the admin to get the product specifications to the users in the Product Specification page.
- The complete information about the products is stored in the databases of the system.
- The admin gets various information about the product like the images of the product, product's name, features, price, brand that is selling it, product reviews, product ratings etc. which are displayed to the users on the screen.
- The system shall communicate with the shipping system for tracking orders and updating shipping methods. Once the order is placed, the shipping system is responsible for updating the users about the shipping process of the products they ordered.

## **3.4: Communications Interfaces:**

The Ecommerce website relies on various communication functions for seamless operation. Some are listed down below:

- **Web Browser Compatibility:**

The website is optimized for compatibility with popular web browsers, with a particular emphasis on Google Chrome. Users are encouraged to use up-to-date browsers for an optimal experience.

- **HTTP/HTTPS Protocols:**

Communication between users and the website occurs over standard HTTP/HTTPS protocols. HTTP is used for regular data transfers, while HTTPS ensures secure, encrypted communication, especially during sensitive transactions such as payment processing.

## **4. Features:**

### ***4.1: User Authentication:***

#### **4.1.1 Description and Priority:**

User must have a account in order to shop. User with no account will not have any permission to buy any good or use cart or do payment for that specific product. Customer' account will hold information about their name, email id or phone number, password. Users can view and login to their accounts and even edit account details in the future.

Priority: **HIGH**

#### **4.1.2 Stimulus/Response sequence:**

In the home page, users can select the signup or login button and type in their credentials for registration or for login respectively. Upon matching the required criteria, the account will either get created and the login page is displayed or the user is logged in to his/her account and the home page is displayed.

#### **4.1.3 Functional Requirements:**

##### **REQ 1: Registration/login:**

Use Case ID:	I.S.01		
Use Case Name:	User Registration and Authentication for Online Shopping	Version:	1.0
End objective:	To login		
Created by:	Saim Imran	On (date):	28-11-23
User/Actor:	Customer		
Pre-Conditions:	The online shopping platform is accessible to the customer		
Priority:	High		
Post-Conditions:	. The customer is registered and can log in to their account for future purchases.		
Basic Flow:			
Step:	User Actions:	System Actions:	
1.	The customer selects the "Sign Up" option.	The system prompts the customer to provide necessary registration information.	
2.	The customer provides necessary registration information (e.g., name, email, password).	. The system verifies the provided information	
3.	The customer registers	. If registration is successful, the system creates a new user account.	

Alternatives:		
Step:	User Actions:	System Actions:
1.	The customer selects the "Login" option.	The system prompts the customer to enter their credentials.
2.	The customer enters their credentials (email and password).	The system verifies the entered credentials.
3.	The customer submits the login form.	If authentication is successful, the customer gains access to their account.

Exceptions:		
Step:	User Actions:	System Actions:
1.	Customers gets the prompt for incorrect information	. System will prompt customer about the wrong information
2.	Customer then enter correct credentials again	System will then verify the credentials information again

## 4.2 Shopping chart functionality

### 4.2.1 Description and Priority:

When a customer views and chooses an item for purchase, they need to use the "Add to Cart" button to include the selected item in their shopping cart. The shopping cart serves as a repository for all items the customer intends to buy, and each user account is linked to a single shopping cart. This allows users to seamlessly browse for items, add them to the cart, continue their shopping, and eventually complete a consolidated purchase. Customer can also remove the product from cart, and its prerequisite is that customer should have at least 1 product in the cart already.

Priority: **HIGH**

### 4.2.2 Stimulus/Response sequence:

To place an item into the shopping cart, the user needs to select the "Add to Cart" button on the item's view page. Subsequently, the customer can continue exploring and adding additional items to the cart. By clicking the "View Cart" button, the customer can access a comprehensive list displaying each item, its individual price, quantity, and the total cost of the entire cart. On this page, customers have the flexibility to remove items or adjust quantities by using the respective "+," or "-" buttons next to each item. To proceed with the purchase, customers can click on the "Proceed to checkout" button.



REQ 1: Add products to cart

Use Case ID:	I.S.02		
Use Case Name:	Adding product in the cart	Version:	1.0
End objective:	To add Product in the shopping cart		
Created by:	Saim Imran	On (date):	28-11-23
User/Actor:	Customer		
Pre-Conditions:	Customer should be registered and login in order to shop		
Priority:	High		
Post-Conditions:	Customer has successfully added product in their shopping cart and ready to purchase it.		
Basic Flow:			
Step:	User Actions:	System Actions:	
1.	The customer browses the products on the E-commerce website.	System shows the Products to customer	
2.	The customer selects a product they want to purchase, and clicks on “Add to Cart” button	System updates the cart by adding the product	

Alternatives:		
Step:	User Action:	System Actions:
1.	Selected product is not available.	System should display the appropriate message to customer.

Exceptions		
Step:	User Actions:	System Actions:
1.	there is a technical error during the process (e.g., server issues, connectivity).	The system will display an error message and prompts the customer to try again later.

2.	Customer can't add product because he hasn't logged in	System prompts user to log in or create an account before adding the product to the cart.
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## REQ 2: Remove product from cart

Use Case ID:	I.S.03		
Use Case Name:	Removing Product from Cart	Version:	1.0
End objective:	To remove desired product from cart		
Created by:	Saim Imran	On (date):	28-11-23
User/Actor:	Customer		
Pre-Conditions:	1.Customer should be registered in order to shopping and logged in 2.Cart should contain at least 1 product		
Priority:	High		
Post-Conditions:	Customer has successfully removed the product form the cart		
Basic Flow:			
Step:	User Actions:	System Actions:	
1.	Customer signs/logs in	System verifies the details and start user session	
2.	Customer add few items in the cart	System adds items to cart	
3.	If desired, the customer removes items from the shopping cart by clicking on ‘-’ sign.	The system updates the shopping cart as customer desires.	

Alternatives (Adjust Quantity):		
Step:	User Actions:	System Actions:
1.	The customer navigates to their shopping cart.	System shows cart option on webpage
2.	The customer clicks on '-' to remove a specific product.	System shows removal option to customer
3.	The customer confirms the removal action.	The system updates the shopping cart by removing the selected product.

Exceptions (Removing product from empty cart)		
Step:	User Actions:	System Actions:
1.	The customer proceeds to checkout with an empty shopping cart.	The system notifies the customer that the shopping cart is empty and prompts them to add products before proceeding to checkout.

### 4.3: *Cancel and return:*

#### 4.3.1 Description and Priority:

The "Orders and Returns" feature is crucial for managing customer transactions and ensuring a streamlined process for order placement and potential returns. This feature allows user to cancel the order or to imitate a order return request. He/she can cancel the order that is yet to be delivered or return the item that is delivered and get the paid amount back, or view past orders and returns.

Priority: **Medium**

#### 4.3.2 Stimulus/Response sequence:

In the homepage on the top right corner on the account. There on the left side we have provided the option of “My Cancel” and “My Return” under the option of “My Orders”. And by clicking on the options of “My orders”, customer shall be able to see the past history/purchases.

#### 4.3.3 Functional Requirement

##### REQ 1: Cancel Order

Use Case ID:	I.S.04		
Use Case Name:	Cancel Order	Version:	1.0
End objective:	Allow customers to cancel orders.		
Created by:	Talha Tofeeq	On (date):	28-11-23
User/Actor:	Customer		
Pre-Conditions:	<ol style="list-style-type: none"> <li>1. The customer must be registered and logged into their account.</li> <li>2. The order to be canceled must exist and be in a cancelable state.</li> </ol>		

Post-Conditions:		3. The order is successfully canceled. 4. The system updates the order status and, if applicable, initiates a refund process.	
Priority		Medium	
Basic Flow:			
Step:	User Actions:	System Actions:	
1.	Customer selects the order they want to cancel.	The system retrieves details of the selected order.	
2.	If eligible, the customer confirms the cancellation.	Updates the order status to "Canceled."	
Alternatives:			
Step:	User Actions:	System Actions:	
1.	The customer is unable to cancel the order through the system.	The system informs the customer and provides a support contact option.	

Exception:		
Step:	User Actions:	System Actions:
1.	Unexpected System Error	If there is an error during the cancellation (e.g., payment processing issue, system error), the system informs the customer about the issue.

REQ 2: Return Order

Use Case ID:	I.S.05
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Use Case Name:	Return Order	Version:	1.0
End objective:	Allow customers to initiate a return for an order.		
Created by:	Talha Tofeeq	On (date):	28-11-23
User/Actor:	Customer		
Pre-Conditions:	5. The customer must be registered and logged into their account. 6. The order to be returned must exist and be in a returnable state.		
Post-Conditions:	7. The return request is successfully initiated. 8. The system updates the order status to "Return Initiated." 9. If applicable, the customer receives information on the return process and any associated shipping labels		
Priority	Medium		

Basic Flow:		
Step:	User Actions:	System Actions:
1.	Customer selects the order they want to cancel	The system retrieves details of the selected order.
2.	If eligible, the customer confirms the cancellation	Updates the order status to "Return Initiated" or "Return".

Alternatives:		
Step:	User Actions:	System Actions:
1.	The customer is unable to return the order through the system.	The system informs the customer and provides a support contact option.

Exception:		
Step:	User Actions:	System Actions:
1.	Customer attempts to return an order without being logged in.	The system prompts the user to log in first.

REQ 3: Track Past Order

Use Case ID:	I.S.06		
Use Case Name:	View Past Orders	Version:	1.0
End objective:	To view the past orders		
Created by:	Saim Imran	On (date):	28-11-23
User/Actor:	Customer		
Pre-Conditions:	The customer is logged into their account on the online shopping		
Priority:	Medium		
Post-Conditions:	The customer can review and track their past orders, accessing detailed information about each order.		
Basic Flow:			
Step:	User Actions:	System Actions:	
1.	Customer navigates to account icon	System will show the icon on top right corner	
2.	After clicking customer will navigate to my order	System will show the “My orders” options	
3.	Customer selects “My Orders”	System will redirect to the Past Order screen	

Alternatives:		
Step:	User Actions:	System Actions:

1.	System has no past orders	System will notify by showing no past orders
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Exceptions (Unsuccessful Order Retrieval):		
Step:	User Actions:	System Actions:
1.	Customer encounters an issue retrieving past orders	System notifies the customer about the problem

## 4.4 Searching Option

### 4.4.1 Description and Priority:

The "Searching Option" feature is integral to the user experience, enabling customers to efficiently search for products within the Ecommerce platform. This functionality allows users to enter keywords, product names, or specific criteria to find relevant items quickly.

Priority: **HIGH**

### 4.4.2 Stimulus/Response Sequences:

To search for the product, the customer types in keywords into a search box . This action immediately shows a drop with the most likely products. The user then clicks on the product he/she wants to view.

### 4.4.3 Functional Requirement.

#### REQ 1: Search for Product

Use Case ID:	I.S.07		
Use Case Name:	Search for Products	Version:	1.0
End objective:	Enable customers to search for products.		
Created by:	Talha Tofeeq	On (date):	28-11-23
User/Actor:	Customer		

Pre-Conditions:	10. The customer must be logged and registered into their account. 11. The product catalog must be available and updated.
Post-Conditions:	12. The customer views a list of relevant products based on the search query.
Priority	High

Basic Flow:

Step:	User Actions:	System Actions:
1.	Customers access the search bar on the platform.	Displays the search bar prominently.
2.	Customer reviews the displayed search results.	The system retrieves relevant products or categories based on the search query and displays them to the customer.

Alternatives:

Step:	User Actions:	System Actions:
1.	Enter a word that does not match a specific product.	The system informs the customer and may suggest alternative search terms.

Exception:

Step:	User Actions:	System Actions:
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1.	In case of technical issues, such as server downtime	The system should inform the customer about the problem and encourage them to try again later.
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4.5: User Review:

4.5.1 Description:

The User Review feature facilitates customer feedback and evaluation of products, contributing to an informed shopping experience. Both customers and sellers can engage with this feature. Users can submit reviews, ratings, and comments on products, while sellers can respond or address concerns.

Priority: Medium.

4.5.2 Stimulus/Response Sequences:

Users initiate the review process by navigating to the product page and selecting the "Submit a Review" option. They input ratings, comments, and any relevant details before submitting. The system processes the input and updates the product's review section with the new information.

4.5.3 Functional Requirements

REQ-1: Reviews

Use Case ID:	I.S.8		
Use Case Name:	Customer Review for Purchased Product	Version:	1.0
End objective:	Customers can add their review.		
Created by:	Abdullah Shafqat	On (date):	29-11-23
User/Actor:	Customer		
Pre-Conditions:	1. The customer must have a valid account and be authenticated. 2. The customer must have purchased a product.		
Post-Conditions:	After successfully adding a review, the customer's feedback is associated with the purchased product.		
Priority	Medium		

Basic Flow:		
Step:	User Actions:	System Actions:
1.	Customer will Login	System will verify Customer's credentials.

2.	Customer can Navigate to Order History	The system navigates to the "Order History" section to view their past purchases.
3.	Customer will Select a Product and add its review	The system selects the product and adds the user's review.
4.	Review Confirmation	The system confirms the successful submission of the review and associates it with the purchased product.

Alternatives:		
Step:	User Actions:	System Actions:
1.	No Previous Purchases	If the customer has not made any purchases, the system notifies the customer that they need to make a purchase before adding a review.

Exception:		
Step:	User Actions:	System Actions:
1.	Review Submission Error	In case of an unexpected error, the system will notify the user about the error.

## 4.6 Admin Tracking

### 4.6.1 Description:

The Admin Tracking feature is essential to our shopping system. It helps the admins keep an eye on everything that happens. Admins use it to see what users are doing, check how well the system is working, and keep track of important events. It's like a security guard making sure everything is in good shape. Admins, with the right access, can use the Admin Dashboard as their control center to make sure everything runs smoothly. Admins use it to view Product sales reports, order details, order history.

Priority: High

### 4.6.2 Stimulus/Response Sequences:

When admins want to use the tracking feature, they log in and go to the Admin Dashboard. From there, they can choose what they want to keep an eye on, like user actions. The system then shows them a report on the product sales, product orders and the order history.

### 4.6.3 Functional Requirements

#### REQ-1: Admin Sales and Analytics

Use Case ID:	I.S.07		
Use Case Name:	Admin Access to Recent Sales and Analytics	Version:	1.0
End objective:	To allow the admin to view recent sales and analytics data.		
Created by:	Abdullah Shafqat	On (date):	28-11-23
User/Actor:	Admin		
Pre-Conditions:	<div>1. The admin must have a valid account and be authenticated.</div> <div>2. The online shopping system must be operational.</div> <div>3. Sales and analytics data should be available in the system.</div>		
Post-Conditions:	After successfully accessing the recent sales and analytics, the admin can make informed decisions based on the data.		
Priority	Medium		

Basic Flow:				
Step:	User Actions:		System Actions:	
1.	Admin will Login		The admin logs in using valid credentials.	
2.	Admin will access Dashboard		The system verifies the admin's credentials and grants access to the admin dashboard.	
3.	Admin can View Recent Sales and Analytics		The admin navigates to the "Sales and Analytics" section within the dashboard. The system retrieves and displays the recent sales data, including transaction details, product information, and customer details.	

Alternatives:		
Step:	User Actions:	System Actions:

1.	Invalid/Insufficient Credentials	If the admin enters invalid credentials, the system denies access and prompts the admin to enter valid credentials.
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Exception:		
Step:	User Actions:	System Actions:
1.	Unexpected System Error	In case of unexpected errors during the access attempt.

## 4.7 Admin Add and Remove Products

### 4.7.1 Description:

The Admin Add and Remove Products feature empowers administrators to efficiently manage the shopping system's product inventory. Admins can seamlessly add new products to the catalog, ensuring an up-to-date selection for customers. Additionally, they have the authority to remove products that may be discontinued or no longer align with the platform's offerings. This feature acts as a key tool for maintaining a dynamic and relevant product lineup.

Priority: High

### 4.7.2 Stimulus/Response Sequences:

Admins, equipped with the necessary access, initiate the process by navigating to the Admin Dashboard and selecting the "Add and Remove Products" feature. For adding products, admins input essential details such as product name, description, and price. The system responds by updating the product catalog, making the new items available to customers. Conversely, when removing products, admins select the products to be discontinued, prompting the system to update the catalog accordingly.

### 4.7.3 Functional Requirements

#### REQ-1: Admin Add Products (use case 9).

Use Case ID:	I.S.09		
Use Case Name:	Add Products by Admin	Version:	1.0
End objective:	Allow administrators to add new products to the system.		
Created by:	Talha Tofeeq	On (date):	28-11-23
User/Actor:	Admin		
Pre-Conditions:	13. Admin must be logged into the administrative interface. 14. The product information and details must be available to the admin.		

Post-Conditions:	15. The new product is successfully added to the system. 16. The product information is updated in the product catalog.	
Priority	High	
Basic Flow:		
Step:	User Actions:	System Actions:
1.	Admin Login	The admin logs in using valid credentials.
2.	Admin navigates to the "Add Product" section and enters the details.	The system displays the interface for adding product details and validates the entered information. The system also updates the product catalog.
3.	Admin confirms and submits the new product.	The system adds the new product to the system, assigns a unique identifier, and updates the product catalog.

<b>Alternatives:</b>		
Step:	User Actions:	System Actions:
1.	If the admin enters incomplete or incorrect information	The system provides error messages and prompts the admin to correct the information.

<b>Exception:</b>		
Step:	User Actions:	System Actions:
1.	Admin enters information for a new product and the product already exists.	The system alerts the admin about the existence of a similar product already in the system.

**REQ-2: Admin Remove Products (use case 10).**

Use Case ID:	I.S.10		
Use Case Name:	Remove Products by Admin	Version:	1.0
End objective:	Allow administrators to remove products from the system.		
Created by:	Talha Tofeeq	On (date):	28-11-23
User/Actor:	Admin		
Pre-Conditions:	17. Admin must be logged into the administrative interface. 18. The product to be removed must exist in the system.		
Post-Conditions:	19. The specified product is successfully removed from the system. 20. The product catalog is updated, and the removed product is no longer listed.		
Priority	High		

## Basic Flow:

Step:	User Actions:	System Actions:
1.	Admin Login	The admin logs in using valid credentials.
2.	Admin navigates to the "Remove Product" section and selects the product to be removed.	The system displays a list of existing products for the admin to locate the product to be removed. The system removes the product and also updates the product catalog.
3.	Admin confirms the removal of the selected product.	The system removes the product from the system, updates the product catalog, and archives relevant information.

## Alternatives:

Step:	User Actions:	System Actions:
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1.	If the admin attempts to remove a product that is linked to existing orders.	The system provides error messages and prompts the admin information on the potential impact.
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Exception:		
Step:	User Actions:	System Actions:
1.	Admin receives an alert about the nonexistent product.	The system informs the admin that the selected product is not found in the system and provides details.

4.8 Customer Payment Feature:

4.8.1 Description:

The "Customer Payment" feature is pivotal for our e-commerce platform, dictating that users must have an account to engage in shopping activities. Without an account, users will be unable to make purchases, utilise the cart, or proceed with payments for specific products. Within their customer accounts, users' essential information, including name, email address, phone number, and password, is securely stored. This feature grants users the ability to view, log in, and edit account details for future interactions, ensuring a seamless and personalised shopping experience.

Priority: HIGH

4.9.2 Stimulus/Response Sequence:

On the home page of our e-commerce website, users can initiate the payment process by selecting the "Checkout" button. For the checkout process, users input their payment address. Upon successful verification and completion of the payment, users receive confirmation, and the order is processed.

This straightforward stimulus/response sequence ensures a user-friendly and secure payment experience, ultimately enhancing customer satisfaction and trust in our e-commerce platform.

REQ 1:Processing Option

Use Case ID:	I.S.11		
Use Case Name:	Processing Customer’s Payment	Version:	1.0
End objective:	Facilitate customer payment for the placed order.		
Created by:	Abdullah Shafqat	On (date):	30-11-23

User/Actor:	Customer
Pre-Conditions:	1. The Customer must have an account and be logged in.  2. The customer must have items in their shopping cart and proceed to checkout.
Post-Conditions:	After successful payment, the order is confirmed, and the customer receives an order confirmation.
Priority	High

Basic Flow:

Step:	User Actions:	System Actions:
1.	Customer will proceed to checkout	The customer initiates the checkout process for the items in their shopping cart.
2.	Customer selects payment method	The system displays payment options(cash, debit).
3.	Customer will enter his credentials	System receives all necessary credentials
4.	Customer proceeds to checkout	System verifies all info provided by customer.
5.	Customer will Checkout	The system generates an order confirmation, displaying details of the completed transaction.

Alternatives:

Step:	User Actions:	System Actions:
1.	Session timed out	If the payment process takes longer than expected or times out, the system informs the customer about the issue and provides guidance on reattempting the payment.



Exception:		
Step:	User Actions:	System Actions:
1.	Payment Transaction Failure	In the event of a payment transaction failure the system informs the customer about the failure and provides guidance on resolving the issue.
2.	System Error	If an unexpected system error occurs during the payment process, the system notifies the customer about the issue and prompts them to try again later.

## REQ 2: Discount Code

Use Case ID:	I.S.12		
Use Case Name:	Apply Discount code at Checkout	Version:	1.0
End objective:	Enable customers to apply a discount code to their order during the checkout process.		
Created by:	Abdullah Shafqat	On (date):	30-11-23
User/Actor:	Customer		
Pre-Conditions:	1. The customer must have a valid account and be authenticated. 2. The customer must have items in their cart and proceed to checkout.		
Post-Conditions:	After successfully applying the discount code, the total order amount is adjusted, reflecting the discount.		
Priority	Medium		

Basic Flow:		
Step:	User Actions:	System Actions:
1.	Customer will apply a discount code	The customer enters a valid discount code in the designated field. The system validates the discount code.

2.	Verify Discount Code	The system verifies the discount code and calculates the adjusted total order amount.
3.	Generate new Bill after Discount	The system displays the discounted amount to the customer.

Alternatives:		
Step:	User Actions:	System Actions:
1.	Invalid Code Entered	If the customer enters an invalid or expired discount code, the system notifies the customer and prompts them to enter a valid code.
2.	No Code Entered	If the customer proceeds without entering a discount code, the system continues with the regular order process without applying any discount.

Exception:		
Step:	User Actions:	System Actions:
1.	System Error	In case of an unexpected error during the discount code validation process, the system informs the customer about the issue and suggests retrying

## 5. Other Nonfunctional Requirements:

### 5.1 Performance Requirements:

- The website should show its main pages like the home page and product pages quickly, ideally taking no more than 6 seconds. This ensures that users have a good experience without waiting too long for the pages to load.

- The website needs to support at least 100 users using it at the same time without slowing down or having problems. This is important for times when a lot of people are using the website at once, so it keeps working well for everyone.
- When users search for something on the website, the results should show up fast—within 6 seconds of them typing in the search. This makes it easy for users to find what they're looking for quickly.
- When you buy something on the website, it shouldn't take more than 50 seconds to finish the whole process, from putting items in your cart to buying them. Making this process fast helps you have a quick and smooth experience when making a purchase.
- If something goes wrong on the website, like an error or a problem, the site should quickly show a helpful error message within 6 seconds. This message will guide users on what to do next or how to fix the issue.

On a non-technical front, the customer satisfaction with the service itself is intrinsically linked with general satisfaction with products, delivery and website experiences.

- Customer Feedback Rating (target: 3.5 stars or more)
- Negative Feedback Rate (target: 1% or less)
- Cancellation Rate (target: 5% or less)
- Reschedule Rate (target: 5% or less)

## **5.2 Safety Requirements:**

When you shop online, there are things that can go wrong and cause problems. One big concern is people trying to steal your personal information, like your name or address, to do bad things. They might use tricks like pretending to be a real website to get your details. The information users provide, like their names and payment details, is kept safe and not accessible to anyone who shouldn't have it. When users buy things, make sure that the way the website handles their payment information is secure. Safeguards should be in place to prevent unauthorized access to administrative functionalities. Only authorized personnel should have access to critical system components and settings. The system should incorporate mechanisms to verify the authenticity of transactions, ensuring that purchases and payments are legitimate. This prevents fraudulent activities that could harm both users and the business. Another worry is fraud with credit cards. Sometimes, when you're paying, you might end up on a fake site that looks real, and your credit card information could be taken. There's also a risk of computer viruses and annoying ads on websites.

## **5.3 Security Requirements:**

For keeping your information safe, the system will use a secure method called secure sockets whenever you share private details. If you're not active for a while, the system might log you out to be extra cautious. Whenever you do something important, like buying something, the system will make sure it's really you by checking with your web browser. The system won't store any important info, like passwords or credit card details, where it can be easily seen. Your browser won't show your password or credit card info, and the people managing the system from the backend won't see your password either. Only specific authorized people can access those servers, which are kept in a secure place, and the info stored there is kept secret with a special code.

## **5.4 Software Quality Attributes:**

- Performance: The website should be responsive.
- Security: Protection of sensitive user data.
- Usability: Easy navigation and easy to use interface.

- Reliability: High availability and uptime

## **5.5 Business Rules:**

Business rules are crucial for guiding the behavior and decisions within an e-commerce drop shipping website. In our website We have some set of Business rules that we have to keep in our mind:

### **1) Payment Security:**

- The website should adhere to industry-standard security protocols for online transactions.
- Payment information should be encrypted and stored securely.
- Customer must create a account to make a purchase

### **2) Customer Support:**

- Customer support inquiries should be addressed promptly and professionally.
- A comprehensive FAQ section and contact information for customer support should be easily accessible on the website.

### **3)Discount:**

- Discounts can only be applied once per transaction

### **4) Customer Support:**

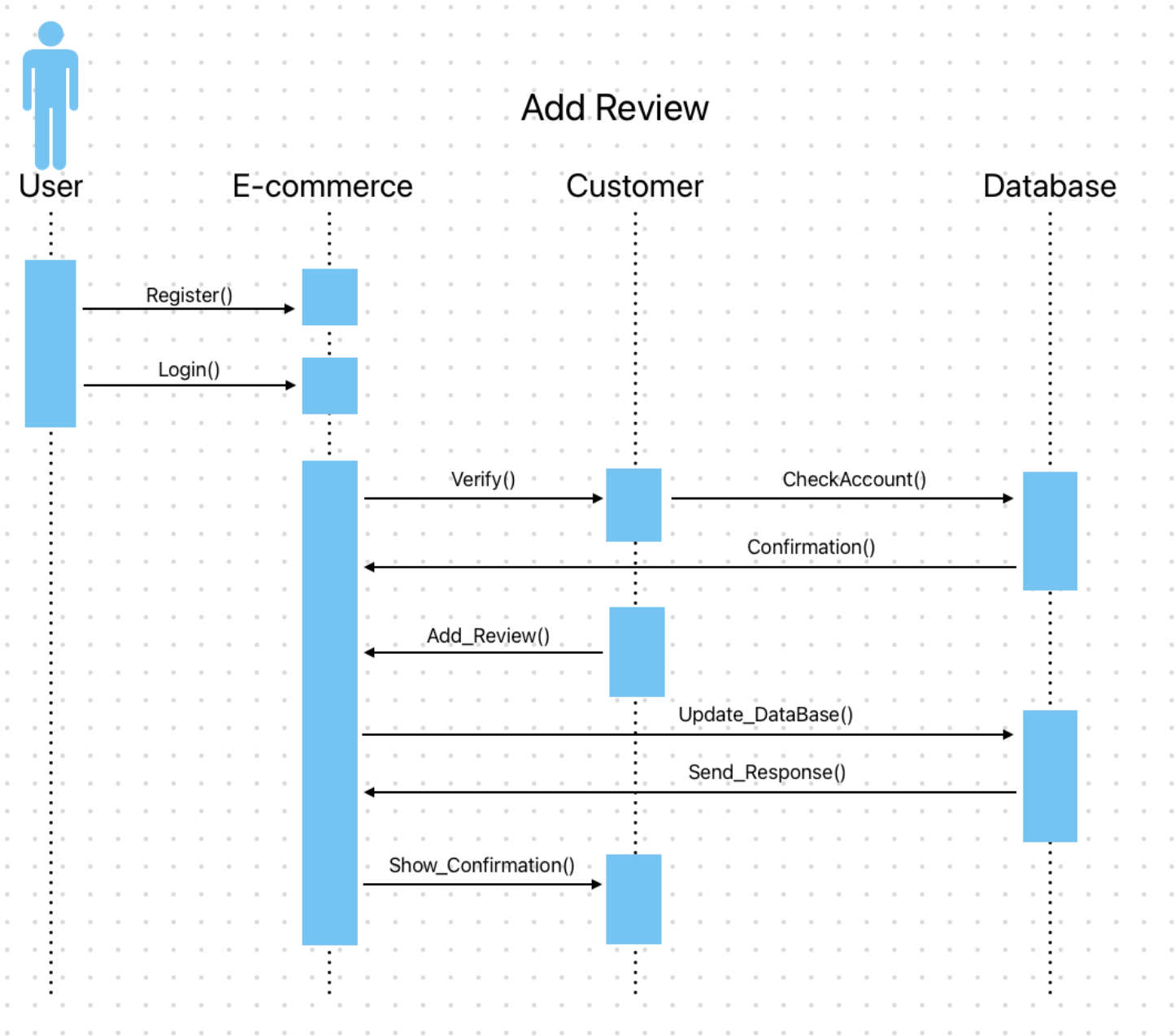
- Customer support inquiries should be addressed promptly and professionally.
- A comprehensive FAQ section and contact information for customer support should be easily accessible on the website.

## **Appendix A: Glossary**

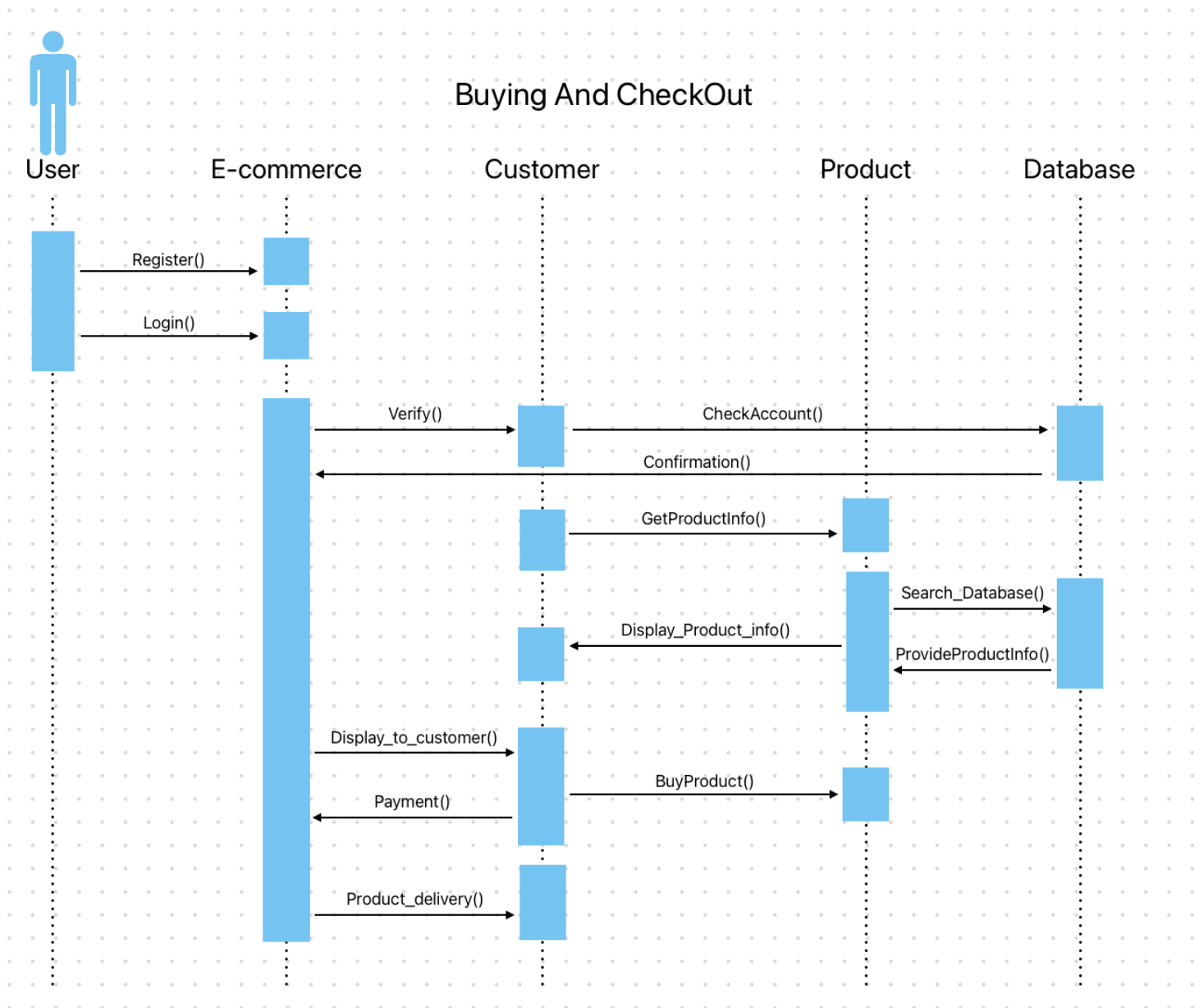
- Vendor: Vendor is a supplier.
- Constraints: Some set of rules which the developing team should need to follow while making a project.
- Stimulus: a thing or event that evokes a specific functional reaction in an organ or tissue.
- Catalogue: a complete list of items.
- Search query: a word or phrase that an internet user types into a search engine's search.

Appendix B: Analysis Models:

Sequence Diagram for Adding Review

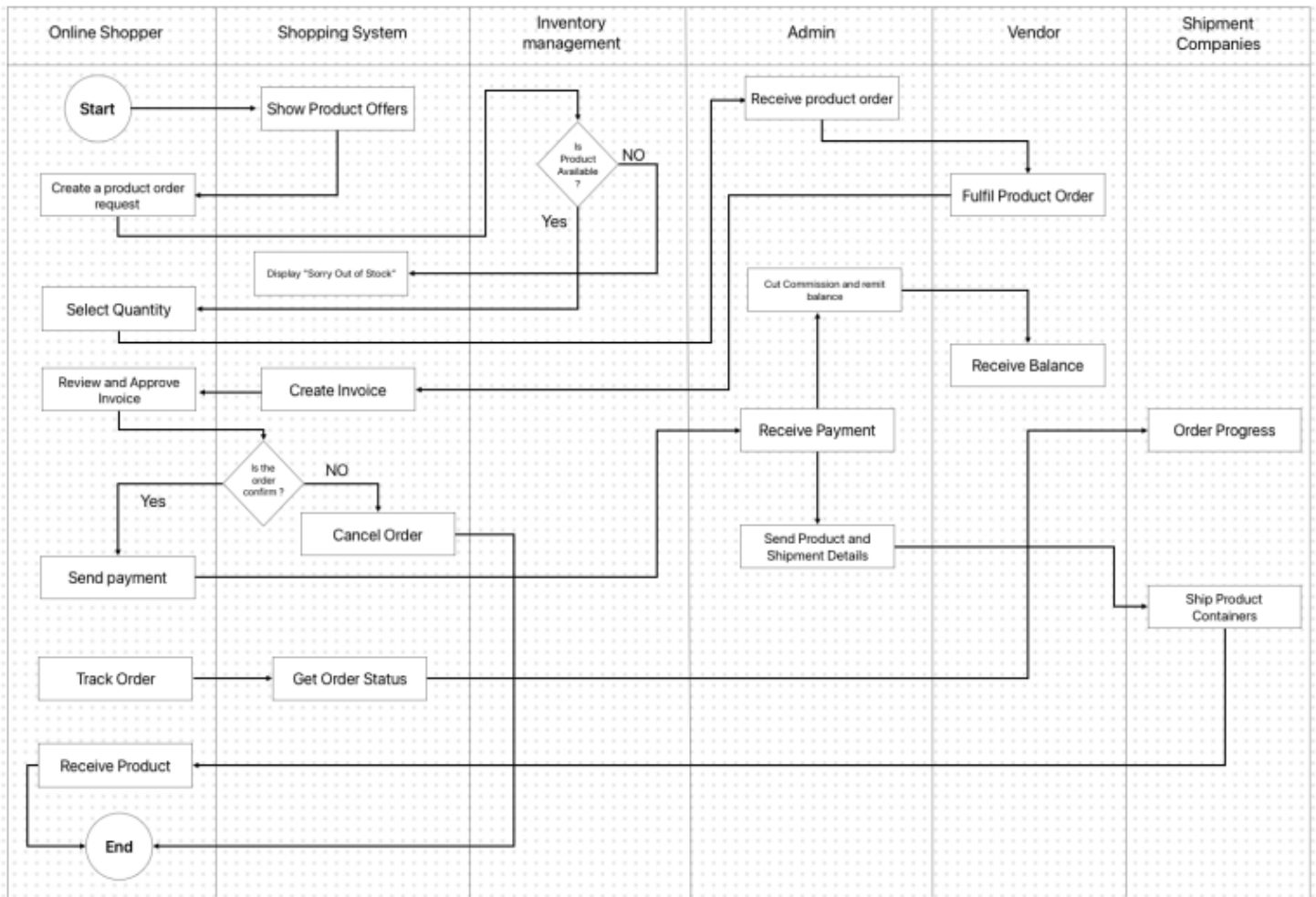


Sequence Diagram for Buying and Checkout



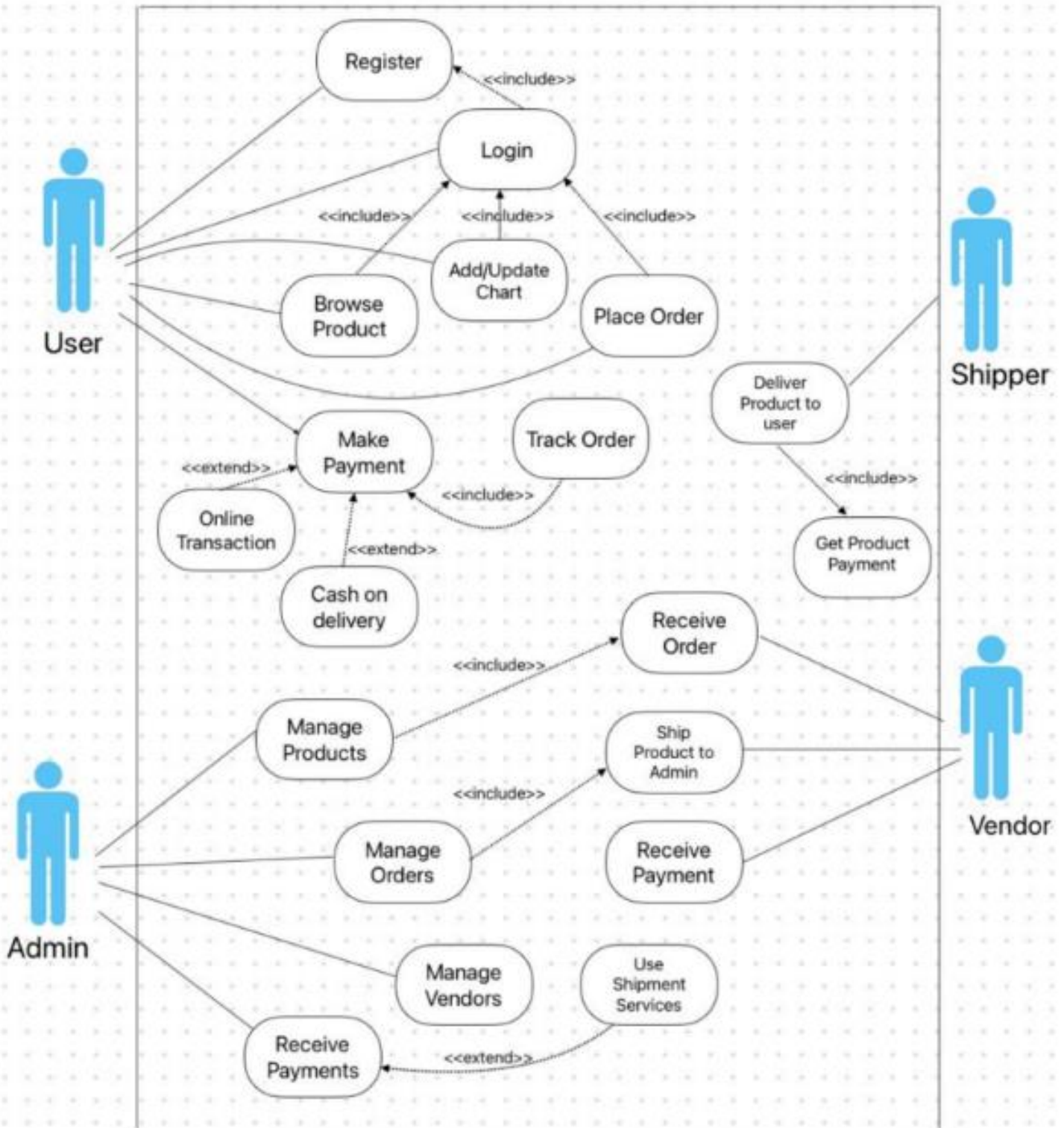
SWIMLANE DIAGRAM

# Swimlane Diagram



## USE CASE DIAGRAM

# UseCase Diagram





# Appendix C: To Be Determined List:

## Product Seed Data Integration

Note: we are currently seeding the product manually but later we will use web scrapping before submission.

## Manual Product Entry:

- Product details, including images, descriptions, and pricing, will be manually input into the database by the system admin.

## Web Scrapping Implementation (Future Phase):

- A subsequent phase will involve the implementation of web scrapping techniques to dynamically populate and update the product database.
  - We will implement this in future before submission inshallah.
-