Software Requirements Specification

for

ShoeBae

**Version 1.0 approved**

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# Introduction

## Purpose

The purpose of this document is to provide an informative description of this E-commerce system. While providing our customers with the goals we hope to achieve, the document will also provide information regarding software specifications used in the development of **Shoebae 1.0**. This document will benefit each stakeholder of **Shoebae 1.0** by providing a better understanding of concepts that have been used, such as: product management, seller accounts, customer accounts, order management, payment processing, and security measures taken.

## Document Conventions

This document employs a hierarchical numbering system to organize sections and subsections. Sections are presented in bold, size eighteen font, using the format 'X.SectionName,' where 'X' is the section number. Subsections follow a similar convention, displayed in bold, size fourteen font as 'X.Y.SubsectionName,' where 'Y' represents the subsection number. Subsubsections are presented in bold, size 12 font as ‘X.Y.Z.SubsubsectionName’, where ‘Z’ represents the subsubsection number. Additionally, the sections themselves will be written in regular, size 12 font.

For the referencing of the Shoe Bae 1.0 SRS document, our team will be using MLA formatting, specifically the MLA 9th edition format. This format will allow for in-text citations and a works cited section (1.5 references).

## Intended Audience and Reading

This Software Requirements Specification (SRS) document is crafted to cater to a diverse set of stakeholders involved in the development, implementation, and maintenance of Shoebae 1.0. The primary audience includes:

**Developers:** To understand the technical specifications, coding requirements, and implementation details.

**Project Managers:** To gain insights into the project scope, timelines, and resource requirements.

**Marketing Staff:** To comprehend the features and functionalities that can be leveraged for promotional activities.

**Users:** To understand the capabilities and functionalities of the E-commerce system.

**Testers:** To identify testing scenarios and requirements.

**Documentation Writers:** To assist in the creation of user manuals and system documentation.

Readers are advised to follow a sequence that aligns with their specific interests and responsibilities:

**Overview Sections:**

Begin with sections providing an overview of the E-commerce system (e.g., Purpose, Product Scope).

Understand the goals, benefits, and objectives of Shoebae 1.0.

**Product Scope:**

Delve into the short description of Shoebae 1.0, its purpose, and how it aligns with corporate goals or business strategies.

**Overall Description:**

Explore the product perspective, understanding the context, and origin of Shoebae 1.0.

Identify major components through simple diagrams and understand the system's interactions.

**System Features:**

Examine the major functions and features the E-commerce system must perform.

Follow the functional requirements organized by system features.

**User Classes and Characteristics:**

Learn about different user classes (Unregistered, Registered, Buyer, Seller, Admin) and their respective privileges.

**Operating Environment:**

Understand the hardware platform, operating systems, and other software components necessary for Shoebae 1.0.

**Design and Implementation Constraints:**

Identify any limitations or constraints that may impact development options.

**Other Requirements:**

Check for any additional requirements not covered in other sections.

**Nonfunctional Requirements:**

Review performance, safety, and security requirements.

**Appendices:**

Refer to the Glossary for definitions of key terms.

Explore Analysis Models (if included) for visual representations.

Check the To Be Determined List for pending items.

## Product Scope

The web application ShoeBae provides consumers with a hub that other users use to buy, sell, and trade goods, primarily shoes. The purpose of this application is to offer users a database of goods sold by other consumers, providing a convenient way to shop and a platform to sell goods at a price of their choosing. Keeping up with modern standards, this platform allows users to filter through content using various forms of characterization, such as type, color, and size. It also provides the opportunity for people to sell their goods on our platform, thanks to our user-friendly design that makes setting up listings easy and simple.

This design ensures that the software and its features are as simple as an average consumer scrolling through, finding an item, and adding it to a cart or adding a listing while waiting for an offer. Our platform is a place for goods to be widely viewed by a large audience, facilitating purchases. In more detail, as a user, you will sequentially create an account with a username and password, and then log in. You can search through our platform with tools to assist your search, such as filtering through items by type, color, or size. If you find an item, you can easily add it to your cart and complete the process by checking out.

For sellers, the process is similarly simple, with a few additional features to make listing their item hassle-free. The process prompts users with questions about their product to seamlessly categorize it according to their desired specifications within our system. Once these questions are answered, they can list the item and wait for offers or trades to arrive in their inbox for consideration.

Should users decide to sell their goods, the domain owners will take a small commission. This fee is intended to provide continuous support, keeping the web application operational and ensuring it doesn't discourage users from selling their goods. The fee is kept relatively low to maintain user satisfaction and encourage continued engagement on the platform. To further support the application, ads relevant to users' searches will be implemented, alongside the continuous support of developers and investors, all contributing to the website's quality and reliability.

*sho*

## References

1. *Judy, Tirian, et al. “Software Requirements Specification for Y.” Canvas, Mississippi State University, 10 Sept. 2023,* [*https://canvas.msstate.edu/courses/121638/files/10040003*](https://canvas.msstate.edu/courses/121638/files/10040003)
2. *Pressman, Roger S., and Bruce R. Maxim. Software Engineering: A Practioner’s Approach. 9th ed., McGraw-Hill, 2020.*

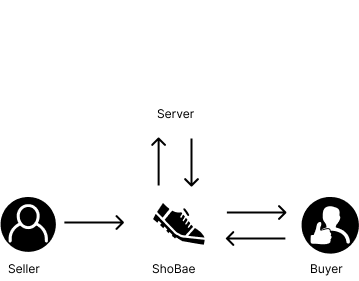
# Overall Description

## Product Perspective

ShoeBae is a website designed to sell to college students seeking quality and affordable footwear. It’s a website that takes inspiration from websites like StockX, Goat, and eBay. ShoeBae will only sell shoes and nothing else as of this moment, but will be able to expand and when the opportunity arises. ShoeBae is designed to fullfil the project credit for the class Introduction to Software Engineering (CSE 4214 / 6214) at MSU.

The usage of ShoeBae are limited to our knowledge and requirements set by the class scope.

Our purpose in creating this website is to acquire the skills necessary to implement various software requirements of an ecommerce website for later use in our workplace. ShoeBae has features like dynamic bidding which engages the user while still ensuring reasonable prices. ShoeBae ensures the authenticity and quality of the products to guarantee our users a standard shopping experience. Prospective sellers will undergo a meticulous vetting process where their character and products will be analyzed in order to make sure they are a perfect fit for our website’s goal — quality products at an affordable price. Ensuring quality goods with sellers with outstanding character allows our users to be able to feel safe in buying our products with high satisfaction.



## Product Functions

Shoebae 1.0 will provide various functions including:

* **Maintain data associated with inventory (shoes)** 
  + each item will be assigned a title, description, and price
  + Shoebae 1.0 will keep a quantity count for each item number

* **Allow access to a limited number of functions for guest, buyers, and sellers**
  + Guest will be limited to search and view functions
  + Buyers will have the ability to login, logout, search items by number, and return items
  + Sellers will have the ability to login, logout, add items, remove items, update pricing on items, add item title, update item title, add item description, update item description, search item number, view item, compare prices on items, update inventory, add item thumbnail, remove item thumbnail, process buyer orders, approve exchange requests, return approval, and refund buyer funds.
  + Admins will have access to all functions for buyers and sellers, ability to flag items, delete buyers, delete sellers, remove items, override exchanges, and override refunds.
* **Shopping cart**
  + Shoebae 1.0 will have a shopping cart function with the purpose of keeping track of items a buyer plans to purchase.
* **Payment Processing**
  + Allows sellers and admins to process payments when provided a 16 digit card number, card holder name, zip code associated with the card, and the correct security code.
  + Shoe bae 1.0 will only allow the use of credit cards.

## User Classes and Characteristics

1. **User**

**Description:** The User class encompasses each user type that will interact with our ecommerce platform. User privileges and engagement capabilities vary depending on registration or administrative status.

* 1. **Unregistered**

**Description:** The Unregistered subclass includes the User class, and is the default user type on the platform. This user can only view and browse product listings, though they have the option to upgrade their account status to registered.

* 1. **Registered**

**Description:** The Registered subclass includes the User class, and encompasses users that have a registered account.

* + 1. **Buyer**

**Description:** The Buyer subclass extends the Registered subclass, and encompasses users that would like to purchase listed products on the platform.

* + 1. **Seller**

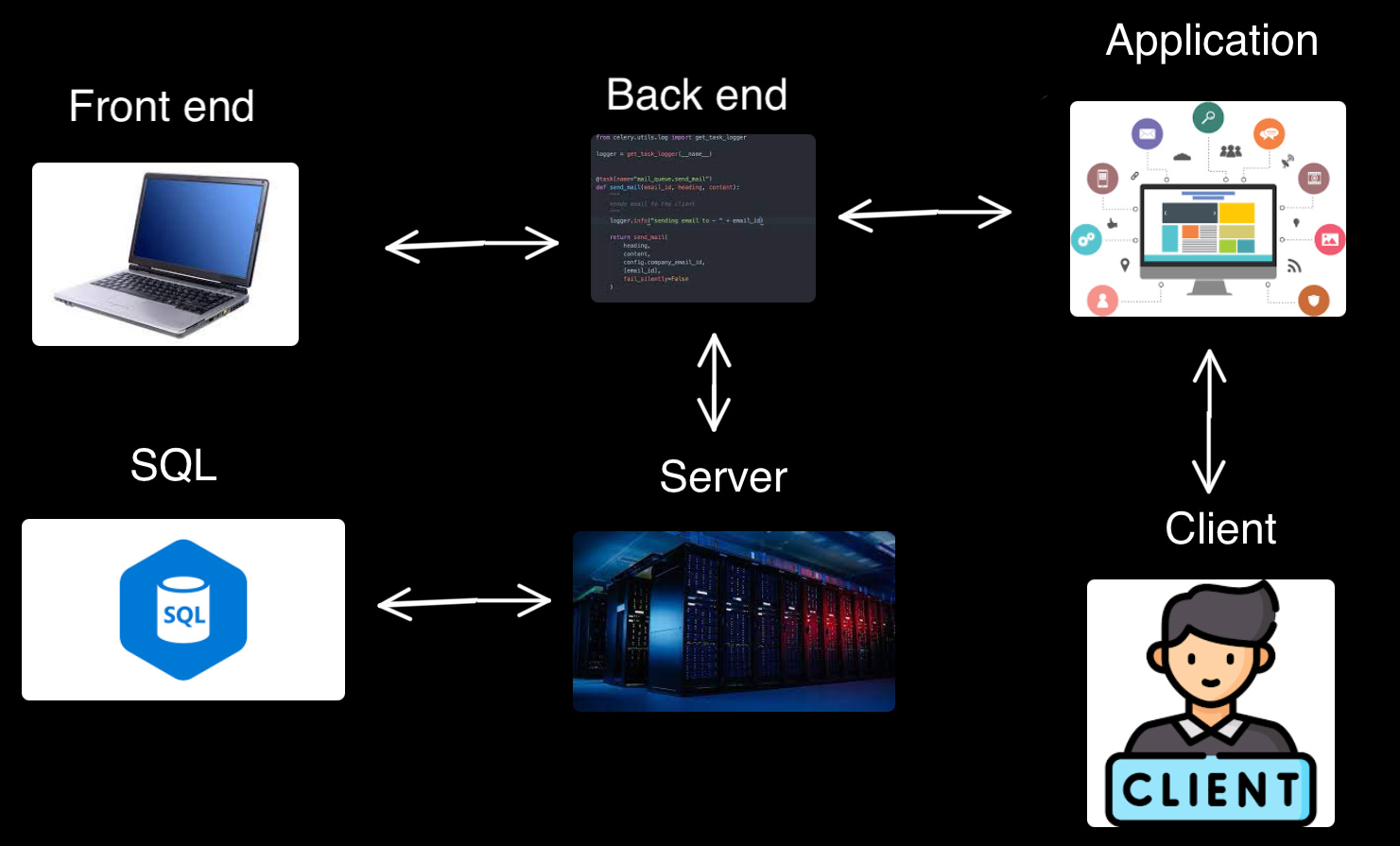
**Description:** The Seller subclass extends the Registered subclass, and encompasses users that would like to list products for sale on the platform.

* 1. **Admin**

**Description:** The Admin subclass extends the User class, and consists entirely of users with administrative privileges to oversee the platform.

## Operating Environment

ShoeBae is poised to be a web platform employing HTML, CSS, and JavaScript for its front-end development, while Python will drive its back-end functionalities. It is designed to be compatible with Windows 10+, MacOS, iOS, and Chrome-based browsers. The database infrastructure will be built using SQL technology.



**Image References**

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## Design and Implementation Constraints

**Corporate and Regulatory Policies:**

Data Protection Regulations:

* Compliance with regional and international data protection laws (e.g., GDPR, CCPA) is mandatory.

Security Standards:

* Adherence to company-specific security standards and protocols is required to ensure data integrity and user privacy.

**Hardware Limitations:**

Minimum System Requirements:

* The application must operate within specified minimum hardware requirements to ensure optimal performance for end-users.

**Interfaces to Other Applications:**

Third-Party Integrations:

* Integration with payment gateways, shipping providers, and other third-party services must comply with API specifications and security standards.

**Technologies and Tools:**

Technology Stack:

* Use of a predefined technology stack, including specific programming languages, frameworks, and databases, as outlined in the project guidelines.

Development Tools:

* Utilization of specified development tools and environments to ensure consistency across the development team.

**Security Considerations:**

Authentication Mechanisms:

* Implementation of robust user authentication mechanisms to enhance platform security.

Data Encryption:

* Encryption of sensitive data during transmission and storage to mitigate security risks.

**Design Conventions:**

User Interface Guidelines:

* Adherence to established user interface design conventions for a seamless and user-friendly experience.

**Programming Standards:**

Coding Standards:

* Conformity to coding standards and best practices for maintainability and collaborative development.

**Communication Protocols:**

Network Communication:

* Specification of communication protocols for secure data transmission over networks.

**System Maintenance:**

System Updates:

* Provision for future system updates and enhancements to accommodate changing business requirements.

**Language Requirements:**

Multilingual Support:

* Incorporation of multilingual support to cater to a diverse user base.

**TBD (To Be Determined):**

Any additional constraints yet to be determined will be specified in subsequent project phases.

# System Features

To-Do: Add alternative scenarios, such as error handling, to all stimulus/response sequences, as well as diagrams. Fix incorrect numbering (i.e. 3.1 -> 3.2.1). Correct the Account Management section. Add a feature consisting of the Admin Panel and one consisting of the Seller Panel.

## User Registration & Authentication

## Description and Priority

This feature allows unregistered users to register an account for our service by providing your full name, email, a username, and password. After entering account information, email verification is performed to complete the account creation process. Priority level is high for this feature.

## Stimulus/Response Sequences

**User Registration**

* **User Action:** Selects the “Sign Up” button.
* **System Response:** Registration form is shown to the user requesting account registration information.
* **User Action:** Selects the “Submit” button.
* **System Response:** An email confirmation code is sent, and an email confirmation form is shown to the user requesting code entry to complete the account creation process.
* **User Action:** Selects the “Verify Email” button.
* **System Response:** Validates account confirmation code and activates the account.

**User Authentication**

* **User Action:** Selects the “Sign in” button.
* **System Response:** Login form is presented to the user requesting login credentials.
* **User Action:** Selects the “Login” button.
* **System Response:** Verifies account credentials and grants user access to account.

## Functional Requirements

**REQ-1: User Registration**

1. The system will provide a registration form with input fields for important account information, such as legal name, email, username, and password.
2. The system will ensure all input fields are completed.
3. The system will verify that the username provided is unique.
4. The system will verify that the email is from a valid domain (i.e. Gmail, Outlook, etc.)
5. The system will require minimum password strength requirements, such as minimum length or character restrictions.
6. The system will generate and send a confirmation email to the user upon successful account registration.
7. The system will confirm that the user-entered email confirmation code is the correct confirmation code.

**REQ-2: User Authentication**

1. The system will provide a login form with input fields for account credentials.
2. The system will authenticate logins via username and password.
3. The system will display an error message “Incorrect Login Information” as a result of authentication failure.
4. The system will provide a “Forgot Password” option that allows users to reset their password via email.
5. The system will grant the user access to their account after successful authentication

## Account Management

## Description and Priority

This will allow the user to edit, manage, and add in their information preloaded necessary information to process their transaction. This information includes user shipping address, payment info, and email to ensure their orders are fulfilled. Priority for this feature would be high.

## Stimulus/Response Sequences

**Accessing Account Management**

* **User Action:** Selects "Account Management" button.
* **System Response:** Redirects users to account details page with a list of their information being user profile, account details, and payment details, and order history.

**Accessing Account Information**

* **User Action:** Selects "Edit Profile" tab.
* **System Response:** Prompts users to edit their profile photo and username.
* **User Action:** Selects "Submit" button.
* **System Response:** Saves new information and redirects users to account details page.
* **User Action:** Selects "Edit Account details" tab.
* **System Response:** Prompts users to edit their username, password, email address, and shipping address.
* **User Action:** Selects "Submit" button.
* **System Response:** Saves new information and redirects users to account details page.
* **User Action:** Selects "Edit Payment Details" tab.
* **System Response:** Prompts users to edit their payment information such as credit card, debit card, etc.
* **User Action:** Selects "Submit" button.
* **System Response:** Saves new information and redirects users to account details page.
* **User Action:** Selects "Order History" tab.
* **System Response:** Shows user past orders and their date of purchase.
* **User Action:** Selects "Back" button.
* **System Response:** Redirects user to account details page.

## Functional Requirements

**REQ-1: User Login**

1. The system makes sure that the user and only the user can edit the information associated with their account.
2. Once the system recognizes the account that is being accessed all of the user profile edit tools will be accessible through designated locations.
3. System will allow designated user to edit information that they wish to change or view information.

## Product Catalog/Listings

## Description and Priority

The purpose of the product catalog and listing is to show which sections shoes are divided into and their price. The product catalog will make our system easy to navigate for our valued customers by ensuring that the item in question is in stock. The Priority level assigned to this feature is high.

## Stimulus/Response Sequences

**Accessing “Men's category”**

* **User Action:** User clicks on the “Men’s category” button.
* **System Response:** Displays all mens shoes.

**Accessing “Women’s category”**

* **User Action:** User clicks on the “Women’s category” button.
* **System Response:** Displays all women’s shoes.

**Accessing “Children's category”**

* **User action:** User clicks on the “Children’s category” button.
* **System response:** Displays all children's shoes.

**Viewing shoes in all categories**

* **User action:** User clicks on shoe icon in any category.
* **System response:** System displays a list of available sizes and prices.

**Searching for a specific brand**

* **User action:** User uses the “Search icon” to search for a specific brand.
* **System response:** System displays all shoes with that brand name in the category they are in. If the user is on the home page, the system will display men’s, women’s, and children’s shoes.

## Functional Requirements

**REQ-1: User viewing “Men’s category”**

1. The system will have a “Men’s category” button
2. Once the user selects the “Men’s category” button the system will display a page of all shoes matching that description.
3. If a user selects one of the shoe icons the page will navigate the user to a page with details about this item such as title, description, sizes, and price.
4. The user will then have the option to select a size
5. If needed the user can add this to their cart using the “Add to shopping cart” button.

**REQ-2: User viewing “Women’s category”**

1. The system will have a “Women’s category” button
2. Once the user selects the “Women’s category” button the system will display a page of all shoes matching that description.
3. If a user selects one of the shoe icons the page will navigate the user to a page with details about this item such as title, description, sizes, and price.
4. The user will then have the option to select a size
5. If needed the user can add this to their cart using the “Add to shopping cart” button.

**REQ-3: User viewing “Children’s category”**

1. The system will have a “Children’s category” button
2. Once the user selects the “Children’s category” button the system will display a page of all shoes matching that description.
3. If a user selects one of the shoe icons the page will navigate the user to a page with details about this item such as title, description, sizes, and price.
4. The user will then have the option to select a size
5. If needed the user can add this to their cart using the “Add to shopping cart” button.

**REQ-4: User viewing “Home”**

1. The system will have a home screen that each user is directed to by default
2. The home screen will display the main product catalog.
3. The main product catalog will feature men’s, women’s, and children’s shoes.
4. If a user selects one of the shoe icons the page will navigate the user to a page with details about this item such as title, description, sizes, and price.
5. The user will then have the option to select a size
6. If needed the user can add this to their cart using the “Add to shopping cart” button.

## Shopping Cart

**3.4.1. Description & Priority**

The shopping cart feature in Shoebae 1.0 enables users to store items they intend to purchase, enhancing the user experience by streamlining the checkout process. It allows users to consolidate multiple items for checkout simultaneously, promoting efficiency and convenience within the system. The priority level assigned to this feature is moderate.

## 3.4.2. Stimulus/Response Sequences

**Adding to shopping cart**

* **User Action:** Clicks “Add to shopping cart” after selecting an item.
* **System Response:** Stores that item in the shopping cart and adds the item's price to the total.

**Removing from shopping cart**

* **User action:** Selects the “Remove from cart” button.
* **System Response**: Item is removed from the shopping cart and the total is updated accordingly.

**Updating item quantities**

* **User action**: Updates the quantity of an item already in the shopping cart.
* **System Response:** Logs the quantity change and recalculates the cart total.

**Viewing shopping cart**

* **User Action:** Selects the “View cart” button.
* **System response:** Displays the items names, prices, quantities, and cart total.

**Checking Out**

* **User Action:** Selects the “Continue to checkout” button.
* **System Response:** Navigates the user to the checkout page where they will be prompted to enter shipping and payment information.

## 3.4.3. Functional Requirements

**REQ-1: User authentication**

1. The system will prompt a user to enter their login information before using the shopping cart.
2. Credentials will be verified by the system.
3. If credentials are valid the user will have access to the shopping cart.
4. If the user is already logged into a verified account, they will not need to login again.

**REQ-2: “Add to shopping cart” button**

1. The system will feature an “Add to shopping cart” button.
2. This button can be found by clicking on any items icon.
3. The user will be required to select an item size and quantity in order to select the “Add to shopping cart” button.

**REQ-3: “Remove from shopping cart” button**

1. The system will contain a “Remove from shopping cart” button.
2. The user can only access this feature if there are existing items in their shopping cart.
3. The “Remove from shopping cart” button can be accessed by clicking on the shopping cart icon and viewing items that exist in their cart.
4. When the user selects this button, the system will remove the selected item from their cart and recalculate the total price.

**REQ-4: “+” button for adding another item that already exists in the cart**

1. The system will feature a “+” button underneath an existing item in the user's shopping cart.
2. This can be accessed by selecting the shopping cart icon.
3. If the user selects this button the system will add an item matching the description of that above.
4. After selecting the cart total will be recalculated.

**REQ-5: “-” for removing an item that already exists in the cart.**

1. The system will feature a “-” button for removing an item from a user’s cart.
2. This feature can only be accessed on an existing item in the cart.
3. If the user selects this button, the item above will be removed from the cart.
4. If there is more than one of the same items above only one of that item will be removed.
5. The cart total will be recalculated accordingly.

**REQ-6: “View cart” button**

1. The “View cart” button will be displayed as a shopping cart icon in the upper righthand corner of a user's screen.
2. For this icon to appear the user will need to be logged into a valid buyer or seller's account.
3. If the user selects this icon the system will display all items in the shopping cart with the cart total.

## Checkout & Order Processing

## Description and Priority

The checkout and order processing feature will allow users of Shoebae 1.0 to purchase items from our website. This will collect information from the user such as name, shipping information, and credit card information. This will be one of the most crucial functions of Shoebae 1.0, and the priority level is classified as high.

## Stimulus/Response Sequences

**Verified user selects the “Continue to checkout” button from the shopping cart**

* **User Action:** User who has items in the shopping cart selects the “continue to checkout” button.
* **System Response:** System collects shipping information from the user and enters into the shipment platform. After retrieving the price for shipping the system will provide the user with a total cost and secure payment details.

**Verified user selects the “Continue to checkout” button from an items icon**

* **User Action:** User selects an item and size that they would like to purchase and clicks “Continue to checkout” underneath the item.
* **System Response:**  System collects shipping information from the user and enters into the shipment platform. After retrieving the price for shipping the system will provide the user with a total cost and secure payment details.

**Payment is successfully processed**

* **User Action:** User successfully submits an order with card and shipping information.
* **System Response:** Upon successful verification of the entered information through our payment processing platform, the system displays a message on the user's screen confirming the successful purchase, along with an assigned order number.

**Payment is declined**

* **User Action:** User successfully submits an order with card and shipping information.
* **System Response:**  Upon declination of the entered information through our payment processing platform, the system displays a message on the user's screen, “Invalid payment information.”

**After order is successfully processed**

* **User Action:** User successfully submits order and receives a unique order number.
* **System Response:** Enters shipping information into desired shipment platform and retrieves estimated delivery date. Then, notifies the customer via email of their orders expected arrival date and sends the tracking id.

## Functional Requirements

**REQ-1: “Continue to checkout” button**

1. The system will display a “Continue to checkout” button.
2. This button can be accessed by a verified user with existing items in their shopping cart.
3. To access this feature the user can select the shopping cart icon in the upper righthand corner of their screen.
4. Once selecting this button the system will display a list of all items in that shopping cart.
5. The system will also have a total for the cart calculated and displayed.
6. Below all items in the shopping cart the “Continue to checkout” button will be displayed.
7. If the user selects this button the system will direct them to a new screen.
8. The new screen will prompt the user to enter shipping and payment information.

**REQ-2: System must have access to a payment processing platform.**

1. Upon user entering payment information the system will need to verify that it can be used.
2. The system will securely transfer the payment information entered by the user to the payment processing platform of choice.
3. The system will collect information regarding if the card information is valid or invalid .
4. If the system concludes that the payment information is invalid a message will be displayed to inform the customer that the order could not be processed.
5. If the system verifies that the payment information is valid, an order number will be generated and provided to the user along with the message confirming the successful purchase.

**REQ-3: System must have access to a shipment platform**

1. Once a user provides the system with a shipping address the system will retrieve a quote to that address.
2. The shipping cost will then be verified with the customer and their total will be recalculated.
3. They will then see a prompt to enter payment information.
4. Once the shipment information is entered into the platform, an estimated delivery date and tracking id will be retrieved.
5. The system will send an email to the customer informing them of the estimated delivery date and providing the tracking id.

## Search & Navigation

## Description and Priority

This will allow the user to find desired items through a multitude of listings, ensuring the user can find what they want. This feature will include filtering through items and a search bar. The priority level assigned to this feature is low.

## Stimulus/Response Sequences

**User Search**

* **User Action:** Clicks the search bar after types keywords related to their preferred item and presses enter.
* **System Response:** System searches for item listings that share key words in which the user has inputted into the system and fetch those results redirecting the user to those results/listings.

**User Filtering**

* **User Action:** Clicks on filter icon.
* **System Response:** System shows filter options ranging from color, type, and size.
* **User Action:** Makes selection of color, type, and size then clicks the "Search" button.
* **System Response:** System shows options that match those characterizations and displays it to the user.

## Functional Requirements

**REQ-1: Search Bar**

1. System will need to recognize an input field on the website as a search bar to take inputted characters.
2. System will compare the user input with keywords to search through the data-base for matching results.
3. System will show results based on what the user searched.

**REQ-2: Filter**

1. System will need a button to recognize that the user wants to quickly sort through listings.
2. System will need to access the database of listings and seller product information to make results easy to categorize.
3. System will need filter options type, size, and color to compare items that match with active listings.
4. System will then translate the user filter preference and show listings that match their preferences.

## Product Reviews

## Description and Priority

This feature will allow users to provide feedback to sellers that they have bought items from. Priority for this feature is low.

## Stimulus/Response Sequences

**Writing a Product Review**

* **User Action:** Navigates to "Account Details" and selects "Order History".
* **System Response:** Provides users with their order history.
* **User Action:** Selects the order in which they want to write a review.
* **System Response:** Provides users with the purchased date, seller information, item information, and transaction details.
* **User Action:** Clicks on "Review Product".
* **System Response:** Prompts users to input a response regarding the seller's product and to rate it on a scale of 1-5.
* **User Action:** Provides the written review and rating and clicks "Submit".
* **System Response:** Records response and rating. Then inputs the review to the seller's profile under product reviews.

## Functional Requirements

**REQ-1: User login**

1. System will ensure that product reviews are from active and logged accounts recorded in the system.
2. System will lock this feature for unregistered accounts.
3. System will allow registered users to write a review to the seller that they have purchased from.

**REQ-2: Item purchased**

1. System will ensure that the user has bought from the seller before.
2. System will then prompt the user to write a review and rate the seller for the specific item they bought from them.
3. System will record response and rating and add it to the seller's profile under reviews.

## Customer Support

## Description and Priority

This feature allows registered users to report issues and seek assistance from site administrators through a ticketing system. Additionally, users have access to a list of Frequently Asked Questions (FAQs) to address common concerns and reduce overall demand for customer support. Priority level for this feature is Medium.

## Stimulus/Response Sequences

**User Support Ticket Creation**

* **User Action:** Selects “Customer Support” button.
* **System Response:** Customer Support page is shown with a list of FAQs and an option to seek further support labeled “Additional Support”.
* **User Action:** Selects “Additional Support” button.
* **System Response:** Additional Support page is shown which includes an option to create a support ticket or to view existing tickets.
* **User Action:** User selects “Create New Ticket” button.
* **System Response:** Support Ticket Creation form is shown to the user requesting details regarding the issue, such as the nature and description of the issue, as well as the order number if necessary.
* **User Action:** Selects “Submit Ticket” button.
* **System Response:** Generates a unique ticket ID and displays ticket ID alongside a confirmation of successful ticket submission. Simultaneously, an email is sent to the user and admins containing the ticket ID and a copy of the ticket.

**User Viewing Support Tickets**

* **User Action:** Selects “Customer Support” button.
* **System Response:** Customer Support page is shown with a list of FAQs and an option to seek further support labeled “Additional Support”.
* **User Action:** Selects “Additional Support” button.
* **System Response:** Additional Support page is shown which includes an option to create a support ticket or view existing tickets.
* **User Action:** Selects “View Tickets” button.
* **System Response:** My Tickets page is presented to the user which shows all of their support tickets, the status of each ticket, and any administrator responses.
* **User Action:** Selects a ticket.
* **System Response:** Selected ticket is shown to the user, with the full details of the ticket, the ticket ID, and any responses from administrators.

**User Closing Support Ticket**

* **User Action:** Selects “Customer Support” button.
* **System Response:** Customer Support page is shown with a list of FAQs and an option to seek further support labeled “Additional Support”
* **User Action:** Selects “Additional Support” button.
* **System Response:** Additional Support page is shown with an option to create a support ticket or view existing tickets.
* **User Action:** Selects “View Tickets” button.
* **System Response:** My Tickets page is presented to the user which shows all of their support tickets, the status of each ticket, and any administrator responses.
* **User Action:** Selects a ticket with open status.
* **System Response:** Selected ticket is shown to the user, with the full details of the ticket, the ticket ID, and any responses from administrators.
* **User Action:** Selects the “Close Ticket” button.
* **System Response:** Displays confirmation of ticket closure to the user, and changes the status of the ticket to closed.

**Administrator Ticket Response**

* **User Action:** Navigates to the Administrator Panel and selects the “View Pending Support Tickets” button.
* **System Response:** Administrator Support Tickets page is shown to the user with a list of pending support tickets.
* **User Action:** Selects a support ticket.
* **System Response:** Administrator Support Ticket Response form is shown to the user with a transcript of the selected ticket, as well as an input field to enter troubleshooting information.
* **User Action:** Selects “Reply” button.
* **System Response:** Sends administrator ticket response to the email of the user who created the ticket, simultaneously updating the ticket on the Administrator Support Tickets page with a copy of the response.

**Administrator Closing Support Ticket**

* **User Action:** Navigates to the Administrator Panel and selects the “View Pending Support Tickets” button.
* **System Response:** Administrator Support Tickets page is shown to the user with a list of pending support tickets.
* **User Action:** Selects an open support ticket.
* **System Response:** Administrator Support Ticket Response form is shown to the user with a transcript of the selected ticket, as well as an input field to enter troubleshooting information.
* **User Action:** Selects “Close Ticket” button.
* **System Response:** Displays confirmation of ticket closure to the user, and alerts the ticket issuer via email that their ticket has been closed. Simultaneously, the status of the ticket is set to closed.

## Functional Requirements

**REQ-1: User Support Ticket Creation**

1. The system will provide a “Customer Support” button accessible to registered users.
2. The system will display a Customer Support page with a list of FAQs for common concerns and an option to seek additional support.
3. The system will have a Support Ticket Creation form with fields for issue details, such as nature of the issue, an issue description, and an optional order number.
4. The system will ensure that all mandatory fields are completed before ticket submission.
5. The system will generate and assign a unique ticket ID upon successful ticket submission.
6. The system will provide a confirmation screen indicating successful ticket submission.
7. The system will send an email copy of the ticket containing the ticket ID to the ticket creator and administrator.

**REQ-2: User Viewing Support Tickets**

1. The system will have a “View Tickets” option for users in need of additional support not listed in the FAQs.
2. The system will display a My Tickets page showing all support tickets, their statuses, and any administrator responses.
3. The system will allow users to select a specific ticket to view ticket details, ticket ID, and administrator responses.

**REQ-3: User Closing Support Ticket**

1. The system will provide users with an option to close a support ticket with a button labeled “Close Ticket”.
2. The system will change the status of the ticket to closed when the “Close Ticket” button is pressed.

**REQ-4: Administrator Ticket Response**

1. The system will have a “View Pending Support Tickets” button in the Administrator Panel.
2. The system will display an Administrator Support Tickets page with a list of pending support tickets.
3. The system will allow users to select a ticket and view its details on an Administrator Support Ticket Response form.
4. The system will allow users to respond to a ticket on the Administrator Support Ticket Response form.
5. The system will send the administrator’s response to the email of the user who created the ticket.
6. The system will update the ticket history on the Administrator Support Tickets page with a copy of an administrator's response.
7. The system will update the ticket history and an administrator’s response on the ticket posters' My Tickets page.

**REQ-5: Administrator Closing Support Ticket**

1. The system will allow administrators to navigate to the Administrator panel and select the “View Pending Support Tickets” button.
2. The system will display an Administer Support Tickets page with a list of pending support tickets.
3. The system will allow administrators to select an open support ticket and select the “Close Ticket” button to change the status of a ticket to closed.
4. The system will show confirmation of ticket closure to the administrator and send an email to the ticket issuer notifying them of ticket closure.
5. The system will be able to set the status of the ticket to closed.

# Other Nonfunctional Requirements

## Performance Requirements

The response time target for Shoebae 1.0 is currently under consideration and will be finalized during the development phase. Our platform is designed to be compatible with mobile devices, Mac computers, and Windows systems, ensuring broad accessibility for users. We plan to utilize Git-Hub as our database solution, which will manage website files and allocate resources effectively. Security of user information is important to our team, and we are committed to selecting a reputable hosting provider to safeguard our users' data.

## Safety Requirements

## User Conduct Guidelines:

**Possible Harm:** Without a clear and well-defined set of acceptable user behavior on our platform, users could begin to misuse our platform.

**Safeguards:** We will have a clear set of rules deploring the use of abusive language, harassment, or any use of our platform for that is not intended.

## Content Moderation:

**Possible Harm:** Without dedicated content moderation, users may attempt to ignore our rules of User Conduct and ruin the commercial integrity of our platform.

**Safeguards:** Our administrative users will be responsible for content moderation and will review any user reports via the ticketing system.

## User Privacy:

**Possible Harm:** If sensitive user information is kept public, then users could be harassed or even become victims of fraud.

**Safeguards:** We will ensure that all sensitive user information is secure and withheld from other users on our site.

## Anti-Spam Measures:

**Possible Harm:** Without protection from spam, bots could flood our platform with fake listing or overwhelm our support channels with fake issues.

**Safeguards:** We will utilize protective anti-spam measures, such as rate limiting user actions like account registration, posting, and other load-intensive user operations.

## Review Verification:

**Possible Harm:** Without review verification from genuine customers, product listings could be polluted with inauthentic reviews.

**Safeguards:** We will ensure that users must have purchased the product before leaving a review on the product. Furthermore, if users have purchased a product but have requested a refund, the review will be flagged as a “Refunded”.

## Scalability:

**Possible Harm:** Without a proper system response to unanticipated amounts of traffic, site performance could drop considerably, potentially resulting in a service outage.

**Safeguards:** To prevent any service outages, we will limit the amount of users that can access the site at any given moment to 500. This amount is subject to change given site growth and maturity.

## Reporting Mechanisms:

**Possible Harm:**Without the proper protocols this could lead to the misuse of information. Individuals or entities may misuse reporting mechanisms to disseminate false, misleading, or malicious information.

**Safeguards:**We will provide clear guidelines and standards for reporting emergencies, including criteria for determining the relevance, urgency, and credibility of reported information. Educate users on the importance of accuracy and truthfulness in reporting.

## Emergency Response:

**Possible Harm:** Websites dealing with an emergency response could become a target for cyber attacks or unauthorized users during the crisis. Security vulnerabilities could compromise sensitive information that is stored on the users behalf.

**Safeguards:** We will develop routes to follow in the case of an emergency response situation. With the purpose of outlining procedures for detecting and responding to security accidents and data breaches in emergency situations.

## Security Requirements

## User Authentication:

**Possible Harm:** Unauthorized access to an account could lead to misuse of personal information.

**Safeguards:** We will enforce strict password policies to protect our users personal information.

## Email Authentication:

**Possible Harm:** Without secondary authentication measures, users could be left without access to their accounts in the event of forgotten credentials.

**Safeguards:** We will utilize email verification for account creation confirmation, as well as allow users to change their passwords exclusively via email.

## Secure Connection:

**Possible Harm:** Sensitive user data could be exposed during transmission, compromising site security.

**Safeguards:** We will implement HTTPS (SSL/TLS) for encrypted communication on our site.

## Data Encryption:

**Possible Harm:** Sensitive data could be stolen in the event of a data breach.

**Safeguards:** We will encrypt sensitive user data, such as login information or payment information.

## Software Quality Attributes

ShoeBae prioritizes several key quality attributes to enhance user experience and accessibility. These quality attributes are measured and verified through user feedback mechanisms, ensuring ShoeBae consistently meets the needs and preferences of its diverse user base.

## Portability:

## ShoeBae ensures seamless access across various devices, including desktops, tablets, and smartphones, supporting HTML elements for consistent functionality and display.

## **Accessibility:**

## The platform offers a dark theme feature to accommodate users with light sensitivity. Additionally, it supports basic zoom features for visually impaired users and utilizes dyslexia-friendly fonts for improved readability.

## **Multilingual Support:**

## ShoeBae is translated into Spanish and Turkish, with the capability to integrate additional languages, catering to international users, particularly those who may face language barriers with English.

## User Guidance:

## A comprehensive guide, accessible via a provided link, offers step-by-step navigation instructions with visual aids, ensuring users can effectively utilize ShoeBae's features. Furthermore, a Frequently Asked Questions (FAQ) section is available to address common queries, enhancing user experience and ease of use.

# Other Requirements

Asynchronous database operations bring a holistic transformation, balancing efficiency and user-centric dynamics. In this system, data processing seamlessly unfolds, providing not just functionality but a user experience upgrade. This means real-time updates on the timeline, influenced by a page refresh or client-triggered actions. This straightforward mechanism ensures an immersive user journey, where the timeline vividly reflects the evolving information landscape in sync with user interactions within the system.

**Appendix A: Glossary**

**CCPA -** California Consumer Privacy Act - A state statute intended to enhance privacy rights and consumer protection. It regulates the collection, use, and sale of personal information by businesses

**GDPR -** General Data Protection Regulation - A regulation in the EU law on data protection and privacy for all individual citizens of the European Union and the European Economic Area (EEA). It address the transfer of personal data outside the EU and EEA areas

**HTTPS -** Hypertext Transfer Protocol Secure - HTTPS is the secure version of HTTP, the protocol over which the data is sent between one’s browser and the website one’s connecting to. It encrypts the data transmitted, providing a secure connection

**SSL -** Secure Sockets Layer - SSL is a security protocol designed to ensure the privacy and integrity of data transmitted between a user’s browser and a website. It encrypts the data to prevent unauthorized access during transmission

**TLS -** Transport Layer Security - TLS is an updated, more secure version of SSL. It provides secure communication over a computer over a computer network and is used widely on the internet for securing connections between web servers and browsers

**SRS** - System Requirements and Specifications - A comprehensive document outlining system features, functions, both functional and nonfunctional requirements, and classes. It aims to articulate the software's objectives and how it intends to fulfill them

**Appendix B: Analysis Models**

*<Optionally, include any pertinent analysis models, such as data flow diagrams, class diagrams, state-transition diagrams, or entity-relationship diagrams*.>

**Appendix C: To Be Determined List**

**System Features**

* **Admin Panel:**

An admin panel would allow for other users of higher status access to different features that the average user wouldn’t have, such as voiding purchases or completing refunds, monitoring seller items and prices, or even overseeing bids. These would be in charge of maintaining the site to keep everything up and running and keep the site user-friendly.

* **Items Listed for Sale:**

Certain items may go on sale if the seller chooses to sell them for a lower price. Furthermore, having a specific search option to filter all popular items on sale would make bargain shopping easier for users.

* **Watch List:**

A watch list would allow for users to view any on-going auctions. This can include auctions that have just started or auctions reaching their end. This would make it easier for shoppers to find popular items or to encounter an auction before it ends, giving them a chance to participate in it.

* **Recommended Items:**

As users shop, ShoeBae will start recommending either the type of shoe that the user purchases, or will recommend more items from the user they purchased from. This will allow users to have a page based around what they are interested in, creating not only an easier-to-shop-in website, but also one that is specifically accustomed to each user.

* **Rate Limiting:**

As users begin to post items and/or reviews, there will need to be a limit to how many times within a certain timespan that a user can post something. This will prevent an information overload on the website, and can prevent users from either spamming items or reviews. Ultimately, this will increase the performance of the website.