Software Requirements Specification

for

E-commerce Group Project

Version 1.0 approved

Prepared by
Caden Bartram - csb542
Daniel Beuker - djb675
Jackie Cline - jjc446

Group 6

8 February 2026

1.   Introduction

1.1   Purpose

The Somethingsomething E-Commerce Platform is an e-commerce platform designed to provide customers with an online consumer shopping experience. This document is designed to be digestible to the client in terms of what technical specifications, requirements, scope, and the design of the Somethingsomething E-Commerce Platform are outlined.

1.2   Document Conventions

This document uses a black Arial font. Top-level section headings are typed in a bold 18pt size and are numbered sequentially (1, 2, 3, etc.). Lower-level sections are typed in a 14pt bold size, and are numbered through decimal points that reflect their placement below a specific top-level section (i.e., sections under 1 are numbered "1.1, 1.2, 1.3" etc.).

Descriptions under designated features in Section 3 are specifically written in an italicized 11pt Arial font. Information is otherwise typically conveyed through a 12pt Arial font.

1.3   Intended Audience and Reading

The intended audience of the Somethingsomething E-Commerce Platform SRS document is the platform's administrators and maintenance developers, along with invested shareholders.

1.4   Product Scope

The Somethingsomething E-Commerce Platform is an e-commerce platform intended to enable users to register accounts for engaging in buying and selling transactions from and to other users. The platform will also…

1.5   References

<List any other documents or Web addresses to which this SRS refers. These may include user interface style guides, contracts, standards, system requirements specifications, use case documents, or a vision and scope document. Provide enough information so that the reader could access a copy of each reference, including title, author, version number, date, and source or location.>

2.   Overall Description

2.1   Product Perspective

The Somethingsomething E-Commerce Platform
<Describe the context and origin of the product being specified in this SRS. For example, state whether this product is a follow-on member of a product family, a replacement for certain existing systems, or a new, self-contained product. If the SRS defines a component of a larger system, relate the requirements of the larger system to the functionality of this software and identify interfaces between the two. A simple diagram that shows the major components of the overall system, subsystem interconnections, and external interfaces can be helpful.>

2.2   Product Functions

- Allow the user to log in to the application using email and password credentials.
- Have three user classes with functions for each.

<Summarize the major functions the product must perform or must let the user perform. Details will be provided in Section 3, so only a high level summary (such as a bullet list) is needed here. Organize the functions to make them understandable to any reader of the SRS. A picture of the major groups of related requirements and how they relate, such as a top level data flow diagram or object class diagram, is often effective.>

2.3   User Classes and Characteristics

Three user types are expected to use the application: buyers, sellers, and administrators.
- Buyers are users who will use the application to search for and purchase products.
- Sellers are users who will submit products to the application for sale.
- Administrators are users who will review and approve new users and new products on the web service.

<Identify the various user classes that you anticipate will use this product. User classes may be differentiated based on frequency of use, subset of product functions used, technical expertise, security or privilege levels, educational level, or experience. Describe the pertinent characteristics of each user class. Certain requirements may pertain only to certain user classes. Distinguish the most important user classes for this product from those who are less important to satisfy.>

2.4   Operating Environment

The software will operate as a web application and will be compatible with any operating system the user uses, provided he/she has a web browser to access the website hosting the software. The software will operate most optimally for Firefox and Chromium-based browsers.

2.5   Design and Implementation Constraints

<Describe any items or issues that will limit the options available to the developers. These might include: corporate or regulatory policies; hardware limitations (timing requirements, memory requirements); interfaces to other applications; specific technologies, tools, and databases to be used; parallel operations; language requirements; communications protocols; security

considerations; design conventions or programming standards (for example, if the customer's organization will be responsible for maintaining the delivered software).>

3.   System Features

3.1   Account Registration

The system provides a way for new users to create an account via submitting required registration information. The system validates the information, ensures the lack of duplicate accounts, and confirms successful registration.

3.1.1   Description and Priority
High priority: 9 (Essential)
The ability to create a new account and designate its type. This is required for the application to be usable.

<Provide a short description of the feature and indicate whether it is of High, Medium, or Low priority. You could also include specific priority component ratings, such as benefit, penalty, cost, and risk (each rated on a relative scale from a low of 1 to a high of 9).>

3.1.2   Stimulus/Response Sequences

[system validates → system displays/creates/updates]

3.1.3   Functional Requirements

REQ: The system shall allow a guest user to submit a registration request containing a unique username and password.

REQ: The system shall send and display to the user an error message that indicates the username credential is invalid if the provided username credential is already registered.

REQ: The system will send and display to the user an error message upon the entry of credentials that do not meet platform-defined format specifications

REQ: The system shall create a new user account with the selected role upon successful registration.

REQ: The system shall display a confirmation message upon successful registration.

3.2   User Authentication
3.2.1   Description and Priority
High priority: 9 (Essential)
The process for registered users to securely log in and gain access to their personalized account features. This enables registered users to access the system as non-guest users.

3.2.2   Stimulus/Response Sequences
[system validates → system displays/creates/updates]

3.2.3 Functional Requirements

REQ: The system shall allow registered users to log in using correct credentials
REQ: The system shall display an error message if the user enters incorrect log-in credentials
REQ: The system shall deny authentication when invalid credentials are provided

3.3   Home Page Display

3.2.1 Description and Priority
High priority: 9 (Essential)
The platform will provide a usable, visual interface that provides the user with immediate access to key features of the system (such as Account Management, Order Tracking, and Order History). This system's usability is contingent on the home page display feature.

3.1.2   Stimulus/Response Sequences

[system validates → system displays/creates/updates]

3.1.3   Functional Requirements

REQ: The system shall accept user input for option selection and textbox entries
REQ: The system shall display categories for filtered search for user to select
REQ: The system shall provide direct links to access Account Management, Order Tracking, Order History

3.4   Product Search

3.2.1 Description and Priority
High Priority : 9 (Essential)
Unique account object which provides a user with ability to browse product listings and consider them for purchase.

3.1.2   Stimulus/Response Sequences

[system validates → system displays/creates/updates]

3.1.3   Functional Requirements

REQ: The system shall allow users to search for products by entering keywords into a search bar.
REQ: The system shall provide filters to narrow search results by product category.
REQ: The system shall provide filters to narrow search results by price range.

3.5 Product Viewing

3.2.1 Description and Priority
High Priority : 9 (Essential)
Unique account object which provides a user with ability to browse product listings and consider them for purchase.

3.1.2 Stimulus/Response Sequences

[system validates → system displays/creates/updates]

3.1.3 Functional Requirements

REQ: The system shall display the price of the product.
REQ: The system shall display the product description and specifications.
REQ: The system shall display one or more images associated with the product.

3.6 Cart/Checkout

3.2.1 Description and Priority
High Priority : 9 (Essential)
Unique account object which provides a user with ability to browse product listings and consider them for purchase.

3.1.2 Stimulus/Response Sequences

[system validates → system displays/creates/updates]

3.1.3 Functional Requirements

REQ: The system shall allow buyers to initiate a purchase transaction for available products.
REQ: The system shall allow buyers to review order details before confirming the purchase.
REQ: The system shall prevent users from adding out-of-stock products to their cart

3.7 Seller Inventory Management

3.2.1 Description and Priority
High Priority : 9 (Essential)

The system provides a way for sellers to update product listings and stock level information. This feature allows sellers to maintain accurate inventory for items offered on the platform.

3.1.2   Stimulus/Response Sequences

[system validates → system displays/creates/updates]

3.1.3   Functional Requirements

REQ: The system shall allow sellers to create product listings.
REQ: The system shall allow sellers to delete product listings.
REQ: The system shall allow sellers to update product stock.
REQ: The system shall

3.8   Order Tracking

3.2.1   Description and Priority
Mid Priority : 5 (Useful)
The system allows the buyer to track active orders and their status.

3.1.2   Stimulus/Response Sequences

[system validates → system displays/creates/updates]

3.1.3   Functional Requirements

REQ: The system shall display the current status of an order.
REQ: The system shall allow buyers to view tracking info for shipped orders.
REQ: The system shall update order status as it progresses.

3.9   Order History

3.2.1   Description and Priority
Mid Priority : 5 (Useful)
The system provides the buyer a means to view records of previously-conducted orders.

3.1.2   Stimulus/Response Sequences

[system validates → system displays/creates/updates]

3.1.3   Functional Requirements

REQ: The system shall maintain a record of completed orders.
REQ: The system shall allow buyers to view their order history.
REQ: The system shall display details for selected past orders.

3.10 Buyer Account Management

3.2.1 Description and Priority
Mid Priority : 5 (Useful)
Page that acts as a personal hub of useful information for buyer users

3.1.2 Stimulus/Response Sequences

[system validates → system displays/creates/updates]

3.1.3 Functional Requirements

REQ:
REQ:

3.11 Seller Account Management

3.2.1 Description and Priority
Mid Priority : 5 (Useful)
The system will allow seller accounts to display their products on their own page that is accessible to all buyer accounts

3.1.2 Stimulus/Response Sequences

[system validates → system displays/creates/updates]

3.1.3 Functional Requirements

REQ: The system shall allow sellers to update their profile information

3.12 Administration

3.2.1 Description and Priority
Mid Priority : 5 (Useful)
The system will allow administrator accounts to ban seller and buyer accounts. This will ensure the platform is adequately moderated and that fraudulent or illegal behaviors are discouraged.

3.1.2 Stimulus/Response Sequences

[system validates → system displays/creates/updates]

[potential user story (delete this and paste onto Github as an issue under a user story label)]: As an administrator, I want to ban seller or buyer accounts so that I can remove accounts that violate the terms of service or legal requirements

3.1.3 Functional Requirements

REQ: The system shall provide an administrative panel that allows to update the status of a user account between banned and active.

REQ: The system shall hide all product listings from accounts with ban status
REQ:

4.   Other Nonfunctional Requirements

4.1   Performance Requirements

4.1.1   The system shall support multiple users at once without significant performance decline
4.1.2   The system shall load pages within two seconds.
4.1.3   The system shall return search results within less than a second.

4.2   Safety Requirements

4.2.1   The system shall prevent unintentional loss of user data
4.2.2   The system shall provide system failure recovery mechanisms
4.2.3   The system shall ensure that transactions are reliably processed

4.3   Security Requirements

4.3.1   The system shall require authentication for user account access
4.3.2   The system shall verify user credentials before granting access to administrative features
4.3.3   The system shall only collect and store personally identifiable information (PII) that is necessary for the legitimate commercial operations of the platform
4.3.4   The system shall enforce a password policy requiring a minimum of 8 characters, including a mix of uppercase letters, lowercase letters, numbers, and symbols.

4.4   Software Quality Attributes

4.4.1   The system shall provide a user-friendly interface
4.4.2   The system shall be maintainable to support future updates
4.4.3   The system shall be scalable to accommodate growth
4.4.4   The system shall be designed to support high uptime

5.   Other Requirements

5.1   The system shall verify the inventory level of products within less than a second

Appendix A: Glossary

- **Actor** - person interacting with the software application.
- **User** - actor with credentials
- **Buyer**- user with the buyer role who interacts with the system by purchasing products
- **Seller**- user with the seller role who interacts with the system by selling products to buyers

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

1. Display Home Page
    1.1. Stimulus/Response
2. Access Search Index
    2.1. Sti

<Collect a numbered list of the TBD (to be determined) references that remain in the SRS so they can be tracked to closure.>