
Software Requirements Specification

for

NetDeals

Version 1.0 approved

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1. Introduction

1.1 Purpose

This document is created in order to inform the reader about the entire system of our eCommerce platform version 1.1 that will support user login with buyer, seller, and admin accounts. Support is also included for seller accounts posting items for sale with tags determining the product category that can be used by buyers to filter through items. This SRS describes the entire project including all subsystems.

1.2 Document Conventions

In this document in order to identify what words will be included in the glossary, we will underline them. Along with that, under System Features, we will italicize every feature that is added underneath it. For the most part, the document will follow the same fonts and size, with the large bold text representing the sections and subsections within this document. As we add more information to the SRS, we will update this section on special formatting for specific things.

1.3 Intended Audience and Reading

This document is intended for the developers, project managers, testers and documentation writers. This document contains the web application description and functions with details included. It describes the characteristics that are provided for the user and also the features of the system. This document is best read while starting with the introduction and then proceeding to the overall description. This is where you can see the web application description and functions in detail. After this, going to section 3, product features, would be advised. This shows an in-depth documentation of all of the system requirements and how they are supposed to respond and function. Section 5 contains other requirements that were needed in order to develop the web application and should be read last. At the bottom, you will find an appendix that contains a glossary, analysis models, and tbd list. The glossary will help understand the terms, acronyms, and abbreviations that may be found in the document. It will provide explanations and definitions of them. The analysis models section contains diagrams that will also help understand sections of this document.

1.4 Product Scope

The eCommerce website will allow users to buy and sell goods and services within a local community, similar to Facebook Marketplace. The platform will have the following key features of user account creation and management, product listing and search functionality, communication tools for buyers and sellers, rating and review system for buyers and sellers, and an admin panel for website management. The user interface will be user-friendly and visually appealing. The website will be secure and adhere to all relevant data privacy regulations. The project will be delivered on time and within budget.

1.5 References

- Django:
<https://www.djangoproject.com/>
- MySQL
<https://www.mysql.com/>
- Python
<https://www.python.org/download/releases/2.7.3/>

2. Overall Description

2.1 Product Perspective

This is a new project, so there is no initial framework or system in place to build upon. This system will consist of a frontend and a backend that will be developed from the beginning. In the frontend, the user will interact directly with a webpage using the interface to do different functions that are determined by the user role. Users with a buyer role will be able to search, compare, buy, and return different types of products from different sellers. Users with a seller role will be able to add, sell, and receive payments for their available products. Users with an admin role will be able to approve/block new user accounts and products, and oversee different user actions. In the backend, our software will allow us to receive and store data from the user.

NetDeals has two design parts, the frontend and backend, that will be used by users and admin. The frontend will be a webpage that the user will interact with to see what all items are for sale and post their own items for sale. The webpage will be built on Django+Python and interface with the MySQL server to store and pull relevant data.

The backend will consist of the MySQL server that will store and push the data that is being used by the application. The backend will be mostly used by management to have access to the data.

2.2 Product Functions

- Users with different roles (Buyer, Seller, Admin) should be able to login into their accounts to be able to perform different actions and logout.
- Sellers should be able to post items for sale including images of the product, a description, price, and category tags that can be used to filter items for buyers.
- Buyers will have the ability to leave ratings on sellers to build trust for future buyers.
- A buyer should be able to search, compare, buy and return different types of products from different sellers, each item will have category tags that the buyer will be able to search through, and compare items based on price, and the rating of the different sellers.
- A seller should be able to add, sell and receive payments for their available products.
- An admin should be able to approve/block new user accounts and products, and oversee different user actions.

2.3 User Classes and Characteristics

The "buyer" users of our software front end will be customers looking for items to purchase and who are familiar with navigating a modern website on a desktop or mobile device. Buyer users are the most important to satisfy and to ensure the site is easily navigated by all people of all technical expertise. The user should easily understand the layout of the website, and should easily understand how to search items and purchase. The "seller" users should easily understand how to create a listing and receive payment when their item is sold. "admin" users will be able to monitor current listings, and remove them if they are determined inappropriate. Admins are expected to have more technical experience and will be presented with more controls than other users.

2.4 Operating Environment

The web application will operate on any desktop device that is capable of connecting to the internet. Due to the design focus of operating on desktop, mobile devices are excluded for running the web application. Operating Systems that will be compatible will be Windows, MacOS, and Linux. Some supported web browsers will include Google Chrome and Firefox.

2.5 Design and Implementation Constraints

Due to the overall time and resources available towards the implementation of the web application, the following considerations could limit the overall design of the application.

Organizational constraints:

- Implementation time - design will be focused on functionality due to the lack of time between each of the design phases.
- Storage Resources - due to the lack of servers or storage capable of running a website, the web application can not handle high loads of user traffic, product listings, or user accounts as these will require infrastructure that the organization can not handle.

Project constraints:

- Use of web languages - using the technologies HTML, CSS, Django, Python, and MySQL to construct our web application, learning of these technologies may limit our ability to effectively implement them.
- User login - users must be able to login to a specific domain of the website depending on the users classification.
- Browser support - Google Chrome and Firefox must be supported with the web page.
- Operating system support - MacOS, Windows, and Linux will be supported.

3. System Features

3.1 System Feature 1 (User login)

3.1.1 Description and Priority

High priority, users will be able to create an account and login to the website. Each user will be assigned a role to the website which will allow them to be a user, seller, or admin of the website.

3.1.2 Stimulus/Response Sequences

Creating an account: when the user is creating the account, they will input their email, password, shipping address and phone number.

- User - the user will input basic information and proceed to the finished account page.
- Seller - the seller account will need to input additional account info such as company name to replace user name and a description of the company
- Admin - system admin will automatically have an account in the system. No creating account information will be chosen.

Logging in: Users will be able to login with their email address and password. They will be able to request a forgotten password button for their account if forgotten or have the option of creating a new account if a new user.

After login: Users will be able to change information relating to their accounts.

- User - changing passwords, phone number, or shipping address
- Seller - changing passwords, phone number, shipping address, or description

3.1.3 Functional Requirements

REQ-1: Login must be a valid email address in the database, display yellow near email box if invalid or not in database

REQ-2: Input passwords should be hidden when logging in, no invalid conditions

REQ-3: Passwords must be 8 characters long for creating password or pause account creation if invalid

REQ-4: Cannot accept empty inputs if it is a required input, reject login if invalid

3.2 System Feature 2 (Create listing)

3.2.1 Description and Priority

High priority - Users with seller accounts will be able to create posts for the items they would like to sell. The post will contain images of the product, a short description, a quantity, and a price.

3.2.2 Stimulus/Response Sequences

Create Listing - User will add the image of the product, name, description, category, quantity, price of the product, and visibility of the listing.

Delete Listing - User can have the option to delete the listing, when deleting a listing the user will have a are you sure option before deleting the listing.

Edit Listing - User will have the option to edit the listing if a listing were posted.

Show listings - User will be able to view all listings associated with their account. They will have the option to edit or delete the listing. If the listing has a quantity of 0, the listing will be at a lower opacity to show that there is not any more product.

3.2.3 Functional Requirements

REQ-1: Image, name, description, quantity, and price must be imputed on the product listing. Mark invalid until inputted

REQ-2: Edit listing should only change when the user clicks submit.

3.3 System Feature 3 (Add to Cart)

3.3.1 Description and Priority

High priority - buyers will be able to add listings to their cart. This will allow them to keep track of the current listings in their cart.

3.3.2 Stimulus/Response Sequences

View listing - users will be able to view listings that are added to their cart. This should display the total of each listing in the cart and the quantity.

Delete listing - user will remove a listing from their cart and also specify the quantity of the listing that will be removed.

Add listing - users will be able to add a listing to their cart. When adding it to their cart, users should be able to specify an amount that will be added.

Checking out - users will checkout the listings that are inside their cart. The final purchase screen will display the total of the items in the cart, listings, quantity of each listing and the cost. When checking out the user will need to input payment info before checking out.

3.3.3 Functional Requirements

REQ-1: Removing listing should specify quantity if greater than 1, if not default to 1.

REQ-2: Adding listings should specify quantity, if not default to 1.

REQ-3: Payment info must be imputed, if not reject and prompt the user again.

3.4 System Feature 4 (Search for Item)

3.4.1 Description and Priority

Medium priority - buyers will be able to search by name for the item they are looking for. They will also be able to search for items by category.

3.4.2 Stimulus/Response Sequences

Search by name - buyers will be able to search for specific items by name

Search by category - buyers will be able to select a category to view listings in the category, buyers will also be able to search through individual categories.

Sort results - buyers will be able to sort through search results by date listed, price, and user rating.

3.4.3 Functional Requirements

REQ-1: Display image of item, price, and rating on search result

REQ-2: If no similar listings are found a message will display stating that

3.5 System Feature 5 (Compare Item)

3.5.1 Description and Priority

Low Priority - Buyers will be able to compare the listing that they are viewing to other listings in the same category.

3.5.2 Stimulus/Response Sequences

Compare Listing - Users will be able to compare the items that they are viewing with other items in the same category.

Sort- Users will be able to sort the compared listings by different categories. Examples include price from low to high, price from high to low, rating, etc.

Search Item- If a user wants to compare two specific items, they will have the option to search the items to compare.

3.5.3 Functional Requirements

REQ-1: Display image, description, price, etc. of both of the compared items.

REQ-2: Display the ratings of both of the sellers to compare.

REQ-3: Display whether the items are in stock or not.

REQ-4: Display the search option and sort option.

3.6 System Feature 6 (Return)

3.6.1 Description and Priority

High Priority - Buyers will be able to return one or more listings after they choose checkout. The user will be able to return one or more items and will be refunded the price of the listings. Users should be able to do this before 14 days of the order date.

3.6.2 Stimulus/Response Sequences

Return listing - After checkout, the user will have the option to return one or more listings to the seller. The buyer should be able to input a description of why they are returning the listings and have a status for each listing for the return.

3.6.3 Functional Requirements

REQ-1: Must have the option to return listings before 14 days.

REQ-2: Should be able to return multiple listings

REQ-3: Should add option of a description for the listing

REQ-4: Seller should approve and disapprove listing

3.7 System Feature 7 (Checkout)

3.7.1 Description and Priority

High priority - buyers will be able to check out after adding items to their cart, after entering a valid payment method and shipping address. buyers will then receive a confirmation email stating their order has been completed.

3.7.2 Stimulus/Response Sequences

Proceed to checkout - user will be able to proceed to checkout after reviewing items in the cart and the total price

Enter shipping address - after reviewing items in the cart user will be prompted to enter in a shipping address, zip code, city, state, and name.

Payment - after entering shipping information the user will continue to payment which will be securely processed and sent to the seller.

3.7.3 Functional Requirements

REQ-1: Buyer will be able to submit payment

REQ-2: Seller will be able to receive payment

3.8 System Feature 8 (Report Listing)

Medium priority - all users will be able to report listings if they appear to be a scam or if the item is seen as inappropriate. After clicking report an option will appear to select a reason for reporting, followed by an optional description as to why.

3.8.2 Stimulus/Response Sequence

Report button - user will be able to click a report button while viewing a listing if it is seen as inappropriate.

Select reason- users will be prompted to select a reason for reporting, and given the option to provide a short description on why they are reporting the listing.

Admin accounts will be able to view reported listings and determine if it should be removed.

3.8.2 Functional Requirements

REQ-1: Report button will show on every listing and menu will appear after clicking to select reason for reporting.

REQ-2: Admin accounts will view reported listings and determine if it should be deleted or not.

3.9 System Feature 9 (View Report List/ Admin ONLY)

3.9.1 Description and Priority

Medium priority - admins will be able to view a list of reported accounts. When on the reported list screen, admins will have an option to block accounts. The list will also show how many times they have been reported.

3.9.2 Stimulus/Response Sequence

View Reported Listings - admin will be able to click on a view reported listings button. This will bring them to the list showing every reported account.

3.9.3 Functional Requirements

REQ-1: View reported listings option will show at the admin main menu.

REQ-2: Option to block/ban an account will show on the list next to the account.

4.0 System Feature 10 (Approve/Block Account/ Admin ONLY)

4.0.1 Description and Priority

High priority - admins will have the option to view any new account being made. They will have the option to approve or block an account. They do this by checking the New Accounts list.

4.0.2 Stimulus/Response Sequence

View New Accounts - admin will be able to see the View New Accounts option at the admin menu. Clicking on it will bring them to the list screen. Every new account will have an option to approve or block next to it.

4.0.3 Functional Requirements

REQ-1: Have the View New Accounts option showing at the admin main menu.
REQ-2: Have the approve/block option next to each account on the list.

4. Other Nonfunctional Requirements

4.1 Performance Requirements

- While searching a category, loading a page of items should take less than 30 seconds
- Posting a new listing should take less than 10 seconds
- Login should take no longer than 5 seconds
- Clicking any link on the navigation bar should take less than 1 second
- Loading previous orders should take no longer than 10 seconds

4.2 Safety Requirements

<Specify those requirements that are concerned with possible loss, damage, or harm that could result from the use of the product. Define any safeguards or actions that must be taken, as well as actions that must be prevented. Refer to any external policies or regulations that state safety issues that affect the product's design or use. Define any safety certifications that must be satisfied.>

4.3 Security Requirements

<Specify any requirements regarding security or privacy issues surrounding use of the product or protection of the data used or created by the product. Define any user identity authentication requirements. Refer to any external policies or regulations containing security issues that affect the product. Define any security or privacy certifications that must be satisfied.>

4.4 Software Quality Attributes

4.4.1 Availability

- The system must deliver services to the client when requested
- The webpage should be available 99.9% of the time

4.4.2 Reliability

- The webpage must perform the given task by the user without failure
- The webpage should be able to complete the given task in a timely manner

4.4.3 Usability

- The webpage must be be easy enough to learn so that users are easily able to access the functions that want to perform
- The application must be more efficient and easier to use than other competing webpages

5. Other Requirements

<Define any other requirements not covered elsewhere in the SRS. This might include database requirements, internationalization requirements, legal requirements, reuse objectives for the project, and so on. Add any new sections that are pertinent to the project.>

Appendix A: Glossary

<Define all the terms necessary to properly interpret the SRS, including acronyms and abbreviations. You may wish to build a separate glossary that spans multiple projects or the entire organization, and just include terms specific to a single project in each SRS.>

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

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