IEEE 830-1998 Software Requirements Specification
”Bazaar Buddy: an app for exchanging items”

Contents

1. Introduction

1.1. Purpose

The purpose of this document is to provide a comprehensive Software Requirements Specification (SRS) for the development of "Bazaar Buddy," a web application designed to facilitate the buying, selling, exchanging, and giving away of items among users. This application aims to create a user-friendly platform that fosters community engagement and promotes sustainable practices by enabling users to trade items they no longer need.

The "Bazaar Buddy" application will serve as a digital hub where individuals can connect, allowing them to declutter their homes, find new items, and engage in environmentally friendly practices by reusing goods. By providing a space for users to interact, the application seeks to reduce waste and encourage a culture of sharing and sustainability.

This document outlines the specific functionalities and requirements of the application from the perspectives of various stakeholders, including end-users, moderators, and administrators. It will serve as a foundational guide for the design, development, and testing phases of the project, ensuring that the final product aligns with the expectations and needs of its users.

Ultimately, the goal of the "Bazaar Buddy" application is to create a safe, efficient, and engaging environment for item exchange, enhancing the overall user experience while promoting responsible consumption and community interaction.

1.2. Document Conventions

This document is written using the IEEE 830-1998 standard for software requirements specifications. It will include user, system, and customer requirements for the completion of the project.

1.3. Intended Audience and Reading Suggestions

This document is intended for the developers and designers working on the "Bazaar Buddy" project. It is recommended that readers start from the beginning and read the document from start to finish to get a complete picture of the project requirements.

1.4. Product Scope

The scope of "Bazaar Buddy" is to create a web application that allows users to post advertisements for items they wish to sell, exchange, or give away. The application will facilitate communication between users and provide a review system for items and sellers.

1.5. References

1. IEEE 830-1998: IEEE Standard for Software Requirements Specifications (IEEE, 1998).

2. Django 4.1. documentation

1.6. Overview

The "Bazaar Buddy" web application will be a platform for users to post advertisements for items and for other users to browse and contact sellers. The application will also provide a review system for users to rate their experience with sellers.

2. Overall Description

2.1. Product Perspective

"Bazaar Buddy" is a web application designed to help users buy, sell, or exchange items quickly and easily. The user interface is designed to be intuitive and easy to use, with a dashboard for ordinary users, a moderator dashboard for privileged users, and an admin dashboard for administrators. Users can view advertisements, post their own, and communicate with sellers.

2.2. Product Functions

Description: An application that allows users to sell, exchange, or give away items. The Bazaar Buddy will provide a simple and intuitive environment for users who want to trade items, whether for sale, exchange, or donation.

Features:

1. **Regular User:**

- **Ad Browsing:** Users will have the ability to browse all available ads on the platform. Ads will be organized by categories, and users will be able to use various filters (such as price, item condition, and location) to easily find what they are looking for. Each ad will contain detailed information about the item, including a description, photos, and the seller's contact information.
- **Item Posting:** Users will be able to easily create and post their own ads for items they wish to sell, exchange, or give away. The posting process will be intuitive, allowing users to enter all necessary information, such as the item name, description, price, options for exchange or donation, and to upload photos of the item.
- **Contacting Sellers:** Users will have the option to contact sellers through private messages. This functionality will facilitate communication between users and allow them to ask questions or negotiate transaction details.

2. **Privileged User (Moderator):**

- **Ad Approval:** Moderators will be responsible for reviewing and approving new ads before they become visible to other users. This functionality will ensure that all ads comply with community guidelines and do not contain inappropriate content.
- **Removal of Inappropriate Ads:** Moderators will have the ability to remove ads that violate rules or are deemed inappropriate. This functionality will help maintain the quality and safety of the platform, ensuring that users have a positive experience while using the application.

3. **Administrator:**

- **User Management:** Administrators will have the ability to manage user accounts, including adding, editing, and deleting users. This functionality will allow administrators to ensure that all users adhere to the platform's rules and guidelines.
- **Category Management:** Administrators will be able to add, edit, or remove item categories, enabling users to search and filter ads more easily. This functionality will help maintain an organized structure within the Bazaar Buddy.

This application will create a dynamic community of users who want to trade items, encouraging interaction and collaboration among members. Through clearly defined functionalities, the "Bazaar Buddy" will provide users with a simple and secure experience for item exchange.

2.3. User Classes and Characteristics

The product will have three logical user classes: Ordinary User, Privileged User (Moderator), and Administrator.

2.3.1. Ordinary User

Ordinary users will have a range of functionalities designed to enhance their experience within the Bazaar Buddy. They will be able to:

- **Browse Advertisements:** Users can explore a wide variety of advertisements posted by other users. The browsing experience will be enhanced with filtering options, allowing users to search by categories, price ranges, item conditions, and locations. This will enable them to find items that meet their specific needs and preferences quickly.

- **Post Their Own Items:** Ordinary users will have the ability to create and post advertisements for items they wish to sell, exchange, or give away. The posting process will be user-friendly, guiding them through the necessary steps to provide detailed descriptions, upload images, set prices, and specify whether the item is for sale, exchange, or donation. Users will also have the option to edit or delete their listings as needed.

- **Contact Sellers:** Users will be able to reach out to sellers directly through the platform. This will be facilitated by a messaging system that allows for private communication, enabling users to ask questions about the items, negotiate prices, or arrange for exchanges. This direct line of communication will help foster trust and transparency in transactions.

- **Manage Their Dashboard:** Each ordinary user will have access to a personalized dashboard where they can manage their. This dashboard will provide insights into the status of their ads and any messages received from potential buyers or traders. Users will also be able to manage their account settings and preferences from this central location.

2.3.2. Privileged User (Moderator)

Privileged users, or moderators, will play a crucial role in maintaining the integrity and quality of the Bazaar Buddy. Their responsibilities will include:

- **Review and Approve Advertisements:** Moderators will have the authority to review new advertisements submitted by ordinary users before they are published on the platform. This review process will ensure that all listings comply with community guidelines and standards, helping to prevent the posting of inappropriate or misleading content.

- **Remove Inappropriate Listings:** If moderators identify ads that violate the platform's rules or contain inappropriate content, they will have the ability to remove these listings promptly. This function is essential for maintaining a safe and trustworthy environment for all users, ensuring that the Bazaar Buddy remains a reliable space for trading items.

2.3.3. Administrator

Administrators will have comprehensive control over the entire application, overseeing its functionality and ensuring a seamless user experience. Their key responsibilities will include:

- **User Management:** Administrators will manage all user accounts on the platform, including the ability to add, edit, or delete user profiles. They will also handle user permissions, ensuring that ordinary users and moderators have the appropriate access levels and capabilities.

- **Category Management:** Administrators will oversee the organization of item categories within the Bazaar Buddy. They will have the ability to create, modify, or remove categories as needed, ensuring that users can easily navigate and find relevant listings. This will help maintain an organized structure that enhances the overall user experience.

Through these defined roles and functions, the Bazaar Buddy will create a well-structured environment that promotes user engagement, safety, and satisfaction. Each user type will contribute to the overall success of the platform, ensuring a vibrant community for item exchange.

2.4. Operating Environment

The web application will be hosted on a web server. It will be accessible through a web browser.

2.5. Design and Implementation Constraints

The web application will be written in Python using the Django framework. It will be hosted on a web server. The data will be stored in a SQLite database. No further design and implementation constraints are known at this time.

2.6. User Documentation

User documentation will be provided to assist users in navigating the application and utilizing its features.

2.7. Assumptions and Dependencies

The application will rely on a stable internet connection for users to access the platform. It will also depend on the Django framework for backend functionality.

3. Specific Requirements

3.1. Functional Requirements: Ordinary User Requirements

3.1.1. User Registration

Req U1 - The web application will allow users to register for an account. Users will provide the following information during registration:

- Name (string, required)
- Email address (string, required, must be unique)
- Password (string, required, must meet security criteria: minimum 8 characters, at least one uppercase letter, one lowercase letter, one number, and one special character)

The application will verify that the email address is unique and not already used by another user. Upon successful registration, the user will receive a confirmation email with a verification link.

3.1.2. User Login

Req U2 - The web application will allow users to log in to their account.

Users will provide their email address and password.The application will verify that the email address and password match the information in the database.If the login is successful, the user will be redirected to their dashboard. If unsuccessful, an error message will be displayed.

3.1.3. User Logout

Req U3 - The web application will allow users to log out of their account.

Users will click a "Log Out" button located in the navigation bar. The application will terminate the user's session and redirect them to the home page.

3.1.4. User Dashboard

Req U4 - The web application will provide a dashboard for users to view their account information and manage their listings.The dashboard will include:

- User's name
- User's email address
- List of items posted by the user (with links to edit or delete each item)
- List of messages from other users (displayed in chronological order)
- A summary of user ratings and reviews received
- A button to post a new item

3.1.5. User Profile

Req U5 - The web application will provide a profile for users to view their account information. The profile will include:

- User's name
- User's email address
- List of items posted by the user
- Users will have the option to edit their profile information.

3.1.6. Item Posting

Req U6 - The web application will allow users to post advertisements for items. Users will provide the following information when posting an item:

- Item title (string, required, must be unique)
- Item description (string, required)
- Item category (dropdown selection from predefined categories)
- Item price (decimal, required, must be a positive number)
- Item condition (dropdown selection: New, Used, Refurbished)
- Item images (upload option, multiple images allowed)

The application will verify that the item title is unique and that the price is a positive number. Upon successful posting, the item will be listed in the Bazaar Buddy and theuser will receive a confirmation message.

3.1.7. Item Listing

Req U7 - The web application will allow users to view a list of items posted by other users. Users will click a "Browse Items" button to access the item listing page. The list will display:

- Item title
- Item description (shortened)
- Item price
- Item condition
- A "Contact Seller" button for each item

Users can filter the list by category, price range, and condition.

3.1.8. Contact Seller

Req U8 - The web application will allow users to contact sellers. Users will click a "Contact" button next to an item. A modal form will appear, allowing users to send a message to the seller. The form will include:

- Subject (string, required)
- Message body (text area, required)

The application will verify that the message is not empty. Upon submission, the message will be sent to the seller, and a confirmation message will be displayed to the user.

3.2. Functional Requirements: Privileged User Requirements

3.2.1. Item Approval

Req P1 - The web application will allow privileged users to approve items before they are published. Privileged users will access a moderation dashboard where they can view items pending approval. Each item will display:

- Item title
- Item description
- Item category
- Item price
- A "Approve" button and a "Reject" button

Upon clicking "Approve," the item will be published and visible to all users. If "Reject" is clicked, the item will be removed from the pending list, and the user who posted it will be notified of the rejection.

3.2.2. Item removal

Req P2 - The web application will allow privileged users to remove inappropriate items. Privileged users will have access to a list of all items, including those flagged for review. Each item will have a "Remove" button that, when clicked, will delete the item from the Bazaar Buddy. The application will prompt the privileged user to confirm the removal action. A notification will be sent to the user who posted the item, informing them of the removal.

3.3. Functional Requirements: Admin Requirements

3.3.1. Admin Dashboard

Req A1 - The web application will provide a dashboard for administrators to manage the system. The admin dashboard will include:

- Overview of total users, items, and active listings
- Quick links to user management, item management, and category management
- Notifications for flagged items or user reports

3.3.2. User Management

Req A2 - The web application will allow administrators to create, edit, and delete user accounts. Admins will have access to a user management interface where they can:

- View a list of all users with their details (name, email, status)
- Create new user accounts by providing necessary information (name, email, password)
- Edit existing user accounts to update information or change user roles

- Delete user accounts, with a confirmation prompt to prevent accidental deletions

3.3.3. Category Management

Req A3 - The web application will allow administrators to manage categories of items. Admins will have the ability to:

- Add new categories by providing a category name and description
- Edit existing categories to update their names or descriptions
- Remove categories, ensuring that no items are currently associated with them
- The application will ensure that category changes are reflected in the item posting interface for users.

3.4. Usability Requirements

The web application will be designed to be easy to use. The web application will be designed to be intuitive and easy to learn.

3.5. Reliability Requirements

None at this time

3.6. Performance Requirements

None at this time

3.7. Supportability Requirements

None at this time

3.8. Design Constraints

None at this time

4. User Interfaces

The top navigation bar will be structured as follows:

On the Left Side:

- **Logo**: A clickable logo that links to the home page of the application.
- **Browse Items**: A link to the page displaying a list of all items available for sale, exchange, or giveaway.
- **Post an Item**: A link to the page where users can create and submit their own advertisements for items.

On the Right Side:

- **Login**: A link to the Login page, visible when the user is not logged in. This will allow users to enter their credentials to access their accounts.
- **Profile**: A link to the Profile page, visible when the user is logged in. This

page will display the user's account information, including their posted items and reviews.

- **Logout**: A link to log out of the user’s account, visible when the user is logged in. Clicking this will terminate the session and redirect the user to the home page.
- **My Listings**: A link to the My Listings page, visible when the user is loggedin. This page will show all items the user has posted, along with options to edit or delete them.

Main Content Area

The main content area will dynamically change based on the selected navigation link. It will include:

- **Home Page**: A welcoming section that highlights featured items, categories, and any ongoing promotions or announcements.
- **Browse Items Page**: A comprehensive list of items available for sale, with filters for categories, price ranges, and conditions. Each item will display a thumbnail image, title, price, and a "Contact Seller" button.
- **Post an Item Page**: A form for users to fill out with details about the item they wish to sell, including title, description, category, price, and images.
- **Profile Page**: A summary of the user’s account, including their name, email, ratings, and a list of items they have posted or reviewed.
- **My Listings Page**: A detailed view of all items the user has posted, with options to edit or remove each listing.

4.2. Hardware Interfaces

The application will be hosted on a secure web server running on either Linux or Windows, with adequate resources to handle user traffic

4.3. Software Interfaces

The application will utilize Django 4.1 for backend development, SQLite for database management, and Bootstrap for frontend design.

4.4. Communication Interfaces

The application will implement secure communication protocols (HTTPS) to ensure data integrity and confidentiality during user interactions.

5. Other Nonfunctional Requirements

5.1. Security Interfaces

The application will use the Django's default User management system. The application will use Django's default authentication system. The application will use Django's default authorization system. The application will use Django's default password reset system.

5.2. Safety Requirements

The application must be designed to prevent users from performing unsafe actions, such as posting prohibited content or accessing restricted areas.

5.3. Business Rules

The application will enforce business rules to ensure the safety and security of user data, including content moderation and user interaction policies.

5.4. Quantity Attributes

The application must provide a high-quality user interface with good usability and responsiveness, ensuring a positive user experience.

The application should maintain an uptime of at least 99% to ensure availability for users.

6. Other Requirements

6.1. Business Requirements

None at this time

6.2. Regulatory Requirements

None at this time