

(IT 314) Software Engineering

Group 21

Renting System

SRS Document

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Throughout the ideation and design stages, our mentor, Jahanvi Thakkar, was a great source of guidance, addressing our queries pertaining to the selection of process models, and offering unwavering support throughout the course of the project.

2. Problem Statement:

In today's world, people are always seeking ways to save money, whether it's by finding discount codes or avoiding shipping fees. Renting has become a popular option as it allows individuals to use items without making a full purchase commitment. Additionally, renting out possessions can provide an extra source of income. Our project aims to design a system that enables users to share details about items they want to rent and connect with potential renters, providing a platform for sharing resources.

3. Functional Requirements:

For borrower:

1. Login

The system must allow the user to **login** into his account.

2. View Categories

The many categories are all visible to the buyer. As a result, he or she can quickly locate the product categories in which they are most interested.

The various categories include furnishings, technology, home goods, gadgets, necessities, etc. are accessible.

3. Add to wishlist:

The system will allow users to **add products to the wish list**.

4. See one item in more detail

Under this function, buyers can view a picture and a description of that item.

5. Borrow a product

The user can borrow a product from the available products.

6. View Wishlist

The things that the buyer added to their wish list are available to them.

7. View My Orders

The items that the buyer rented can be found

8. View Profile

In this feature, Borrower can find his(her) personal details.

9. FAQ section, Help and Contact us

This section provides answers to frequently asked questions for buyers, and they also have the option to submit their own queries.

For Lender:**1. View all Products**

Users should be able to see a list of their product(s) for rental and later on able to edit the details.

2. View all Categories

It is easy for a seller to locate product categories as they have access to view all the different categories.

3. Manage a Product

Lender can change the price, picture, description, etc. of the listed products

4. See one item in more detail

Under this function, buyers can view a picture and a description of that item.

5. Approve rental of a product

The lender can approve the renting request of a borrower.

6. View My Products

The seller can see all the products.

7. View My Orders

A seller can view a comprehensive list of all products that they have previously rented out, as well as a separate list of products that they are currently renting out.

4. Non Functional Requirements:

1. **Availability:** This system must always be accessible, twenty-four hours a day, seven days a week. Additionally, during the maintenance period, the website should be up within 5 to 6 hours to prevent any hassle for the users.
2. **Portability:** The software should be portable and usable on desktop as well as mobile devices.
3. **Reliability:** The system should be reliable for the users and they should feel safe in renting the products.
4. **Usability:** The system should have a user-friendly interface and enable the user to learn the same in simple easy steps.
5. **Security:** Only authorized employees of the firm can have admin access to the system and can manage the users. Users with login credentials only can use the lend and rent functionalities. The passwords of the users should be stored in an encrypted format and the database should have an overall integrity.
6. **Performance:** When processing user input, the system should operate quickly and be able to respond or offer feedback promptly.
7. **Error Handling:** The error margin should be as little as possible, and whenever one occurs, a helpful error message instructing the user on how to correct the issue should show. User input validation is crucial.
8. **Database Requirements:** It is necessary to manage a database that contains information about both users and products.

5.1 Buyer Use Case Models

5.1.1 Register/Sign-up for New Buyer

Use Case	Signup
Actor	New User
Description	The user registers himself by filling up the details
Pre-condition	None
Post Condition	The user is now a registered buyer on the platform. Buyer will be shown the homepage of the website.
Basic Flow:	<ul style="list-style-type: none">• The new user clicks on the Signup button and opens a form to register himself on site.• He will fill the details asked in the form like name, email id, address and password for the account.• After successfully filling all the correct and valid details, he will submit the form.
Alternate Flow/s:	If the user doesn't insert any of the valid details, he will be prompted to fill that detail with a valid entry.
	In case the user is unable to register on the platform, he can browse through the products without a registration.

5.1.2 Sign In for Registered Buyer

Use Case	Signup
Actor	Registered Buyer
Description	Buyer logs in to the system
Pre-condition	He/she must be a registered buyer.
Post Condition	Buyer is directed to the homepage of the website.
Basic Flow:	<ul style="list-style-type: none">The buyer clicks on the Signinbutton and opens a form to login himself on site.He will enter the username and password.After successfully filling all the correct and valid details, he will submit the form.
Alternate Flow/s:	If the user doesn't insert any of the valid details, he will be prompted to fill that detail with a valid entry.

5.1.3 View Products

Use Case	View Products
Actor	New Buyer, Registered
Description	Buyer gets overview as well as details of all the product
Pre-condition	None
Post Condition	Registered buyers can buy the product on rent.
Basic Flow:	<ul style="list-style-type: none"> • New/unregistered Buyer can view all the products that are available for rent. • Also, can select a specific product and look out for other available details.
Alternate flow:	<ul style="list-style-type: none"> • Registered buyers after login can see all the products on the home page. • He/she can navigate through them, and see the primary product information like photographs of product, name and price. • Registered Buyer can then select a specific product and look at all the available details about the product.

5.1.4 Buy a product on rent

Use Case	Buy a product on rent
Actor	Registered Buyer
Description	Buyer chooses a product that he/she wants to buy.
Pre-condition	Buyer must have logged in to the system.
Post Condition	Buyer goes to the checkout page.
Basic Flow:	<ul style="list-style-type: none"> • After viewing the product, the user will click on the buy now button. • Then, he will be shown the checkout option.

5.1.5 Search

Use Case	Search
Actor	Buyer
Description	Buyer searches for specific products by product title.
Pre-condition	Buyer is on the 'All Products' or Home Page.
Post Condition	None
Basic Flow:	<ul style="list-style-type: none">• Buyer is on the 'All Products' page.• Then, clicks on the search bar, and enters the keyword for search.• He/she will be shown the results of his search.

5.1.6 Select by Category

Use Case	Select by Category
Actor	Buyer
Description	Buyer chooses to look for products for specific categories.
Pre-condition	None
Post Condition	None
Basic Flow:	<ul style="list-style-type: none">• Buyer will click on the Categories button.• He will be shown the Categories of Products present on the platform.• He can select a specific category of all the mentioned.

5.1.7 Add to Wishlist

Use Case	Add to wishlist
Actor	Buyer
Description	Buyer adds product to his/her wishlist.
Pre-condition	Must have logged in to the system.
Post Condition	Wishlisted products will be visible in the Wishlist page of the user profile.
Basic Flow:	<ul style="list-style-type: none">• Buyer after selecting a specific product, will click on 'Add to Wishlist' button• The product will be added to his/her 'Wishlist' page.

5.1.8 Request Seller Details

Use Case	Request Seller Details
Actor	Buyer
Description	Buyer sends a request to get details about the seller.
Pre-condition	Must have logged in to the system.
Post Condition	Requests will be sent to Seller.
Basic Flow:	<ul style="list-style-type: none">• Buyer after selecting a single product can click on request seller details.• Buyer will get a popup of Requests Sent on the screen.

5.1.9 Checkout

Use Case	Checkout
Actor	Buyer
Description	Buyer will confirm his purchase of the product on rent.
Pre-condition	Must have logged in to the system.
Post Condition	Order will be visible in MyOrders.
Basic Flow:	<ul style="list-style-type: none">After looking on the details of the product and clicking on 'Buy Now', he/she will be directed to 'Checkout' optionHe will display the details of purchase on the Checkout page, and on confirmation, the product will be updated in his orders.

5.2 Seller Use Case Models

5.2.1 Register/Sign-up for New Seller

Use Case	Signup
Actor	New Seller
Description	The user registers himself by filling up the details
Pre-condition	None
Post Condition	The user is now a registered seller on the platform. Sellers will be shown the homepage of the website.
Basic Flow:	<ul style="list-style-type: none">• The new user clicks on the Signup button and opens a form to register himself on site.• He will select the seller out of the option, fill the details asked in the form like name, email id, address and password for the account.• After successfully filling all the correct and valid details, he will submit the form.
Alternate Flow/s:	If the user doesn't insert any of the valid details, he will be prompted to fill that detail with a valid entry.
	In case the user is unable to register on the platform, he can browse through the products without registration.

5.2.2 Sign In Registered Seller

Use Case	Sign In
Actor	Registered Seller
Description	Seller Logs in to the system
Pre-condition	He/she must be a registered seller.
Post Condition	Seller is directed to the homepage of the website.
Basic Flow:	<ul style="list-style-type: none">The seller clicks on the Sign In button and opens a form to login himself on site.He will enter the username and password.After successfully filling all the correct and valid details, he will submit the form.
Alternate Flow/s:	If the user doesn't insert any of the valid details, he will be prompted to fill that detail with a valid entry.

5.2.3 Rent New Product

Use Case	View Products
Actor	New Seller, Registered Seller
Description	Seller gets overview as well as details of all the product
Pre-condition	None
Post Condition	None(Seller won't be shown buying option from seller account)
Basic Flow:	<ul style="list-style-type: none">• New/unregistered sellers can view all the products that are available for rent.• Also, can select a specific product and look out for other available details.
Alternate flow:	<ul style="list-style-type: none">• Registered buyers after login can see all the products on the home page.• He/she can navigate through them, and see the primary product information like photographs of product, name and price.• Registered Buyer can then select a specific product and look at all the available details about the product.

5.2.4 Manage Product

Use Case	Rent New Product
Actor	Registered Seller
Description	Seller adds a new product to the platform.
Pre-condition	He/she must be a registered seller.
Post Condition	New Product Successfully Added.
Basic Flow:	<ul style="list-style-type: none"> • Seller clicks on the Add New Product button. • He will be shown a form to fill the details about the product like product name, photograph, price of rent, format of price, end-date and availability status, category and description. • Clicking on submit he/she can see the product on the MyProducts page.
Alternate Flow/s:	If the user doesn't insert any of the valid details, he will be prompted to fill that detail with a valid entry.

5.2.5 Accept/Deny Request

Use Case	Manage Product
Actor	Register Seller
Description	The Seller Updates the details or delete the product
Pre-condition	He/she must be a registered seller.
Post Condition	Product description will be updated or product will be deleted.
Basic Flow:	<ul style="list-style-type: none"> • Seller clicks on the Manage Product button. • He/she will be shown to choose the option between Update and delete. • If he/she chooses an update then he can change any details field like photo, price, description etc.. • If he/she chooses a delete then the product will be deleted from the website.

5.2.6 Select by Category

Use Case	Accept/Deny Request
Actor	Registered Seller
Description	Sellers can see the request and accept/deny the request.
Pre-condition	He/she must have added a minimum of one product.
Post Condition	The buyer who sent the request will get the details.
Basic Flow:	<ul style="list-style-type: none"> • After receiving the request from the buyer, the seller can see the requests in 'My Requests'. • On accepting the request, the buyer will get the relevant contact information of the seller like address and email-id.
Alternate Flow/s:	<ul style="list-style-type: none"> • If the seller declines the request, the buyer will be shown a message of "Seller declined the request".

5.2.7 View Products

Use Case	Select by Category
Actor	Seller
Description	Seller chooses to look for products for specific categories.
Pre-condition	None
Post Condition	None
Basic Flow:	<ul style="list-style-type: none"> • Seller will click on the Categories button. • He/she will be shown the Categories of Products present on the platform. • He/she can select a specific category of all the mentioned.