Thapar Store

UCS318 Software Engineering Project Report

End-Semester Evaluation

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Group No: 1

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September 2023 TABLE OF CONTENTS

S.No.	Assignment
1.	**Project Selection Phase**
1.1	Software Bid
2.	**Planning Phase**
2.1	Abstract
2.2	Scope and Description
2.3	Work Breakdown Structure
2.4	Feasibility Report
2.5	Gantt Chart
3.	**Analysis Phase**
3.1	Use-Case template
3.2	Use Case diagram
3.3	Activity diagrams
3.4	Sequence Diagram
3.5	Data Flow Diagrams –Level 0, Level 1
3.6	Class Diagram

3.7	Sequence Diagram
3.8	Component Diagram
3.9	Deployment Diagram
3.10	Collaboration Diagram
3.11	Testing Report

PROJECT SELECTION PHASE

Software Bid

UCS318 SE Lab

Team Name: Frozen Coconuts

Please enter the names of your Preferred Team Members:

- You are required to form a **three to four** person teams.
- Choose your team members wisely. You will not be allowed to change teams.

Name	Roll number	Project Experience	Programming language used	Signature
Kaashvi Goel	102203687	1)Mess management app	Java, HTML	
Shriya Malik	102203926	1)Revenue prediction model 2)Currency conversion app	Python, Java	
Kavya Sikka	102203954	1) snakes and ladder game 2) stock market analysis project	python, MySQL	
Asavri Kaur	102203940	1)Personal Site 2) image to text to audio	HTML, python	

Programming Language / Environment Experience

List the languages you are most comfortable developing in, as a team, in your order of preference. Many of the projects involve Java or C/C++ programming.

1. HTML
2. C/C++

Choices of Projects:

Please select 4 projects your team would like to work on, by order of preference *Write at least one paragraph for each choice (motivation, reason for choice, feasibility analysis etc.)*

First Choice	**Thapar Store this project incorporates a store on a website where students at Thapar can sell their old books and room to other Thapar students.**
Second Choice	**Events Rent finding site** **The Rent Predictor application anticipates next year's property rental costs based on input data. It employs a machine learning prediction model, and we have the flexibility to select a suitable dataset from platforms like Kaggle.**

Third Choice	**Library seat finder** **It can be hard to find a seat at Nava Nalanda, Thapar's main library. This project aims to use a QR code-based setup that asks users to scan QRs on**
	selecting their seats in the library so that it is easier for students entering the library to check which seats have been occupied, therefore saving their time.
Fourth Choice	**Events** **There are several apps on the Internet that allow users to see upcoming events in their city/nearby places. However, it is hard for people to host their own pop ups and meet and greets and attract their target audiences. For example, dog lovers may be interested in meeting fellow dog families in their local park areas. Small businesses may wish to host their own pop up shops and use the project to market their product.** **This event finder project aims to allow users to host their own events as well as view upcoming activities and events near them.**

Additional Remarks/ Inputs

We want to work on this site as this project incorporates a store on a website where students at Thapar can sell their old books, room supplies such as mattresses and other items to other Thapar students. This is helpful to the students of Thapar as it streamlines the buying and selling process by verifying the identities of people involved in the purchase. This project can be expanded as a university-specific store where students and faculty from other universities can sell and purchase products from fellow university members on campus.

PLANNING PHASE

Abstract-

In today's digital age, physically looking for buyers for school and personal supplies is simply impractical. This ideology gave rise to "Thapar Store" – an exclusive online retail platform tailored for Thapar University students. This innovative solution fosters seamless buying and selling experiences, enhancing community engagement within the university ecosystem.

Thapar Store offers a dedicated virtual space for secure transactions, ranging from books to electronics, all accessible through a user-friendly interface. A powerful search, smart filters, and dedicated sections for new items simplify navigation.

The platform ensures security and exclusivity, built with HTML and CSS for the front end and Python with Django for the back end. Access is restricted to Thapar students, cultivating trust among buyers and sellers.

Thapar Store revolutionizes student interactions by providing a secure avenue for efficient transactions within a digital ecosystem. Its tech-savvy approach aligns with the university's ethos,

advancing custom solutions for the student community and eliminating the need for traditional, time-consuming physical searches for buyers.

Scope

Develop Thapar Store, an online retail platform for Thapar University students.

Objectives: create a user-friendly web platform with secure student authentication and product listings. Implement reviews, search, and filter features, enhancing user engagement with community-building tools. Ensure robust security and privacy.

Not in scope: transactions outside the university.

Budget and time constraints also apply.

Milestones: initiation, development, testing, launch, and ongoing maintenance. Stakeholders: Thapar students, university administration, and development team.

Description

Thapar Store is an exclusive online retail platform created for Thapar University students, providing a streamlined and user-friendly space for buying and selling within the university community. Catering to the distinct needs of students, it ensures a seamless experience.

The platform offers a secure login process via student authentication, enabling students to easily list and browse items, including textbooks, electronics, and clothing.

Thapar Store promotes trust and transparency through a robust rating and review system, allowing users to share feedback. Its powerful search and filter features make finding products efficient, saving time for busy students.

Community-building tools like forums create a sense of belonging, while stringent security measures protect user data in accordance with regulations.

Thapar Store enriches the university experience, connecting students, simplifying essential purchases, and fostering a thriving online marketplace within Thapar University.

Work Breakdown Structure

1. Project Initiation

Define project scope and objectives

- Identify stakeholders and gather requirements
- Develop a project plan and timeline

2. Requirements Analysis and Planning

- Conduct feasibility analysis
- Gather functional and non-functional requirements
- Prepare a detailed project schedule
- Define roles and responsibilities

3. System Design

- Create use case diagrams
- Develop use case templates
- Design activity diagrams
- Create swimlane diagrams
- Develop data flow diagrams
- Design class diagrams
- Create sequence diagrams

4. Create item listing forms

- Implement item search and filtering
- Develop item detail pages
- Design and implement the shopping cart functionality

5. Implementing the site on wordpress

- Setting up Xampp
- Setting up a database
- Building a website using wordpress
- Implementing Dokan
- Installing plugins

6. Testing and Quality Assurance

- Perform unit testing for front-end and back-end components
- Conduct integration testing
- Test security features and data protection
- Verify the functionality of user profiles, item listings, and the shopping cart • Perform performance testing to ensure fast loading times

7. Security and Compliance

- Review and enhance security measures
- Ensure compliance with data protection regulations
- Conduct security testing and vulnerability assessments
- Implement access controls for different admin roles

8. Deployment

- Deploy the system to a secure server
- Transferring local site to live site using wp-vivid.
- Using Hostinger to Host the website.
- Configure the production environment
- Perform final testing in the live environment
- Monitor system performance after deployment

9. User Training and Support

- Provide user training sessions for administrators, sellers, and buyers
- Set up a user support system for issue resolution and inquiries

10. Post-Deployment

- Monitor system performance and user feedback
- Make necessary improvements based on user feedback
- Plan for future enhancements and updates

11. Project Closure

- Review the project's success against its objectives
- Document lessons learned
- Archive project documentation
- Conduct a project closure meeting with stakeholders

Feasibility Report Schedule Feasibility

The deadlines proposed for the project carry huge importance. We need to schedule the sub-tasks and provide the accurate time required, which is necessary for the project's success. If we divide the work equally, the total project will take us six weeks to complete. This gives enough time for the project and ensures that it is completed in time for the evaluation.

Technical Feasibility

This mainly concentrates on technical assets available to the team. It finds out if the resources align with the project's needs and if the team has the skills to convert them into a working model. The software and languages needed for this project meet these requirements.

Economical Feasibility

The project uses IDEs, environments and open-source software that are easily and freely available. We incurred a small amount while buying the domain name to host our website.

Operational Feasibility

It looks into the daily processes of a company as well as the steps and actions needed for its routine and sustained upkeep. The e-commerce site would seamlessly integrate into the everyday life of a college student. It follows well-defined procedures and is easy to maintain.

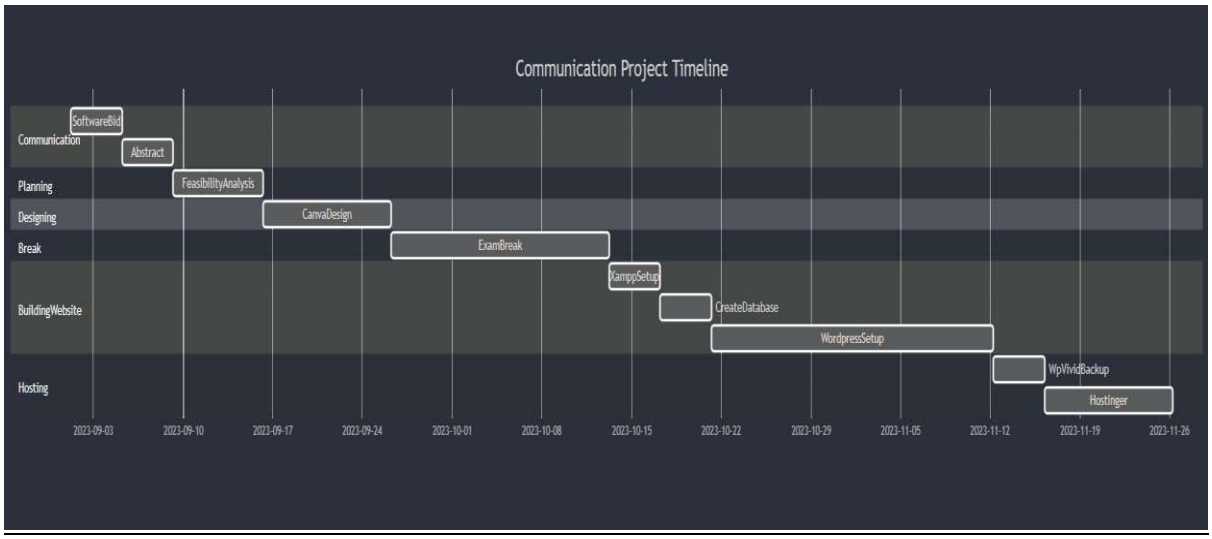
Legal Feasibility

The project does not break any laws regarding data protection or social media regulations. It also complies with the legal standards the Thapar sets and society in general. The site ensures a secure complaint platform for purchasing academic supplies from a verified student body.

Cultural/Behavioral Feasibility

The cultural/behavioral feasibility delves into the scientific, ethical and social aspects. The website is made for a diverse community. We have ensured that we don't hurt the sentiments of any culture, caste, religion and gender**.**

Gantt Chart



Functional Features for Thapar Store:

Easy Sign-Up and Secure Access:

- Thapar students can register using their university email.
- Incorporating two-factor authentication to ensure enhanced security.
- Password reset option available for forgotten credentials.

Personalized Profiles:

- Students can set up profiles, featuring personal information, a profile picture, and contact details.
- Easy editing of profile information for keeping things up-to-date.

Item Listings:

- Students can easily create listings for items they wish to sell.
- Listings include comprehensive details such as item title, description, price, category, condition, images, and location.
- Option to set fixed prices or allow negotiations.

Smart Search and Filtering:

- Users can search for items based on keywords and categories.
- Handy filters for refining search outcomes, like item condition, brand, and more.

Detailed Item Pages:

- Each item has its own dedicated page showcasing all relevant info and pictures.

Seamless Buying Process:

- Adding items to the cart is a breeze for purchasing.

User Ratings and Reviews:

- Students can rate and write reviews for sellers, reflecting their interactions and experiences.

Safety and Reporting:

- Users can flag suspicious or inappropriate listings, messages, or users for review.

Reliable Support System:

- Access to a user support system for issue resolution, inquiries, and assistance.

Non-Functional Features for Thapar Store:

Usability: Thapar Store will be used by college students with technical and non-technical backgrounds. This would mean that it should be intuitive and easy to use. A well-equipped homepage, easy checkout and details would ensure a seamless user experience.

Maintainability- we aim to provide a helpful solution for Thapar students now and in the coming years. Making the site maintainable from the initial phases of development would help cut the time and cost required to identify system bugs in the future.

Performance- the site would be working with heavy user traffic from the students. We want the site to load fast, irrespective of the integrations, fresher season, or hostel allotment days.

Security: The site would deal with sensitive student information. Different admin roles must be able to control who can create, see, copy, change and delete data.

DIAGRAMS

USE CASE TEMPLATE

Use Case ID:	**UC-001**
Use Case Title:	User Registration and Login
Description:	This use case describes the steps involved in user registration and login on the website.
Actors:	1. Guest (User who is not logged in)
Preconditions:	The website is accessible, and the user has an internet connection.
Basic Flow:	**Step**
1.	**User Registration**
2.	**Registration Confirmation**
3.	**User Login**
Alternate Flows:	**Step**
1.	**Invalid Login Credentials**
2.	**Email Verification Failure**

Postconditions:	- The user is registered and logged into the website. - The user can access their profile and perform authorized actions.
Exception Handling:	1. If there are technical issues or server downtime, the system should provide error messages and redirect users to a maintenance page.
Notes:	This use case template covers the essential steps involved in user registration and login on the website. Additional features such as password reset and account management can be added as needed.

Use Case ID:	**UC-002**
Use Case Title:	Buying a Product (Contact Seller)
Description:	This use case describes the steps involved when a buyer wishes to purchase a product, and the website provides contact information about the seller for the buyer to contact personally.
Actors:	1. Registered Buyer 2. Seller
Preconditions:	1. The user is logged into their account as a registered buyer. 2. The product listing is available on the platform, displaying the seller's contact information.
Basic Flow:	**Step**
1.	**Browse Products**
2.	**View Product Details**
3.	**Contact Seller**

4.	**Negotiate Terms**
5.	**Finalize Transaction**
6.	**Complete Purchase**
Alternate Flows:	**Step**
1.	**Product Unavailable**
Postconditions:	- The buyer successfully purchases the product from the seller through direct contact. - The platform may update the product listing to indicate that it's sold.
Exception Handling:	1. If there are issues with the product or payment disputes, the buyer and seller must resolve them independently, as the platform does not facilitate the transaction.
Notes:	This use case template outlines the process of a buyer purchasing a product where the website provides contact information for the seller. The actual communication and transaction details are handled externally by the buyer and seller.

Use Case ID:	**UC-003**
Use Case Title:	Sell a Product
Description:	This use case describes the steps involved when a registered user (seller) lists a product for sale on the e-commerce platform.

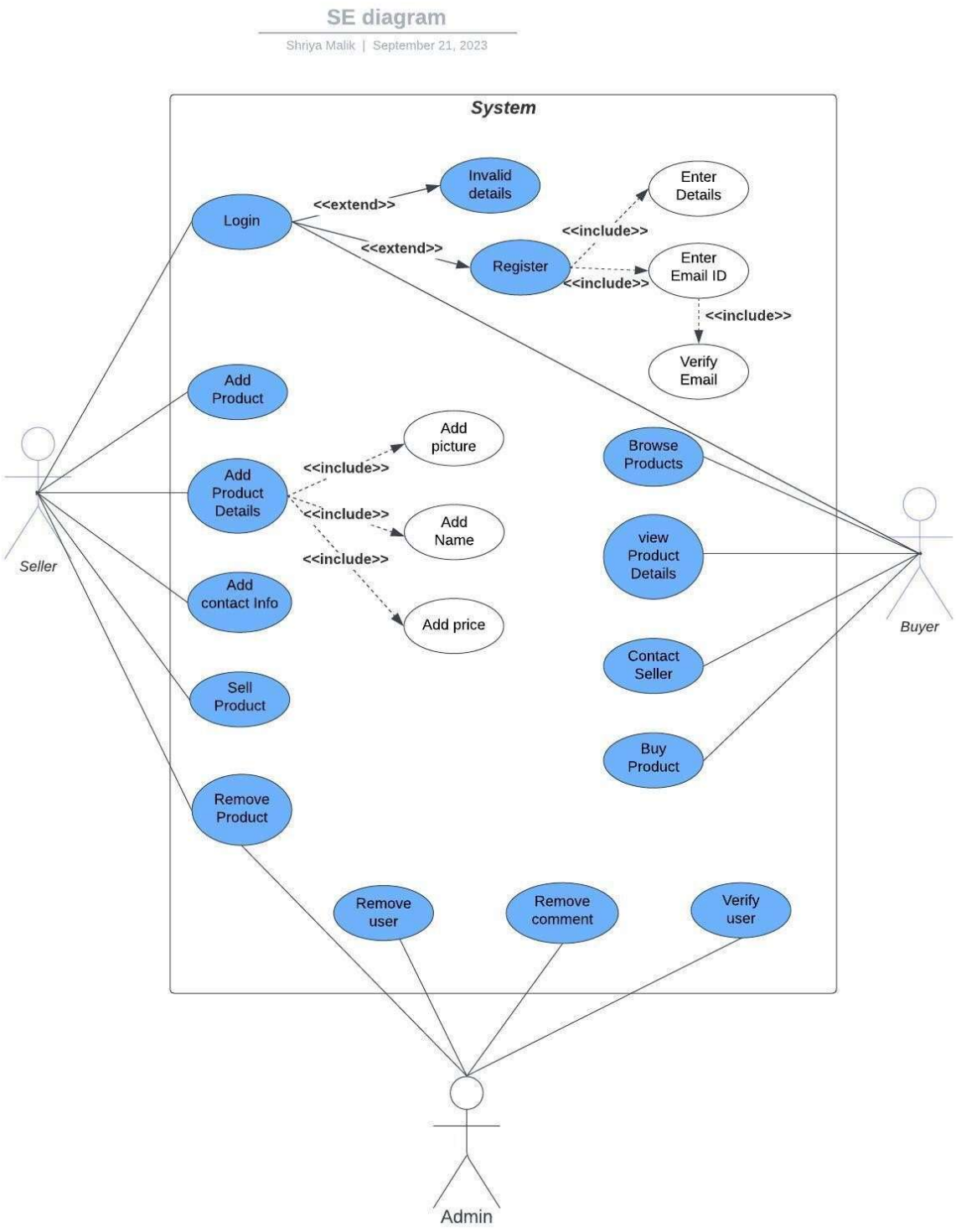
Actors:	1. Registered User (Seller)
Preconditions:	The user is logged into their account, and they have access to the e-commerce platform.
Basic Flow:	**Step**
1.	**Access Seller Dashboard**
2.	**Select "Sell a Product" Option**
3.	**Provide Product Details**
4.	**Set Product Availability**
5.	**Review and Confirm**
6.	**List Product**
Alternate Flows:	**Step**
1.	**Incomplete Listing Information**
2.	**Listing Suspension**
Postconditions:	- The product is successfully listed for sale on the platform. - The seller can view and manage their product listings in their seller dashboard.
Exception Handling:	1. If there are technical issues or server downtime during the listing process, the system should provide error messages and prompt the seller to try again later.

Notes:	This use case template outlines the steps involved when a registered user (seller) lists a product for sale on the e-commerce platform. Additional features such as editing listings and managing inventory can be added as needed.

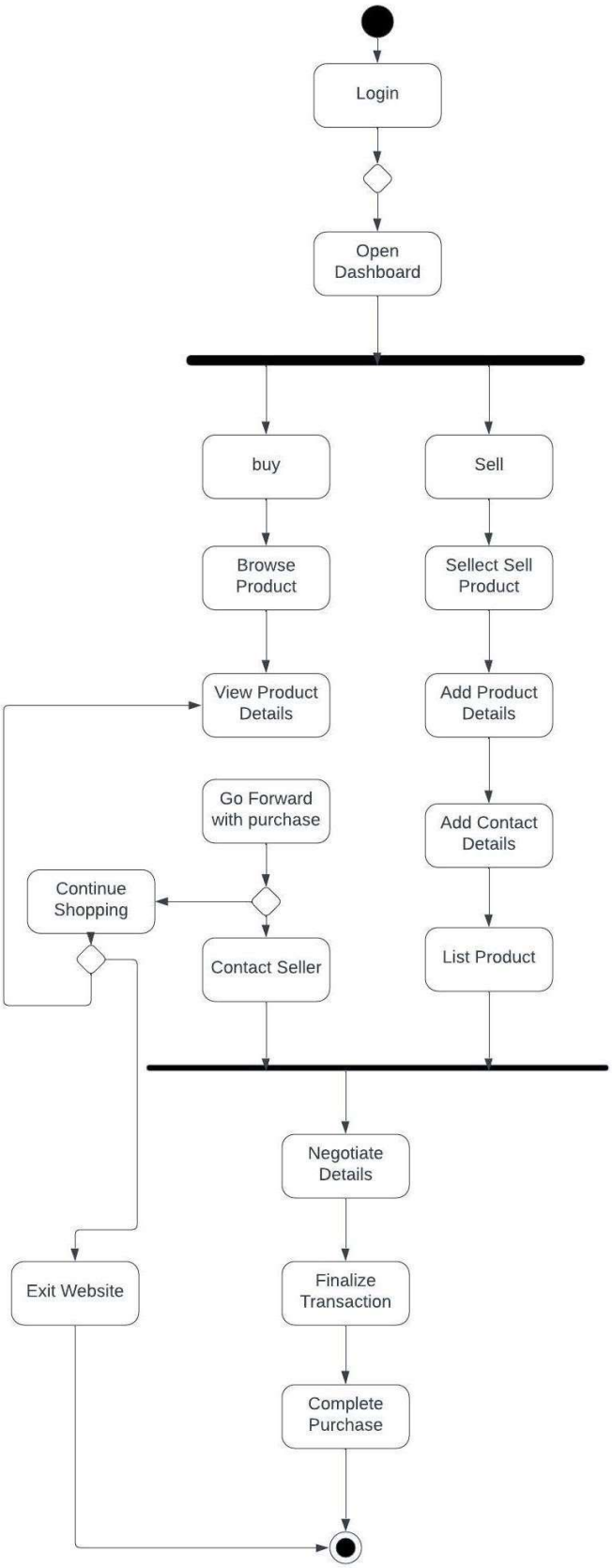
Use Case ID:	**UC-004**
Use Case Title:	Post-Purchase Actions
Description:	This use case describes the post-purchase actions, including writing a product review and complaining about other users on the e-commerce platform.
Actors:	1. Registered User (Buyer/Seller) 2. Administrator
Preconditions:	1. The user is logged into their account. 2. A successful purchase transaction has occurred. 3. The user has navigated to the relevant product or user profile.
Basic Flow:	**Step**
1.	**Write a Product Review**
2.	**Complain about Another User**
3.	**Administrator Review (Complaints)**
Alternate Flows:	**Step**

1.	**Inappropriate Review Content**
Postconditions:	1. Product reviews are displayed on the product page for other users to see. 2. Complaints about other users are recorded and investigated by the administrator. 3. Appropriate actions are taken based on the investigation results.
Exception Handling:	1. If there are technical issues or server downtime during the review writing or complaint reporting process, the system should provide error messages and prompt the user to try again later.
Notes:	This use case template outlines the steps for users to write product reviews and report complaints about other users. The administrator plays a crucial role in investigating and addressing reported complaints to maintain a safe and fair online marketplace environment. Additional features, such as dispute resolution mechanisms and user warnings, can be integrated as needed.

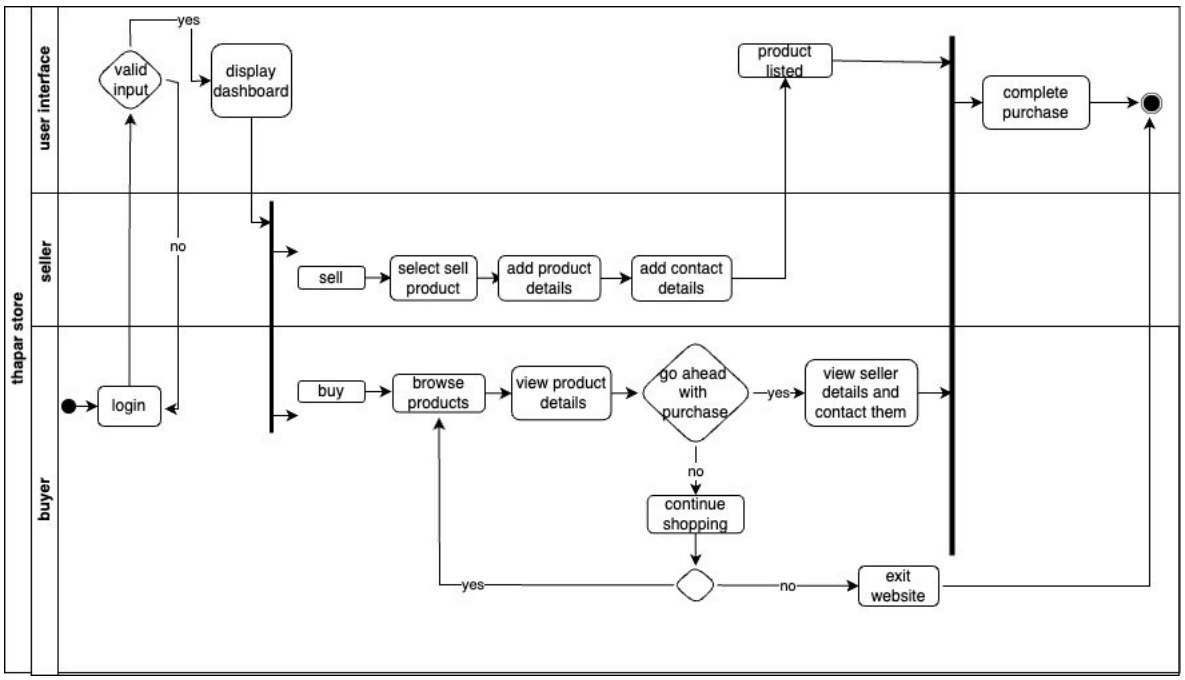
USE CASE DIAGRAM



ACTIVITY DIAGRAM

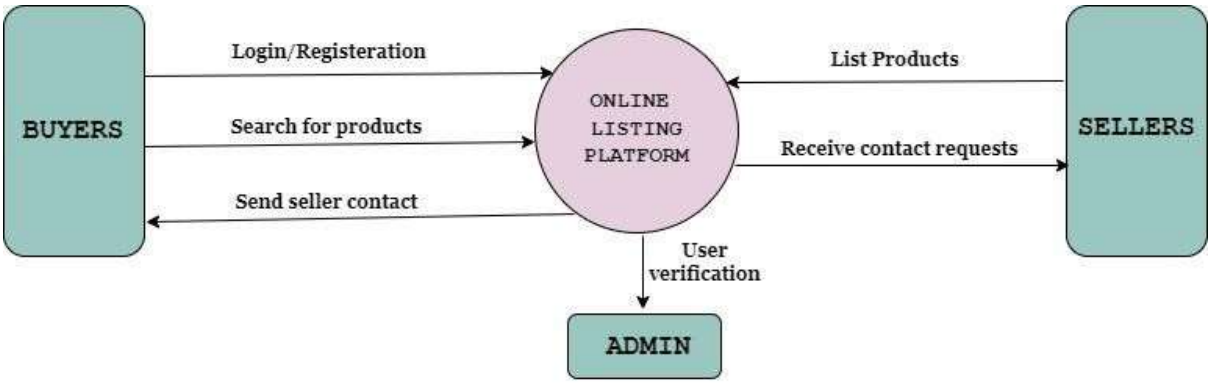


SWIMLANE DIAGRAM

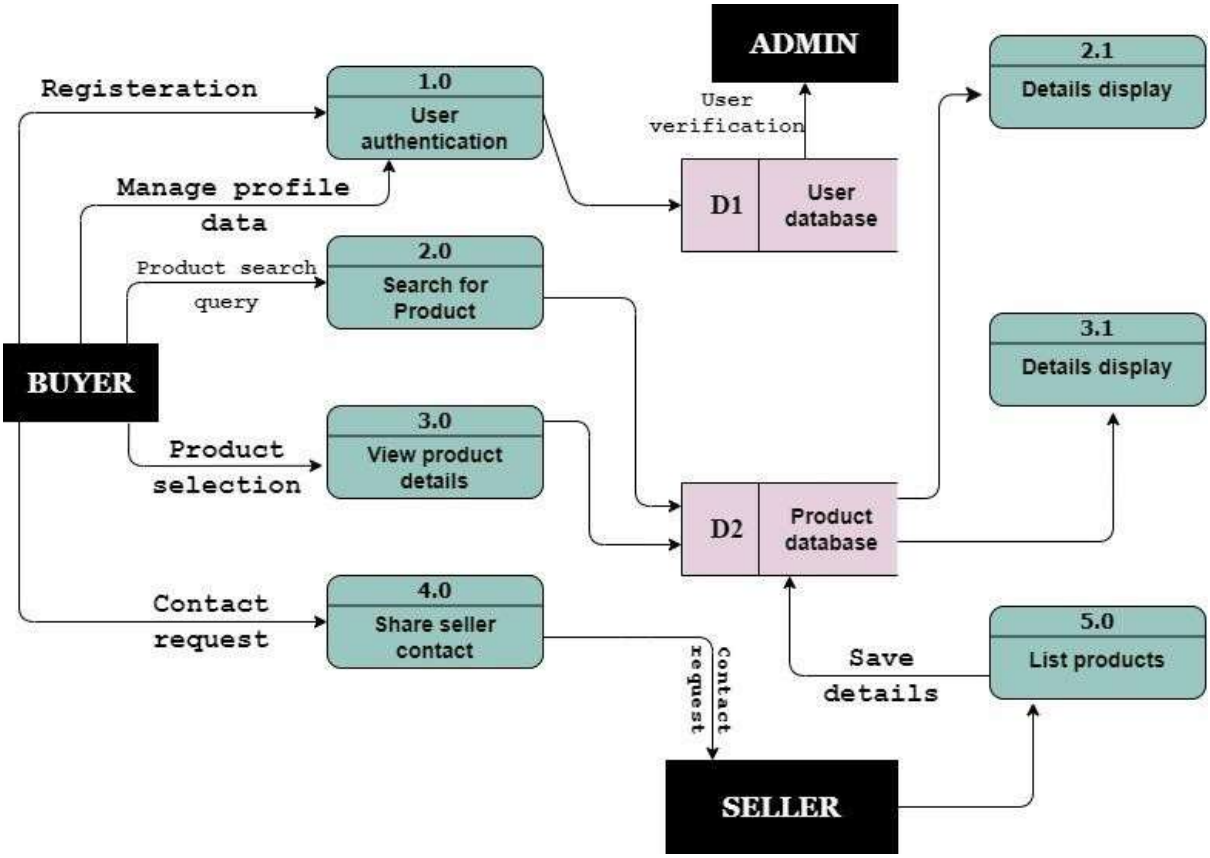


DATA FLOW DIAGRAM

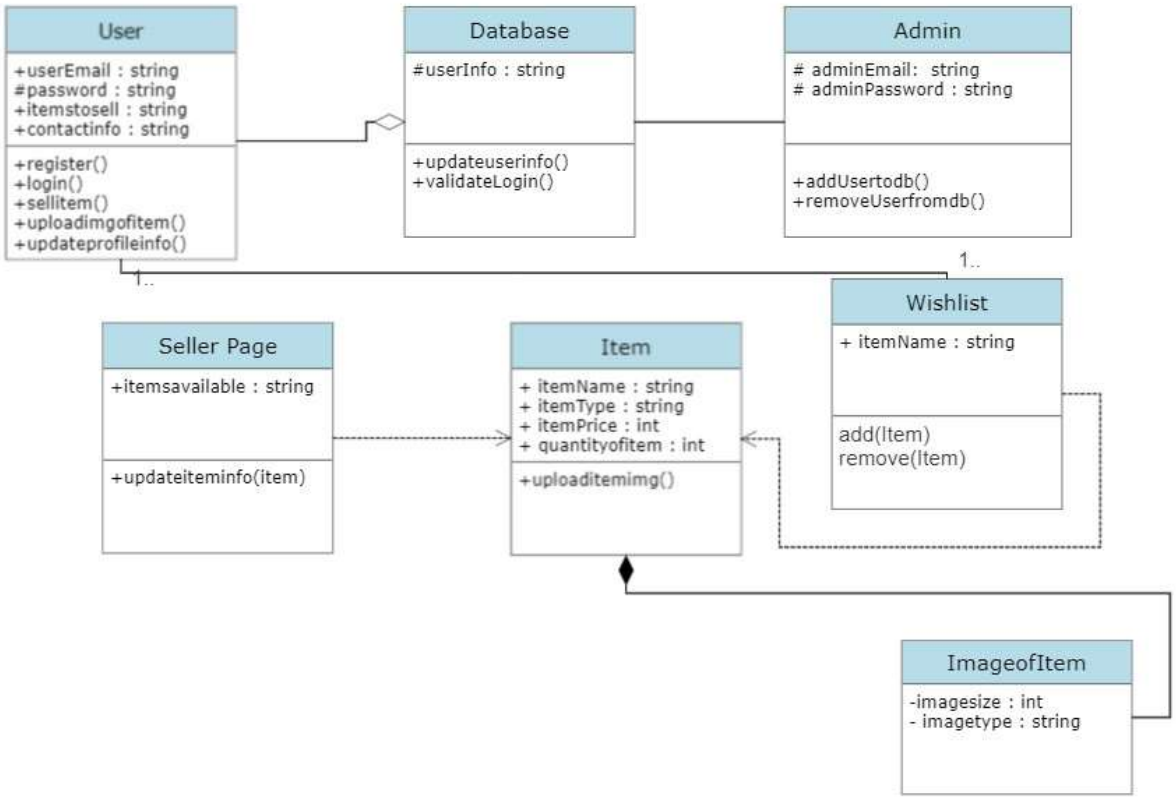
LEVEL 0:



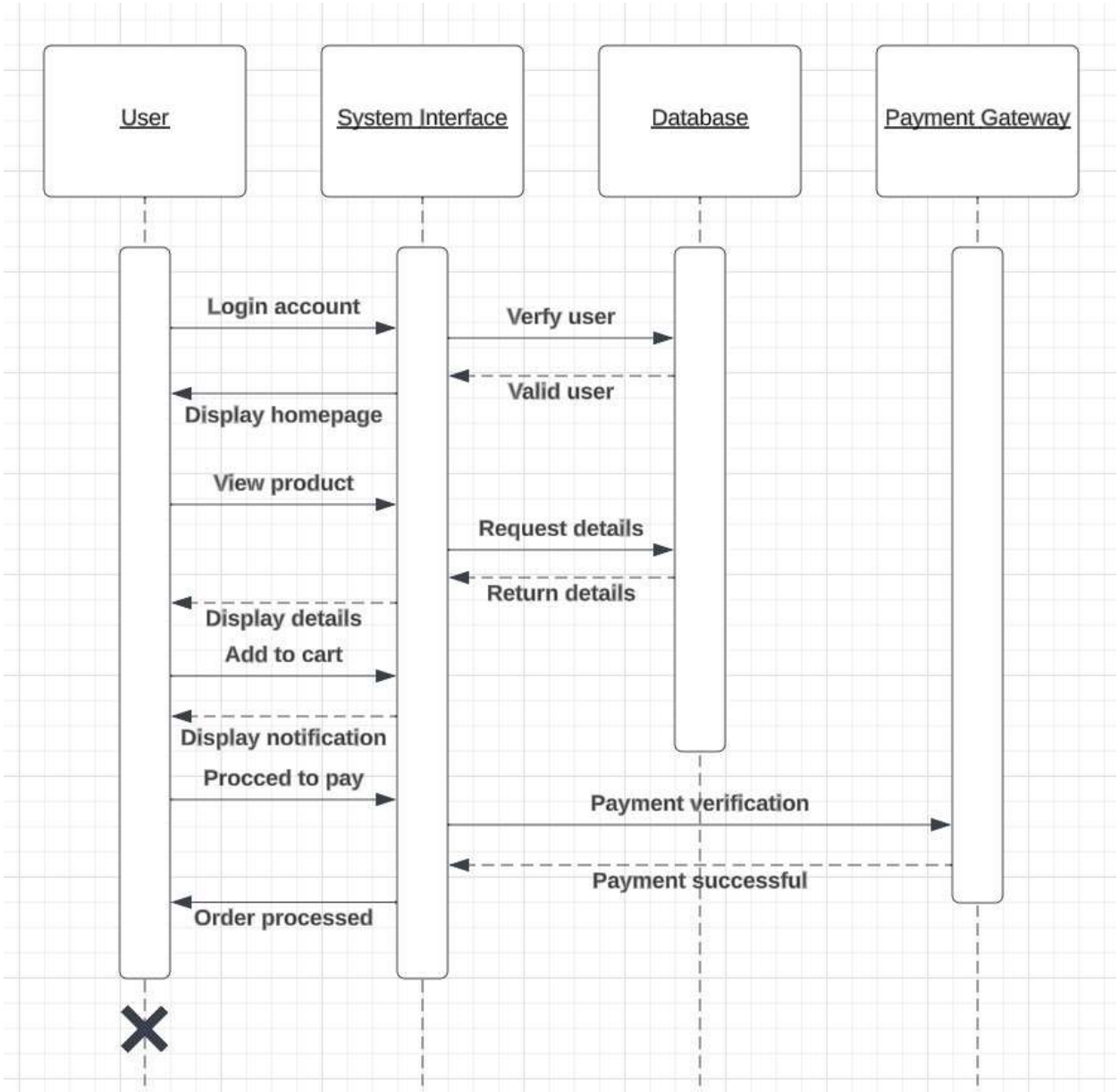
LEVEL 1:



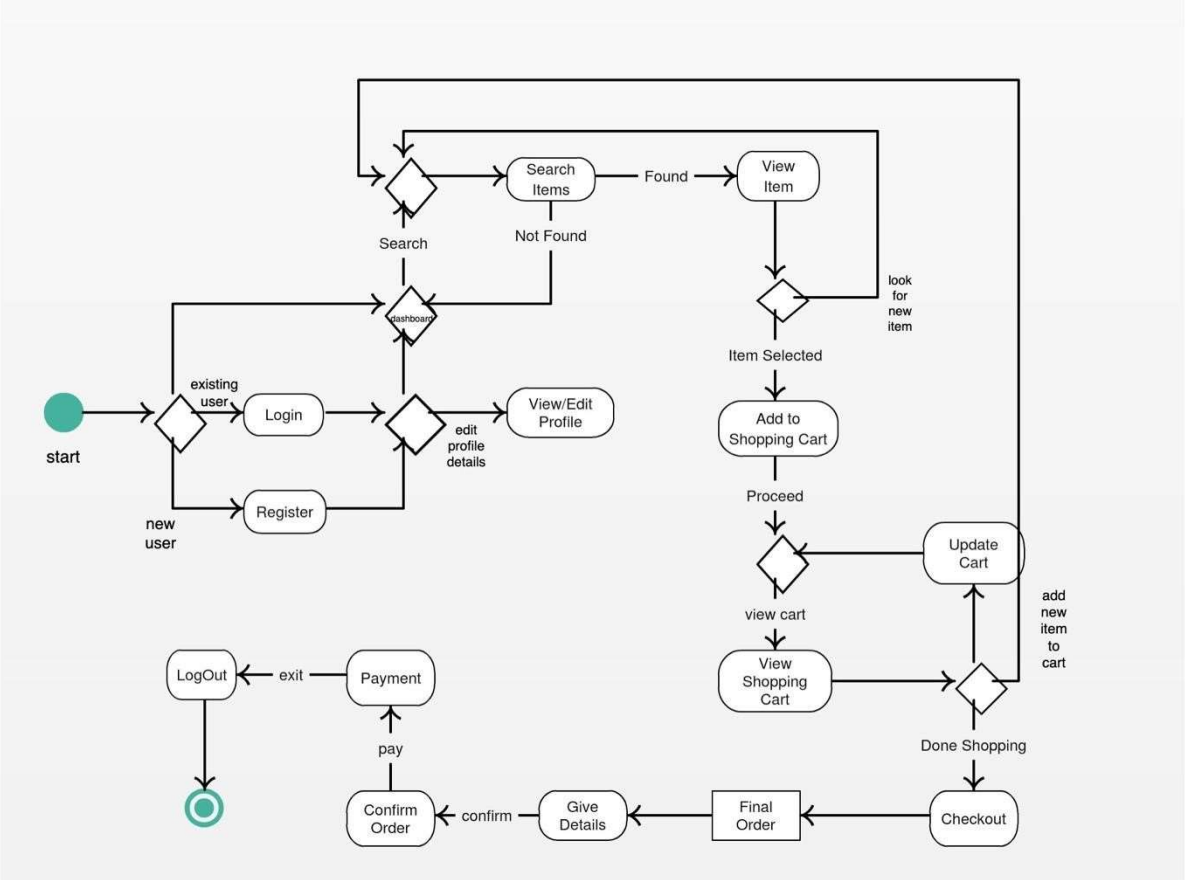
CLASS DIAGRAM



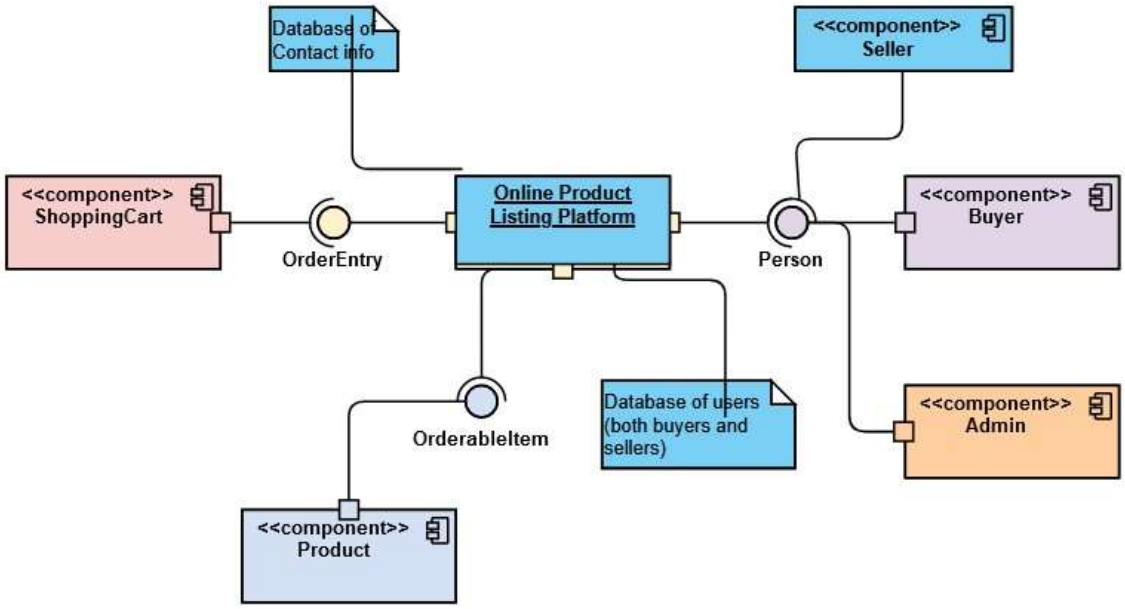
SEQUENCE DIAGRAM



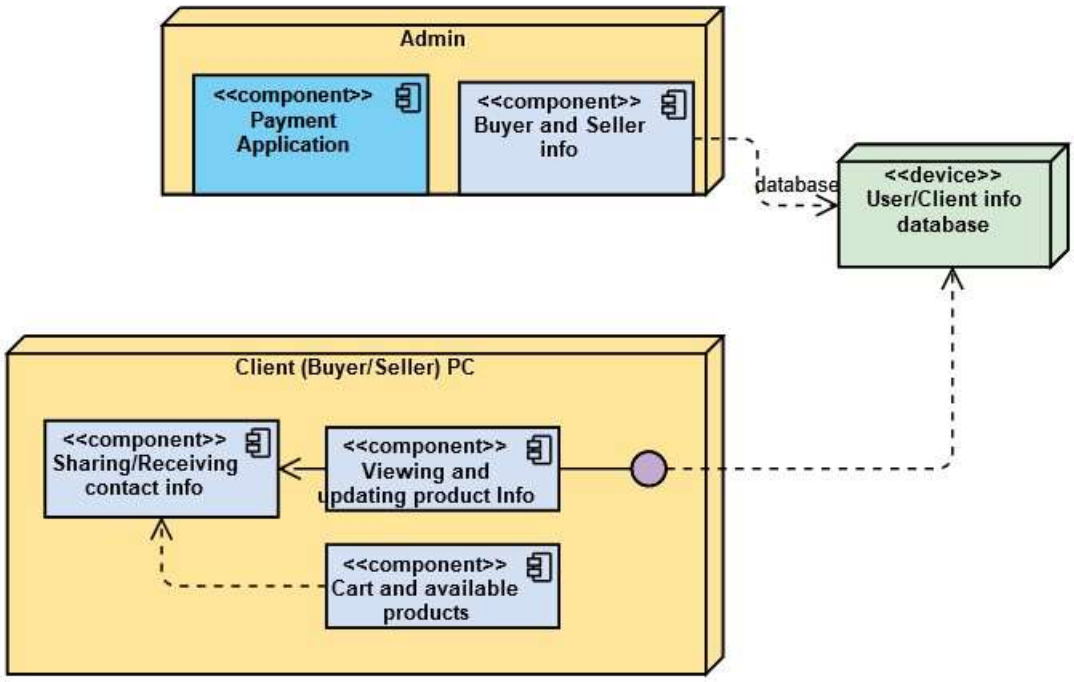
STATECHART DIAGRAM



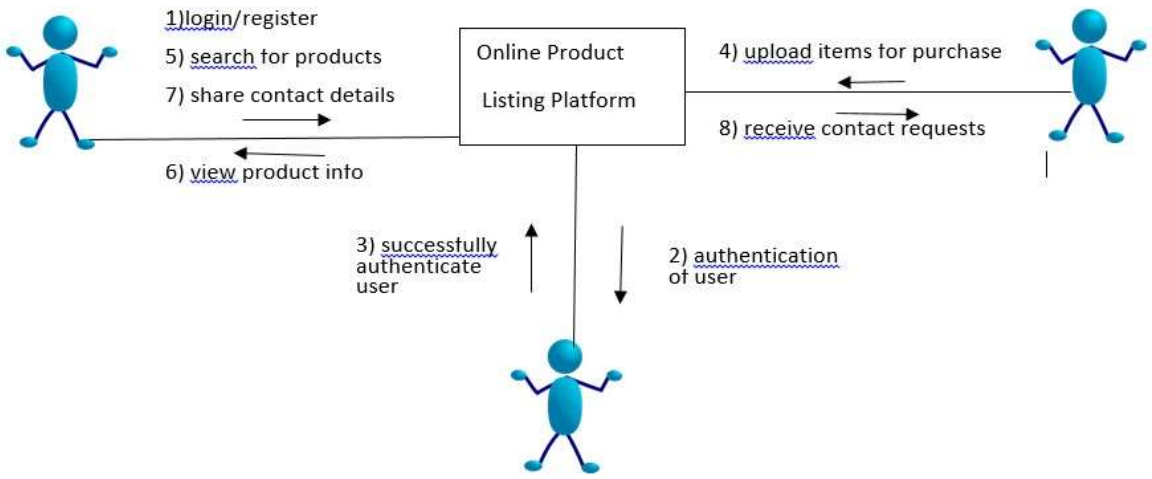
Component Diagram



Deployment Diagram



Collaboration Diagram



Thapar Store

HOME ALL PRODUCTS ABOUT CONTACT MY ACCOUNT VENDORS ₹0.00 0

Best Quality Products

One place for all your Thapar life needs!

Start Exploring Today!

GET STARTED >

Home / Hostelroom

Hostelroom

Showing all 2 results

Default sorting

Bathroom

Dustbin

☆☆☆☆☆

₹500.00

Hostelroom

Mirror

☆☆☆☆☆

₹350.00

Test Cases

Test Case ID	001	Test Case Description	Verify Successful Login
Created By	Shriya	Design Date	29/11/23

Tester's Name	Asavri	Date Tested	23/11/2023	Test Case (Pass/Fail/Not Executed)	Pass

Precondition:	User has a registered account

Short description	Ensure users can successfully log in with valid credentials.

Step #	Step Details	Actual Results	Pass / Fail / Not executed / Suspended
1.	Navigate to the login page.	As Expected	Pass
2.	Enter valid username and password.	As Expected	Pass
3.	Click on the "Login" button.	As Expected	Pass
Postcondition:	Product is successfully added to the cart, and the cart reflects the added product.		

Test Case ID	002	Test Case Description	Verify Successful Registeration
Created By	Shriya	Design Date	29/11/23

Tester's Name	Asavri	Date Tested	23/11/2023	Test Case (Pass/Fail/Not Executed)	Pass

Precondition:	User does not have an existing account.

Short description	Ensure users can successfully register for a new account.

Step #	Step Details	Actual Results	Pass / Fail / Not executed / Suspended
1.	Navigate to the registration page.	As Expected	Pass
2.	Enter valid registration details.	As Expected	Pass
3.	Click on the "Register" button.	As Expected	Pass
Postcondition:	User is successfully registered and on the home page.		

Test Case ID	003	Test Case Description	Verify Admin Approval of Clients
Created By	Shriya	Design Date	29/11/23

Tester's Name	Asavri	Date Tested	23/11/2023	Test Case (Pass/Fail/Not Executed)	Pass

Precondition:	Admin is logged in.

Short description	Test the functionality of the admin approving client registrations.

Step #	Step Details	Actual Results	Pass / Fail / Not executed / Suspended
1.	Access the admin panel.	As Expected	Pass
2.	Review pending client registrations.	As Expected	Pass
3.	Approve a client.	As Expected	Pass
4.	Verify the client's approval status is updated.	As Expected	Pass
Postcondition:			

Test Case ID	004	Test Case Description	Verify Dropdown Menu in Product Tab
Created By	Shriya	Design Date	29/11/23

Tester's Name	Asavri	Date Tested	23/11/2023	Test Case (Pass/Fail/Not Executed)	Pass

Precondition:	User is on the product tab page.

Short description	Test the functionality of the dropdown menu containing types of products in the product tab.

Step #	Step Details	Actual Results	Pass / Fail / Not executed / Suspended
1.	Navigate to the product tab.	As Expected	Pass
2.	Locate the dropdown menu containing types of products.	As Expected	Pass
3.	Click on the dropdown menu.	As Expected	Pass
4.	Select a product type from the dropdown.	As Expected	Pass
5.	Verify the display of products related to the selected type.	As Expected	Pass
Postcondition:	User can successfully navigate and select product types, and the associated products are displayed accordingly..		

Test Case ID	005	Test Case Description	Verify Adding Products to Cart
Created By	Shriya	Design Date	29/11/23

Tester's Name	Asavri	Date Tested	23/11/2023	Test Case (Pass/Fail/Not Executed)	Pass

Precondition:	User is on the product page and the cart is currently empty.

Short description	Test the functionality of adding products to the shopping cart.

Step #	Step Details	Actual Results	Pass / Fail / Not executed / Suspended
1.	Navigate to the product page.	As Expected	Pass
2.	Select a product to add to the cart.	As Expected	Pass
3.	Click on the "Add to Cart" button.	As Expected	Pass
4.	Verify the cart icon or summary.	As Expected	Pass
5.	Navigate to the cart to view added products.	As Expected	Pass
Postcondition:	Product is successfully added to the cart, and the cart reflects the added product.		

Test Case ID	006	Test Case Description	Verify Cart Functionality
Created By	Shriya	Design Date	29/11/23

Tester's Name	Asavri	Date Tested	23/11/2023	Test Case (Pass/Fail/Not Executed)	Pass

Precondition:	User has items in the cart..

Short description	Test the functionality of the shopping cart.

Step #	Step Details	Actual Results	Pass / Fail / Not executed / Suspended
View the cart.	View the cart.	As Expected	Pass
Update quantities or remove items.	Update quantities or remove items.	As Expected	Pass
Proceed to checkout.	Proceed to checkout.	As Expected	Pass
Postcondition:	User can successfully manage the cart and proceed to checkout.		

Test Case ID	007	Test Case Description	Verify Working of Coupon Code
Created By	Shriya	Design Date	29/11/23

Tester's Name	Asavri	Date Tested	23/11/2023	Test Case (Pass/Fail/Not Executed)	Pass

Precondition:	User has items in the cart and a valid coupon code.

Short description	Test the functionality of applying a coupon code during checkout.

Step #	Step Details	Actual Results	Pass / Fail / Not executed / Suspended
1.	Navigate to the cart page.	As Expected	Pass
2.	Locate the coupon code input field.	As Expected	Pass
3.	Enter a valid coupon code.	As Expected	Pass
4.	Apply the coupon code.	As Expected	Pass
5.	Verify the discounted order total.	As Expected	Pass
6.	Proceed to complete the checkout.	As Expected	Pass
Postcondition:	Order is successfully placed with the applied coupon code, and the discounted total is reflected in the order summary.		

Test Case ID	008	Test Case Description	Verify Free Delivery in Patiala Region
Created By	Shriya	Design Date	29/11/23

Tester's Name	Asavri	Date Tested	23/11/2023	Test Case (Pass/Fail/Not Executed)	Pass

Precondition:	User has items in the cart and is on the checkout page.

Short description	Test the functionality of free delivery being applied only for the Patiala region during the completion of a

	purchase..

Step #	Step Details	Actual Results	Pass / Fail / Not executed / Suspended
1.	Navigate to the checkout page.	As Expected	Pass
2.	Verify delivery options.	As Expected	Pass
3.	Select delivery address within Patiala region.	As Expected	Pass
4.	Verify the application of free delivery.	As Expected	Pass
5.	Proceed to complete the checkout.	As Expected	Pass
Postcondition:	Order is successfully placed with free delivery applied for the selected delivery address within the Patiala region.		

Test Case ID	009	Test Case Description	Verify Payment Processing
Created By	Shriya	Design Date	29/11/23

Tester's Name	Asavri	Date Tested	23/11/2023	Test Case (Pass/Fail/Not Executed)	Pass

Precondition:	User is on the checkout page.

Short description	Test the functionality of the payment gateway.

Step #	Step Details	Actual Results	Pass / Fail / Not executed / Suspended
1.	Select payment method.	As Expected	Pass
2.	Enter payment details.	As Expected	Pass
3.	Confirm payment.	As Expected	Pass
Postcondition:	Payment is successfully processed, and the user receives confirmation.		

Test Case ID	010	Test Case Description	Verify Viewing Previous Orders
Created By	Shriya	Design Date	29/11/23

Tester's Name	Asavri	Date Tested	23/11/2023	Test Case (Pass/Fail/Not Executed)	Pass

Precondition:	User is logged in and has placed previous orders.

Short description	Test the functionality of viewing a user's previous orders..

Step #	Step Details	Actual Results	Pass / Fail / Not executed / Suspended
1.	Navigate to the "Previous Orders" section.	As Expected	Pass
2.	Locate the list of previous orders.	As Expected	Pass
3.	Click on a specific order for details.	As Expected	Pass
4.	Verify the accuracy of order details.	As Expected	Pass
5.	Return to the list of previous orders.	As Expected	Pass
Postcondition:	User can successfully view details of previous orders and navigate back to the list of orders.		

Test Case ID	011	Test Case Description	Verify Contact Form Submission
Created By	Shriya	Design Date	29/11/23

Tester's Name	Asavri	Date Tested	23/11/2023	Test Case (Pass/Fail/Not Executed)	Pass

Precondition:	User is on the contact page.

Short description	Test the functionality of the contact form.

Step #	Step Details	Actual Results	Pass / Fail / Not executed / Suspended
1.	Fill in the contact form with valid details.	As Expected	Pass
2.	Click on the "Submit" button.	As Expected	Pass
Postcondition:	Contact form submission is successful.		

Test Case ID	012	Test Case Description	Verify Product Review Submission
Created By	Shriya	Design Date	29/11/23

Tester's Name	Asavri	Date Tested	23/11/2023	Test Case (Pass/Fail/Not Executed)	Pass

Precondition:	User is on the product page.

Short description	Test the functionality of submitting product reviews.

Step #	Step Details	Actual Results	Pass / Fail / Not executed / Suspended
1.	Write a product review.	As Expected	Pass
2.	Submit the review.	As Expected	Pass
3.	Verify the review is displayed on the product page.	As Expected	Pass
Postcondition:	Product review is successfully submitted and displayed.		