DealOye: An online platform for buying and selling study materials using web development technologies

Project Report

Submitted partial fulfillment of the requirement for the award of degree of

Bachelor of Technology
In
Information Technology

Submitted to

RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA,
BHOPAL (M.P.)

Guided By
Prof. Shahida Khan

Submitted By
Pavendra Singh Rajput (0827IT211081)
Sanjana Yadav (0827IT211104)
Soni Rathore (0827IT211114)
Vidhi Goyal (0827IT211128)
Vikas Agrawal (0827IT211130)

DEPARTMENT OF INFORMATION TECHNOLOGY
ACROPOLIS INSTITUTE OF TECHNOLOGY & RESEARCH,
INDORE (M.P.) 452020
2023-2024

Declaration

I hereby declared that the work, which is being presented in the project **entitled DealOye: An online platform for buying and selling study materials using web development technologies** partial fulfilment of the requirement for the award of the degree of **Bachelor of Technology**, submitted in the department of Information Technology at **Acropolis Institute of Technology & Research, Indore** is an authentic record of my own work carried under the supervision of "**Prof. Shahida Khan**". I have not submitted the matter embodied in this report for award of any other degree.

Pavendra Singh Rajput (0827IT211081)

Sanjana Yadav (0827IT211104)

Soni Rathore (0827IT211114)

Vidhi Goyal (0827IT211128)

Vikas Agrawal (0827IT211130)

Prof. Shahida Khan

Project Approval Form

I hereby recommend that the project **DealOye: An online platform for buying and selling study materials using web development technologies** prepared under my supervision of Pavendra Singh Rajput (0827IT211081), Sanjana Yadav (0827IT211104), Soni Rathore (0827IT211112), Vidhi Goyal (0827IT211128), Vikas Agrawal (0827IT211130) be accepted in partial fulfillment of the requirement for the degree of Bachelor of Engineering in Information Technology.

Prof. Shahida Khan

Supervisor

Recommendation concurred in 2023-2024

Prof. Deepak Chouhan

Project In charge

Prof. Shahida Khan

Project Coordinator

Acropolis Institute of Technology & Research

Department of Information Technology

Certificate

The project work entitled **DealOye: An online platform for buying and selling study materials using web development technologies** submitted by of Pavendra Singh Rajput (0827IT211081), Sanjana Yadav (0827IT211104), Soni Rathore (0827IT211112), Vidhi Goyal (0827IT211128), Vikas Agrawal (0827IT211130) is approved as partial fulfillment for the award of the degree of Bachelor of Technology in Information Technology by Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal (M.P.).

Internal Examiner

Name:…….

Date: …./…/……..

External Examiner

Name: ……..

Date: …./…/……..

Acknowledgement

With boundless love and appreciation, we would like to extend our heartfelt gratitude and appreciation to the people who helped us to bring this work. We would like to have some space of acknowledgement for them.

Foremost, our would like to express our sincere gratitude to our supervisor, Prof. Shahida Khan whose expertise, consistent guidance, ample time spent and consistent advice that helped us/me to bring this study into success.

To the project in-charge Prof. Deepak Chouhan and project coordinator Prof. Shahida Khan for their constructive comments, suggestions, and critiquing even in hardship.

To the Honorable Prof. (Dr.) Prashant Lakkadwala , Head, Department of Information Technology, for his favorable responses regarding the study and providing necessary facility.

To the Honorable Dr. S.C. Sharma , Director, AITR, Indore for his unending support, advice and effort to make it possible.

Finally, we would like to pay our thanks to faculty members and staff of the Department of Computer Science & Engineering for their timely help and support.

We also like to pay thanks to our/my parents for their eternal love, support and prayers. Without them it is not possible.

Pavendra Singh Rajput (0827IT211081)

Sanjana Yadav (0827IT211104)

Soni Rathore (0827IT211112)

Vidhi Goyal (0827IT211128)

Vikas Agrawal (0827IT211130)

Abstract

In response to the challenges faced by college students in India, particularly related to resource management, affordability, and sustainability, a dedicated online platform, "DealOye," has been developed to address these issues. This abstract provides a concise overview of what was done, why it was done, how it was done, what was found, and the significance of the findings.

What was it done? A comprehensive online platform, "DealOye," was created to facilitate the buying, selling, and sharing of used academic materials and other items among college students. The platform was designed to be user-friendly, college-specific, and environmentally conscious.

Why was it done? College students in India face significant challenges in managing resources, affordability, and sustainability while residing on campus. Existing methods for buying and selling items lacked transparency and security, making it difficult for students to access affordable educational resources. "DealOye" was developed to address these challenges and provide a transparent, secure, and sustainable solution for college students.

How was it done? The platform was designed as a full-stack website, with a user-friendly interface and mobile responsiveness. Users can list their items for sale, including product details and images. A messaging system was integrated for secure communication.

College-specific features were included to foster a sense of community and provide information about campus events and resources. Interactivity features were added to promote interactions between senior and junior students.

What is the significance of the findings?

The findings demonstrate the importance of creating a college-specific online marketplace that caters to the unique needs and challenges faced by students. "DealOye" not only simplifies resource management and reduces waste but also promotes a strong sense of community and mentorship among college students.

List Of Figures

Figure 1: Sequence Diagram 22
Figure 2: Class Diagram 23
Figure 3: Data Flow Diagram 23
Figure 4: Home Page 24
Figure 5: Signup Page 24
Figure 6: Login Page 24
Figure 7: Sell Page 25
Figure 8: Buy Page 25
Figure 9: Requirements Page 26
Figure 10: Dashboard Page 26
Figure 16: GitHub Commit Stats 35

List of Tables

Figure 11: Database 27

Figure 12: Products Table 27

Figure 13: Requirements Table 28

Figure 14: User Details Table 28

Figure 15: Wishlist Table 28

Abbreviations

DOP: DealOye Platform

HTML: Hyper Text Markup Language

CSS: Cascading Style Sheet

JS: JavaScript

ERD: Entity Relationship Diagram

DFD: Data Flow Diagram

UI: User Interface

UX: User Experience

Node.js: A JavaScript runtime environment

API: Application Programming Interface

UML: Unified Modelling Language

Table of Content

Declaration 2
Project Approval Form 3
Acknowledgement 5
Abstract 6
List of Figures 7
List of Tables 8
Abbreviations 9
Chapter 1: Introduction 12
1.1 Rationale 12
1.2 Existing System 13
1.3 Problem Formulation 13
1.4 Proposed System 13
1.5 Objectives 13-14
1.6 Contribution of the Project 14
1.6.1 Market Potential 14
1.6.2 Innovativeness 14
1.6.3 Usefulness 14
1.7 Report Organization 14-15
Chapter 2: Requirement Engineering 16
2.1 Feasibility Study (Technical, Economical, Operational) 16
2.2 Requirement Collection 16
2.2.1 Discussion 16
2.2.2 Requirement Analysis 17
2.3 Requirements 17
2.3.1 Functional Requirements 17
2.3.1.1 Statement of Functionality 17
2.3.2 Nonfunctional Requirements 17
2.3.2.1 Statement of Functionality 18
2.4 Hardware & Software Requirements 18
2.4.1 Hardware Requirement (Developer & End User) 18
2.4.2 Software Requirement (Developer & End User) 19

2.5 Use-case Diagrams 19
2.5.1 Use-case Descriptions 20
Chapter 3: Analysis & Conceptual Design & Technical Architecture 21
3.1 Technical Architecture 21
3.2 Sequence Diagrams 22
3.3 Class Diagrams 23
3.4 DFD 23
3.5 User Interface Design 24-26
3.6 Data Design 27-28
Chapter 4: Implementation & Testing 29
4.1 Methodology 29
4.1.1 Proposed Algorithm 29
4.2 Implementation Approaches 29
4.2.1 Introduction to Languages, IDEs Tools and Technologies 29
4.3 Testing Approaches 30
4.3.1 Unit Testing 30
a. Test Cases 30
4.3.2 Integration Testing 30
b. Test Cases 30
Chapter 5: Results & Discussion 31
5.1 User Interface Representation 31
5.1.1 Brief Description of Various Modules 31
5.2 Snapshot of System with Brief Description 31
5.3 Database Description 31
5.3.1 Snapshot of Database Tables with Brief Description 31
5.4 Final Findings 32
6. Conclusion & Future Scope 33
6.1 Conclusion 33
6.2 Future Scope 33
REFERENCES 34
Appendix A: Project Synopsis
Appendix B: Guide Interaction Report (*Dully Signed by Guide)
Appendix C: User Manual

CHAPTER 1: INTRODUCTION

In conclusion, "DealOye" represents a valuable solution to the challenges faced by college students, offering a user-friendly, sustainable, and community-oriented platform that empowers students while promoting environmental consciousness and cost savings.

1.1 Rationale:

The "DealOye" platform for college students is founded on a compelling rationale, born out of the significant challenges that students encounter during their higher education journey in India.

The college experience in India is a pivotal stage where students undergo academic growth, personal development, and the exploration of their passions.

Resource Management: College students often grapple with the efficient management of their resources. The absence of effective resource management systems can lead to inefficiencies and increased expenses for students.

1.2 Existing System

The existing landscape of platforms catering to buying and selling among users offers a diverse array of options, each with its own set of advantages and limitations.

Mercari: Mercari has earned favor among users for its hassle-free selling experience, as it does not deduct any fees from the sale. While it excels in some respects, its narrow focus might not fully serve the needs of college students looking to exchange educational materials.

Poshmark: Poshmark, on the other hand, is viewed as a more professional option with a strong focus on clothing. This fee structure may not align with the budget-conscious nature of college students.

Letgo: Letgo differentiates itself by offering a broader range of products beyond fashion and electronics. This specialization is essential for a platform catering specifically to the needs of college students.

Vinted: Vinted is a fashion-centric platform and presents another alternative, although it may have a smaller user base compared to the larger competitors.

AllStudyX: AllStudyX emerges as a unique addition to the landscape. This platform stands out by focusing on college campus-based exchanges and encouraging the sharing of various used products.

1.3 Problem Formulation

The "DealOye" project is grounded in a well-defined problem formulation, driven by a deep understanding of the challenges faced by college students in India. College life is a transformative journey, a time of academic growth, personal development, and exploration of interests.

1.4 Key Features of "DealOye"

"DealOye" is not just a marketplace; it is a comprehensive solution that addresses the challenges faced by college students and goes beyond peer-to-peer commerce.

Transparent and Secure Transactions: It ensures that every transaction is reliable, with user verification and a secure payment system to protect both buyers and sellers.

Specialization in Academic Resources: It provides a platform exclusively for buying, selling, and sharing textbooks, study materials, research tools, and other academic essentials.

Sustainable Practices: The platform promotes sustainability by encouraging students to reuse and share academic materials, reducing waste and the environmental impact of college life.

1.4.1 Transformative Impact

By promoting reuse and recycling of academic materials, "DealOye" contributes to sustainability by minimizing waste, ultimately having a positive impact on the environment.

1.5 Objectives

The objectives of the "DealOye" project are multifaceted, encompassing the core goals and outcomes that the platform aspires to achieve.

1. Save Money: "DealOye" aims to provide affordable deals for students, granting them access to vital educational resources without imposing an overwhelming financial burden.
2. Convenience: The platform streamlines transactions on campus, simplifying the process of buying, selling, or giving away items for students.
3. Reduce Waste: "DealOye" promotes sustainability by encouraging the reuse and sharing of books and materials, ultimately curbing waste.
4. Access to Educational Resources: "DealOye" is designed to bolster academic success by ensuring students have access to crucial study aids, books, and other educational materials.
5. Connect with Peers: The platform aims to foster a sense of community within the college by linking students and enabling them to interact, share experiences, and collaborate on educational endeavors.

1.6 Contribution of Project

The "DealOye" project brings forth several substantial contributions to the landscape of resource management and peer-to-peer commerce among college students.

1.6.1 Market Potential

Objective: To assess the market potential and the impact "DealOye" can have on the target audience.

1.6.2 Innovativeness

Objective: To highlight the innovative aspects of "DealOye" that set it apart from existing platforms.

1.6.3 Usefulness

Objective: To emphasize the practical usefulness of "DealOye" for college students.

1.7 Report Organization

The structure and organization of this report are integral to effectively communicate the details, rationale, and significance of the "DealOye" project.

1. Title Page: The title page serves as the introduction to the report, providing essential information such as the project's title, authors, institutional affiliation, and the date of publication.

2. Abstract: The abstract is a concise yet comprehensive summary of the entire report. It encapsulates the critical elements of the project, including its objectives, methodology, findings, and significance, in approximately 350 words.

3. Introduction: The introduction section lays the foundation for the report, establishing the context of the "DealOye" project. It outlines the problem statement, discusses the challenges faced by college students, and introduces the proposed solution.

4. Problem Formulation: This section delves into a detailed analysis of the problems that "DealOye" seeks to address. It emphasizes the significance of these problems, their implications on students, and the rationale behind developing the platform.

5. Existing System: The existing system section conducts a comprehensive survey of the current landscape of peer-to-peer commerce platforms, focusing on resource management among college students.

6. Proposed System: The proposed system section is a detailed exposition of the "DealOye" platform. It outlines its key features, technologies, and the transformative impact it aims to bring to college life.

7. Objectives: The objectives section elaborates on the core goals of the "DealOye" project. It delves into the rationale behind each objective and highlights the significance of achieving them.

8. Contribution of the Project: This section underscores the contributions of the "DealOye" project, focusing on three key aspects: market potential, innovativeness, and usefulness.

9. Report Organization: The report organization section, which you are currently reading, serves as a guide to the report's structure.

10. Conclusion: The conclusion section summarizes the key takeaways from the report, emphasizing the significance of the "DealOye" project and its potential impact.

11. Limitations: This section discusses the limitations and challenges that "DealOye" may face.

CHAPTER 2: REQUIREMENT ENGINEERING

2.1 Feasibility Study (Technical, Economical, Operational)

The feasibility study for the "DealOye" project is a critical step in evaluating the practicality and viability of the platform.

2.1.1 Technical Feasibility

1. Uses HTML, CSS, JavaScript, Node.js, Express.js, and MongoDB.
2. Needs a skilled web development team.
3. Must be scalable for future growth.

2.1.2 Economic Feasibility

1. Requires budget for development, marketing, and maintenance.
2. Revenue through ads, premium features, or transaction fees.
3. Conduct cost-benefit analysis to assess value.

2.1.3 Operational Feasibility

1. Ensure student adoption and active usage.
2. Integrate campus-specific features effectively.
3. Regular updates, maintenance, and content moderation needed.

2.2 Requirement Collection

It involves gathering, discussing, and analyzing the specific needs and expectations of the project to ensure that it aligns with the objectives and serves the target audience effectively.

2.2.1 Discussion

1. User Needs: This includes their requirements for academic materials, study aids, and other resources that "DealOye" aims to fulfill.

2. Features and Functionality: Stakeholders discuss the desired features and functionalities of the platform, considering elements like product listings, search capabilities, user profiles, and community-building features.

3. Mobile Responsiveness: The importance of mobile optimization is emphasized, given the tech-savvy nature of college students.

2.2.2 Requirement Analysis

Requirement analysis delves into the specific needs and expectations gathered during the discussions.

1. Academic Materials Listings: Requirement analysis includes defining the specific details that users can provide when listing academic materials.
2. Search and Filtering Functionality: The analysis focuses on how users can search for products and filter results.
3. Mobile Optimization: Requirement analysis assesses the extent of mobile optimization required, considering different devices and operating systems to ensure a seamless mobile experience.

2.3 Requirements

The requirements for the "DealOye" project can be categorized into functional and nonfunctional requirements.

2.3.1 Functional Requirements

Functional requirements specify the features and functionalities that the "DealOye" platform must possess to meet user needs and achieve its objectives.

2.3.1.1 Statement of Functionality

Statement of Functionality for "DealOye" outlines the core functional requirements that are integral to the platform's operation and user experience:

1. User Registration and Profiles: Users can create accounts using college email IDs and set up profiles with name, profile picture, and contact info.
2. Product Listings: Users can list academic materials for sale/rent, including title, author, edition, condition, price, category, and description.
3. Search and Filtering: Robust search and filters help users refine results to find relevant listings.

2.3.2 Nonfunctional Requirements

Nonfunctional requirements focus on aspects of the platform that do not involve specific features but are essential for its overall performance, security, and user experience.

2.3.2.1 Statement of Functionality

Statement of Functionality for nonfunctional requirements in "DealOye" includes the following key aspects:

1. Performance: The platform should deliver high performance, ensuring fast loading times and responsiveness to user interactions.
2. Security: Data security is paramount. "DealOye" should employ encryption and secure payment systems to protect user information and transactions.
3. Scalability: The platform must be designed for scalability, allowing it to accommodate a growing number of users and listings as it expands.

2.4 Hardware & Software Requirements

The hardware and software requirements for the "DealOye" platform are essential considerations for both developers and end-users.

2.4.1 Hardware Requirement (Developer & End User)

2.4.1.1 Hardware Requirements for Developers:

Developers working on the "DealOye" platform require the following hardware specifications:

1. Processor: Multi-core, e.g., Intel Core i3 or higher.
2. Monitor: Resolution of 1920x1080 or higher.
3. Internet: High-speed connection for collaboration and data transfer.
4. Input Devices: Standard mouse and keyboard.
5. Storage: Minimum 64 GB capacity.
6. RAM: At least 1 GB for smooth IDE operation.

2.4.1.2 Hardware Requirements for End Users:

End-users accessing the "DealOye" platform require relatively standard hardware configurations, as the platform is designed to be accessible to a wide audience:

1. Device: End-users can access "DealOye" on various devices, including personal computers, laptops, smartphones, and tablets.

2. Internet Connection: An internet connection is essential for accessing the platform, searching for products, and engaging in transactions. Both wired and wireless connections are suitable.

3. Input Devices: Users should have access to standard input devices such as a keyboard and mouse or touchpad for navigating the platform.

2.4.2 Software Requirement (Developer & End User)

2.4.2.1 Software Requirements for Developers:

Developers working on the "DealOye" project require specific software tools and environments for coding and project management:

1. Operating System: Windows 10 for stable, supported development.
2. Text Editors/IDEs: Visual Studio Code (v1.72+) or similar IDEs.
3. Database: MySQL (v5.6) for data management.
4. Version Control: Git and GitHub for code collaboration.
5. Web Development Tools: Node.js (v18), Express.js (v4.18.1), and proficiency in HTML5, CSS3, and JavaScript ES12.

2.4.2.2 Software Requirements for End Users:

End-users accessing the "DealOye" platform need standard software configurations for a seamless experience:

1. Web Browser: End users can access "DealOye" through popular web browsers, including Google Chrome, Mozilla Firefox, Microsoft Edge, or Safari.

2. Mobile App: For users accessing the platform on mobile devices, the "DealOye" mobile app, available on Android and iOS, is recommended for the best mobile experience.

2.5 Use-case Diagrams

Use-case diagrams are a visual representation of how users interact with a system and the specific actions or functions they can perform.

2.5.1 Use-case Descriptions

1. User Registration and Profile Creation:

a. Actors: College students.
b. Main Flow: Create accounts using college email, name, profile picture, contact info; platform verifies emails.
c. Alternate Flow: Registration denied if email is not from a recognized college domain.

2. Product Listing:
    a. Actors: Sellers (college students).
    b. Main Flow: Enter product details (title, author, edition, condition, price, category, description) and upload images.
    c. Alternate Flow: Prompt to complete listing if required details are missing.
3. Product Search and Filtering:
    a. Actors: College students.
    b. Main Flow: Search by keywords, apply filters (type, college, category, price), and view results.
    c. Alternate Flow: Notify users if no results match; suggest alternatives.
4. Messaging System:
    a. Actors: College students.
    b. Main Flow: Secure communication for inquiries, negotiation, and deal confirmation.
    c. Alternate Flow: Initiate reporting/moderation for inappropriate behavior.
5. User Profile Management:
    a. Actors: College students.
    b. Main Flow: Manage profiles, view active listings, mark items as sold/rented, manage wishlists.

CHAPTER 3: ANALYSIS & CONCEPTUAL DESIGN & TECHNICAL ARCHITECTURE

3.1 Technical Architecture

The technical architecture of the "DealOye" platform is a fundamental aspect that determines how the system is structured and how its various components interact to deliver a seamless user experience.

Client-Side:

"DealOye" provides user interfaces accessible via web browsers and mobile apps for smartphones and tablets. It supports popular browsers like Google Chrome, Mozilla Firefox, Microsoft Edge, and Safari. Mobile apps for Android and iOS ensure a user-friendly, optimized experience, crucial for tech-savvy college students.

Server-Side:

The platform's server-side architecture manages client requests and core functionalities. Web servers route requests, while application servers handle business logic for processes like user registration, product listings, and messaging. A robust database supports data storage and management.

Network Infrastructure:

A secure network infrastructure ensures reliable data transmission. Load balancers distribute traffic across servers for scalability, while firewalls provide security against unauthorized access. Content Delivery Networks (CDNs) enhance loading times and reduce latency for users in different locations.

3.2 Sequence Diagrams

In the "DealOye" project, a sequence diagram can illustrate how users interact with the platform, from browsing products to contacting sellers.

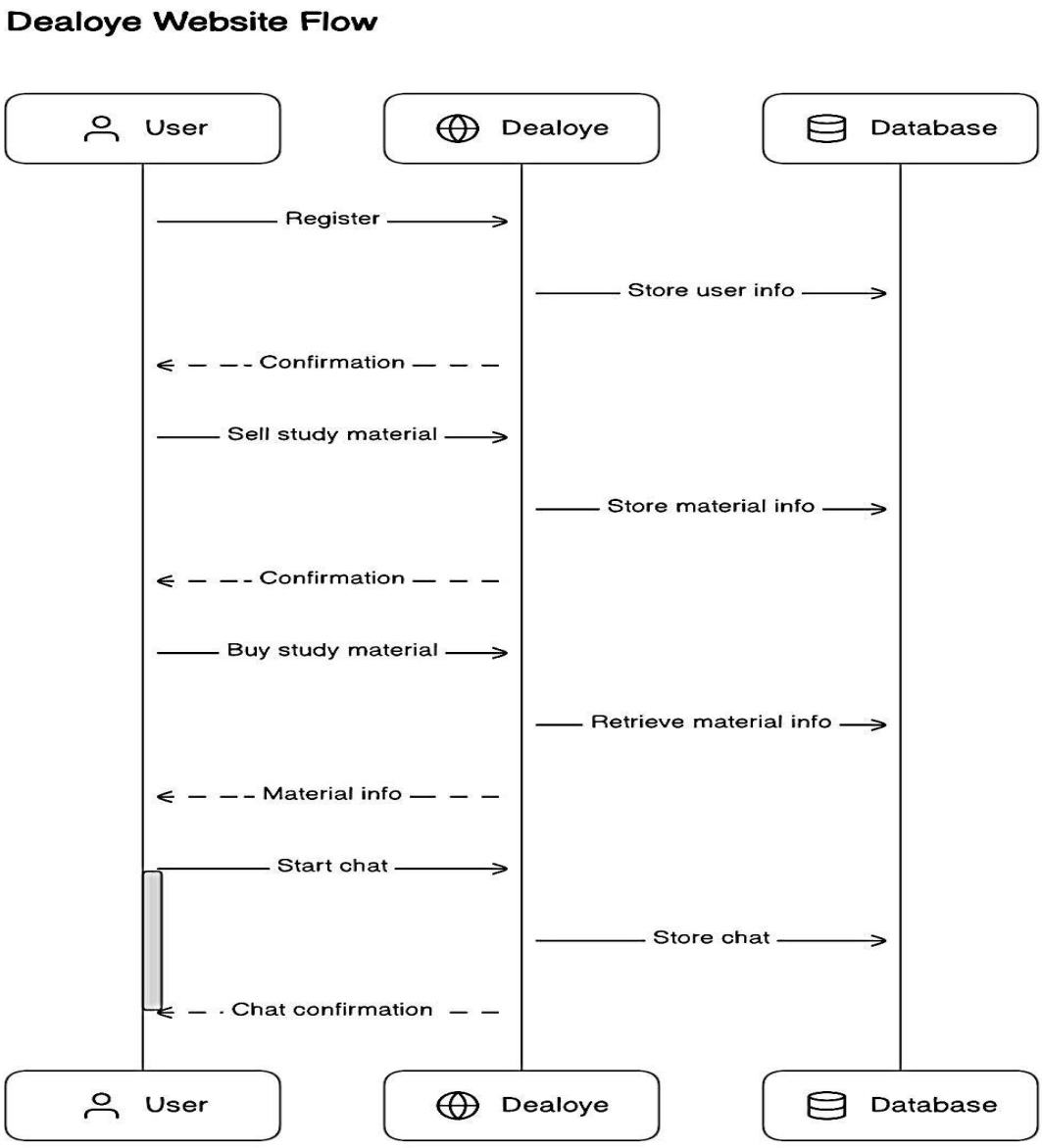

Figure 1: Sequence Diagram

3.3 Class Diagrams

In the context of "DealOye," class diagrams can illustrate the system's structure, including classes like User, Product, and Message.

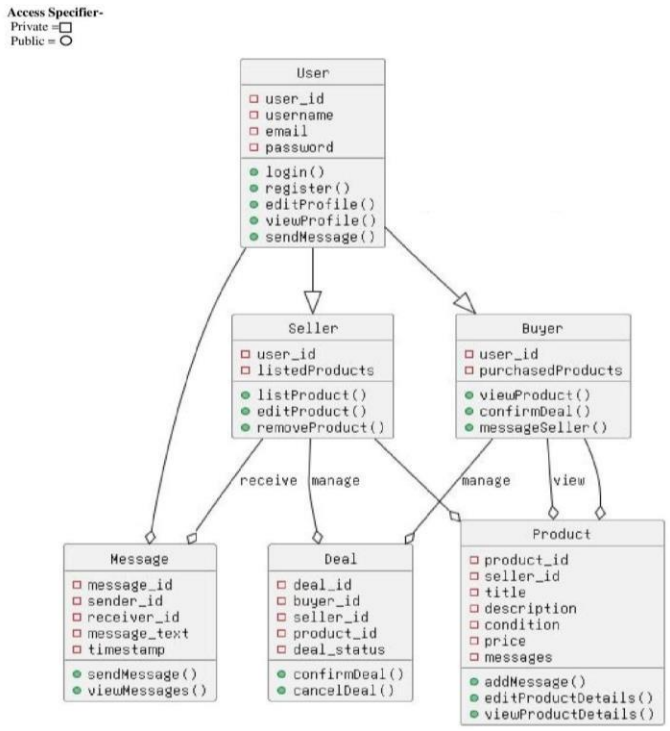

Figure 2: Class Diagram

3.4 DFD

DFDs for "DealOye" can depict how data, such as product listings and user messages, flows within the system.

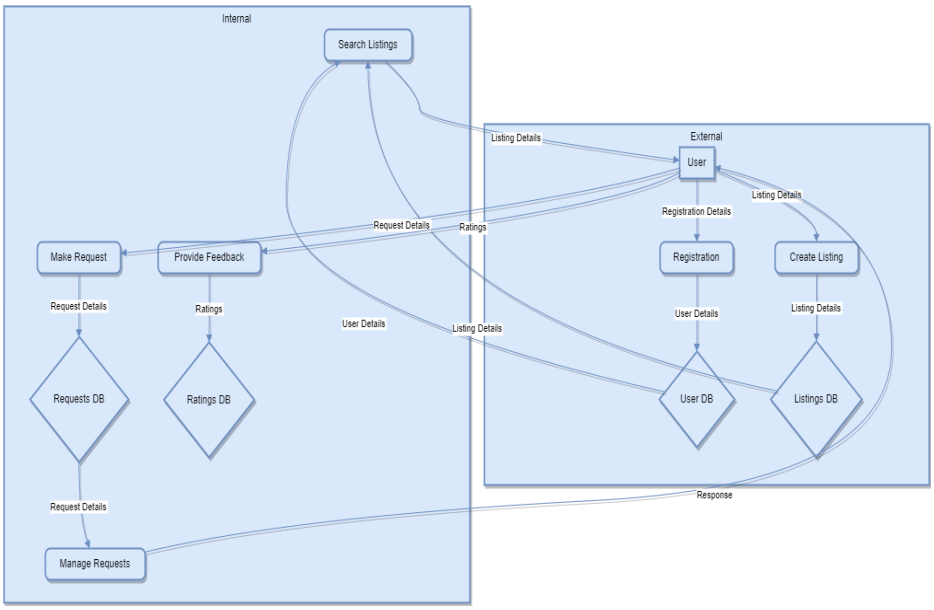

Figure 3: Data Flow Diagram

3.5 User Interface Design

Home Page

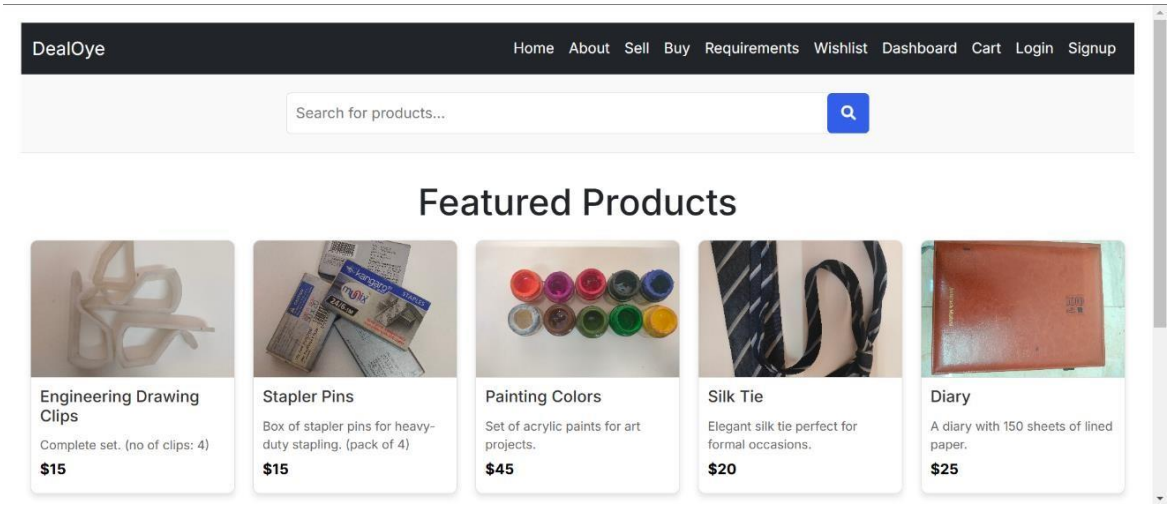

Figure 4: Home Page

Signup Page and Login Page

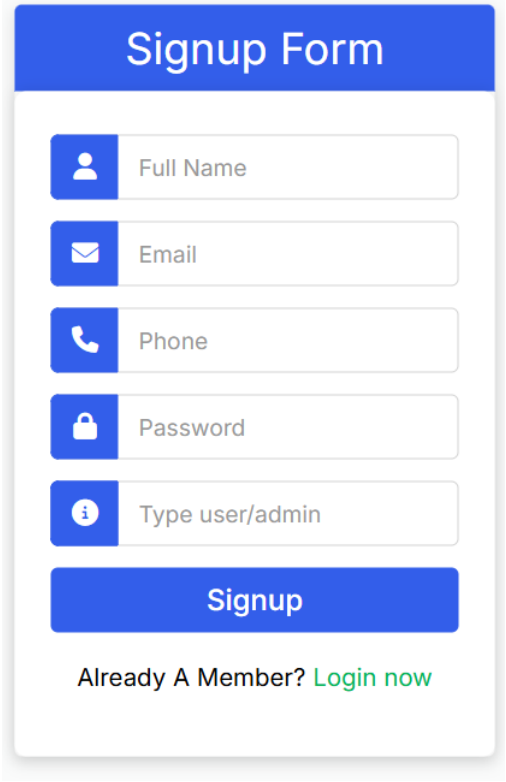

Figure 5: Signup Page

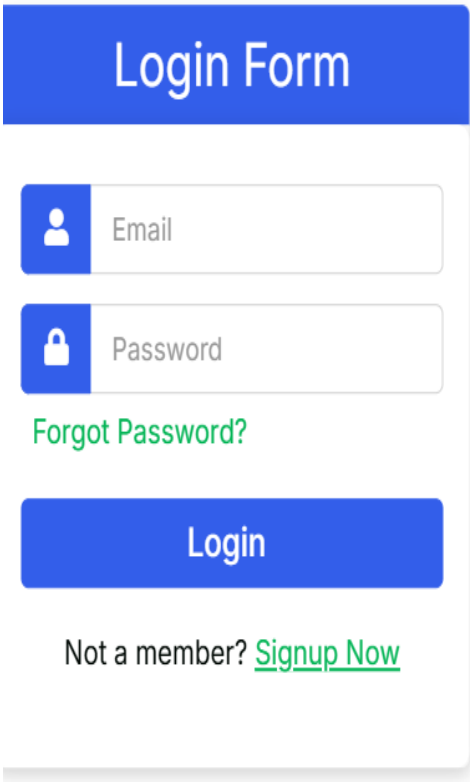

Figure 6: Login Page

Sell Page

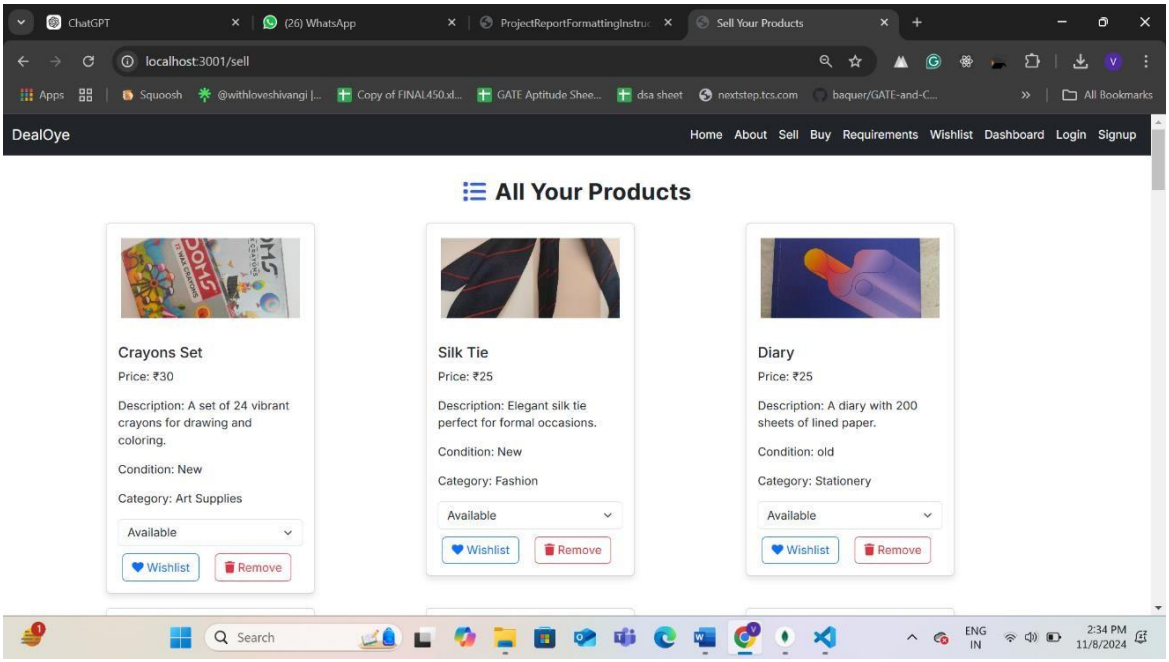

Figure 7: Sell Page

Buy Page

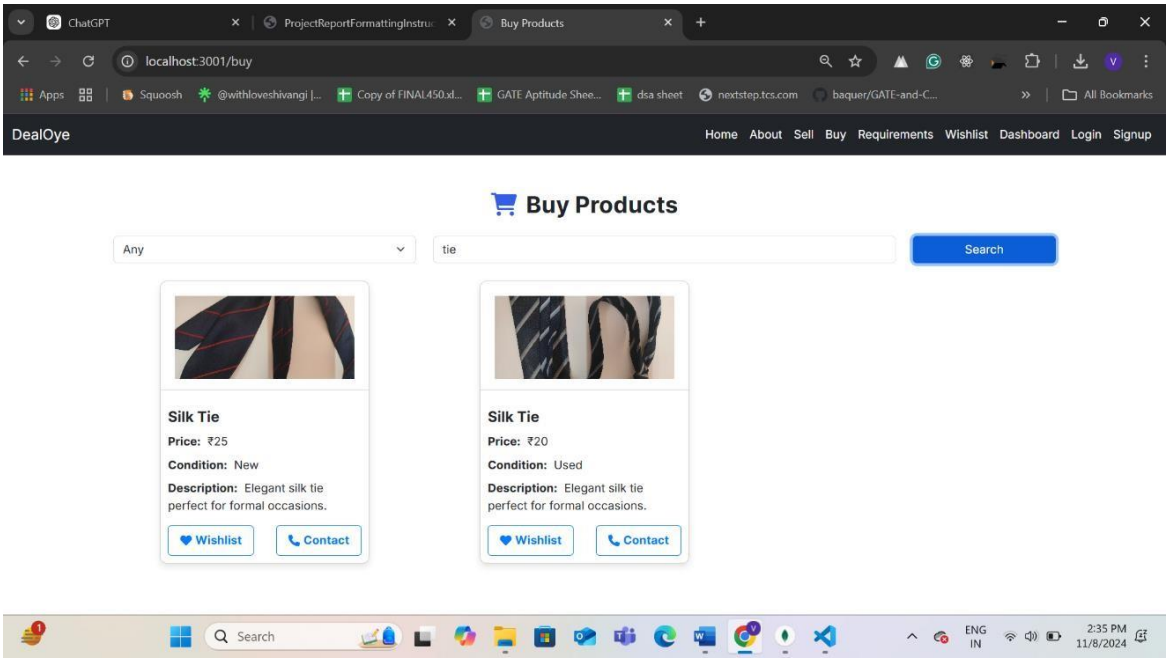

Figure 8: Buy Page

Requirements Page

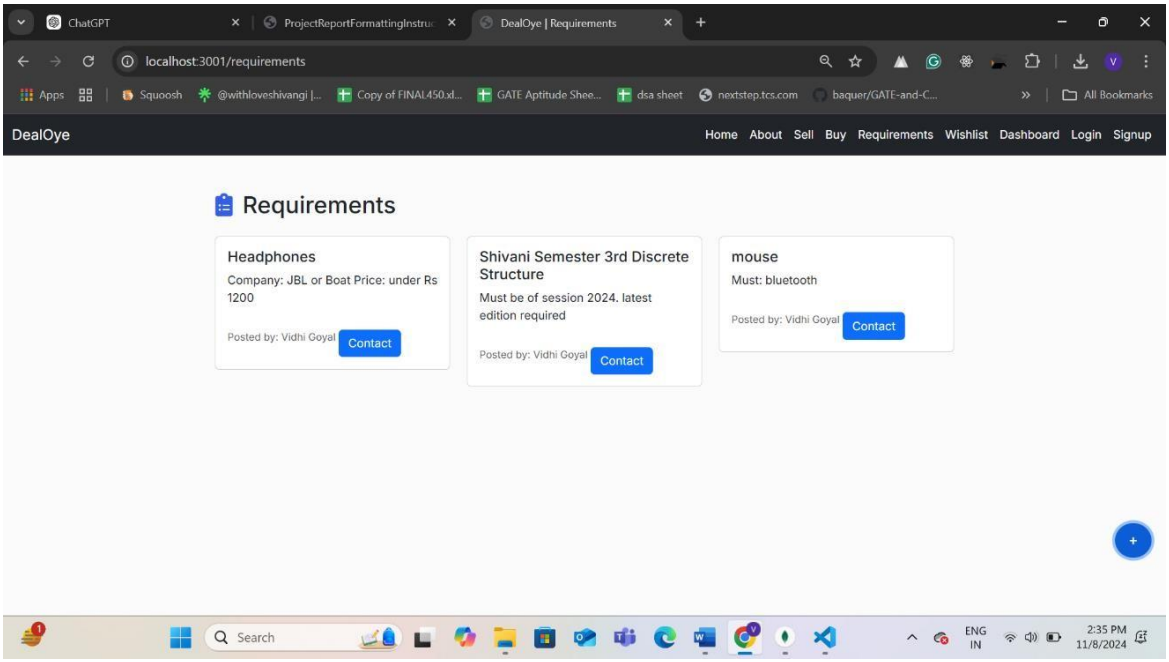

Figure 9: Requirements Page

Dashboard Page

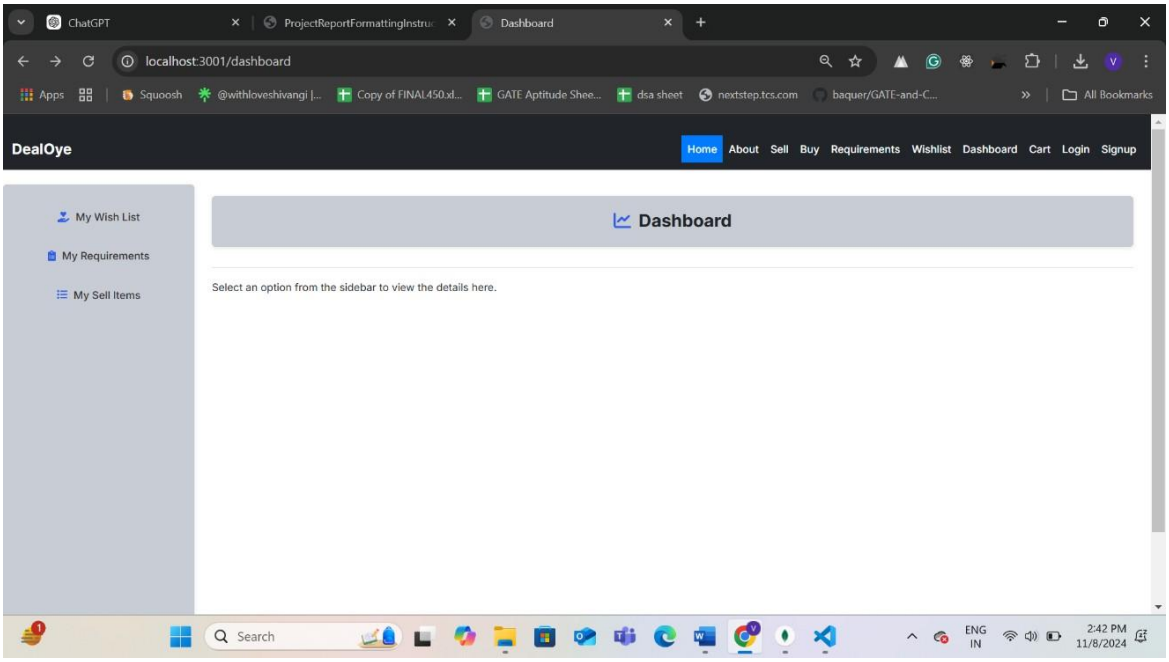

Figure 10: Dashboard Page

3.6 Data Design

Test Database with different collections

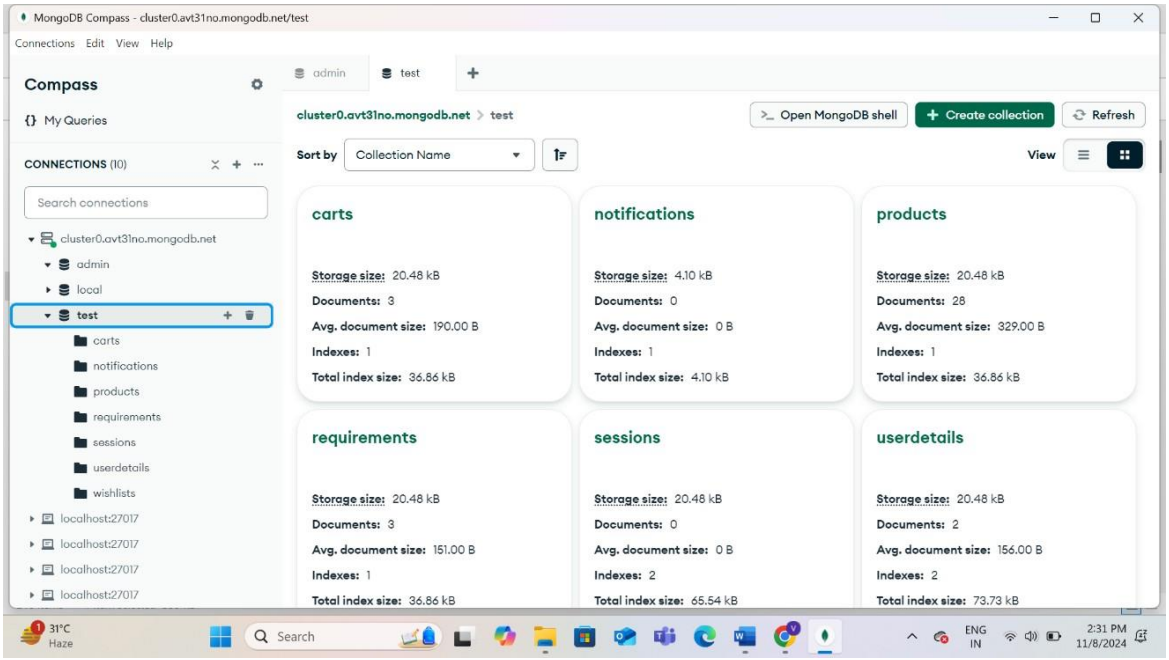

Figure 11: Database

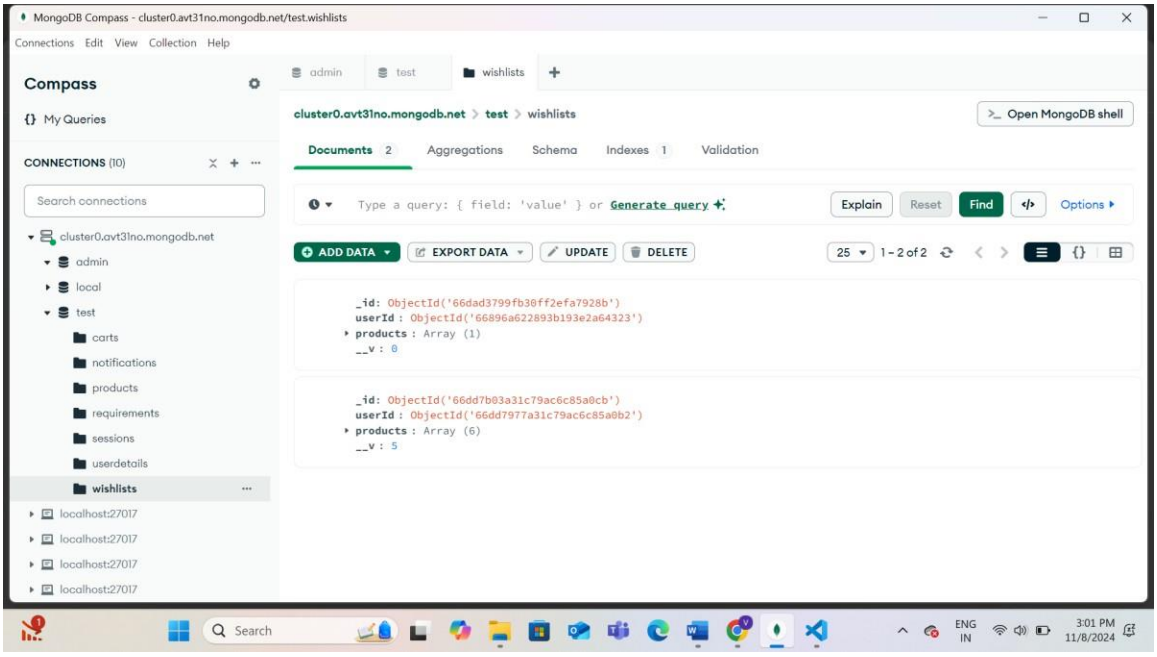

Figure 12: Products Table

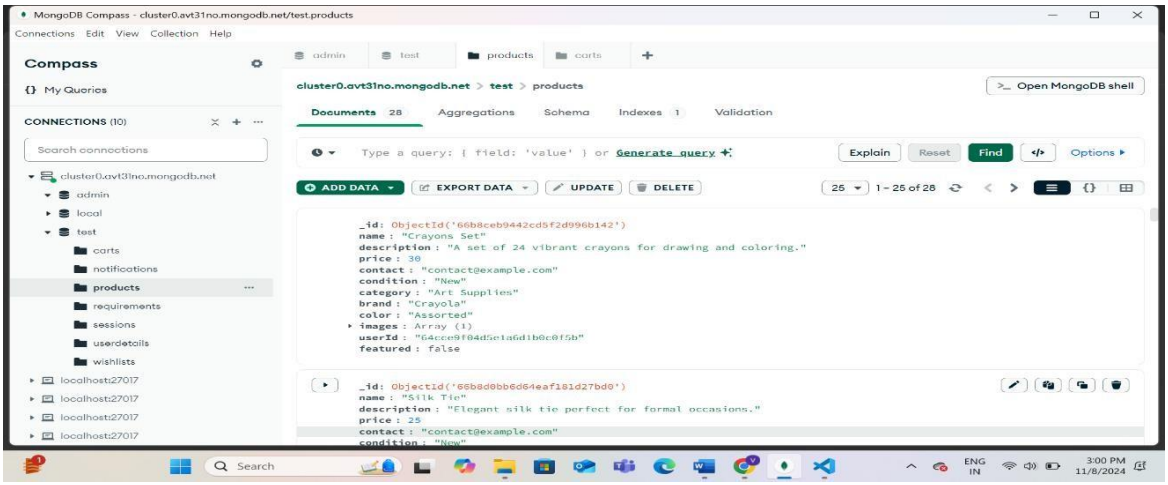

Figure 13: Requirements Table

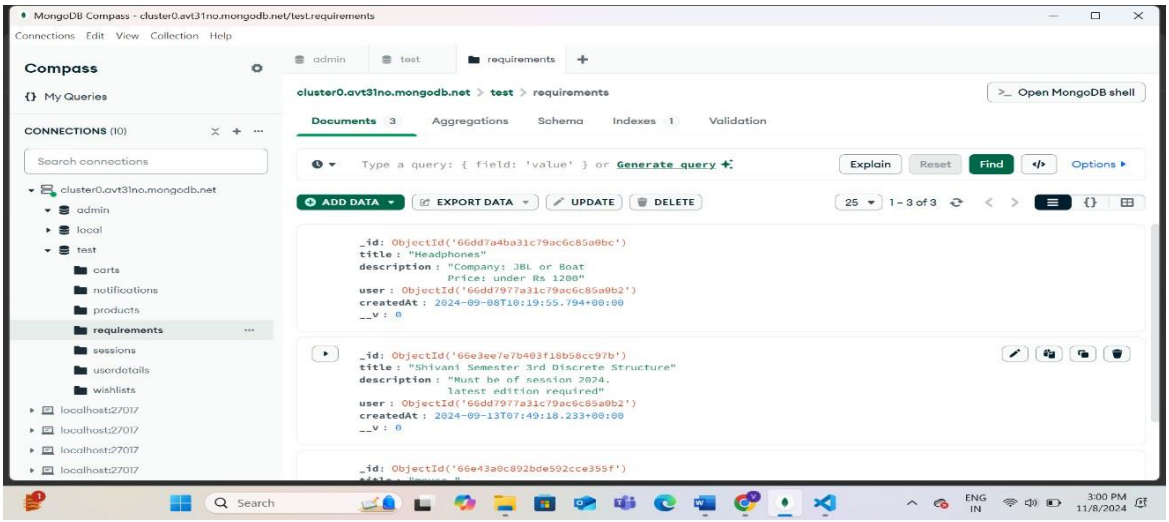

Figure 14:UserDetails Table

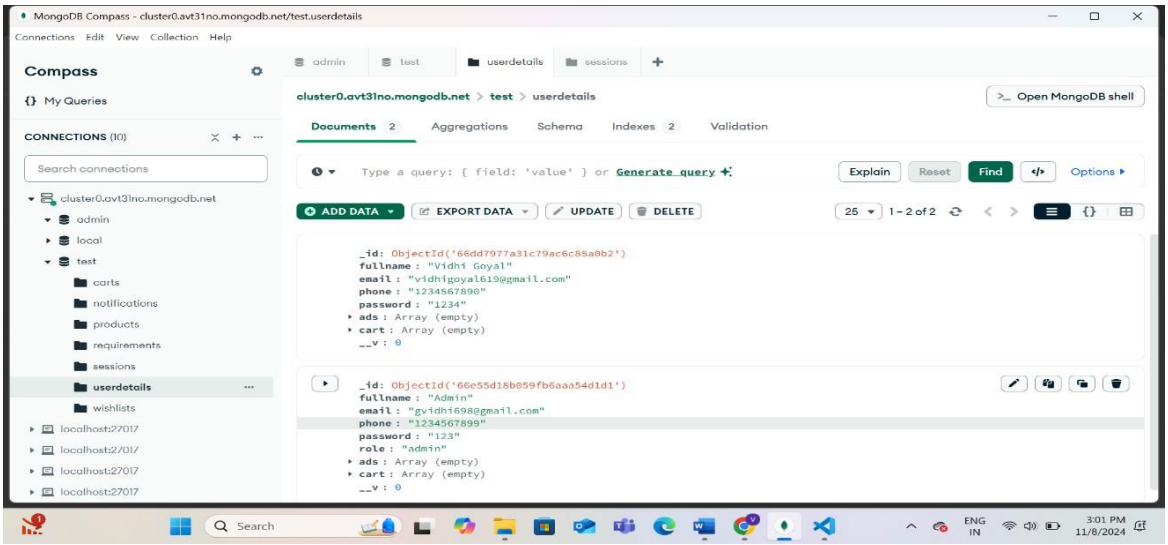

Figure 15: Wishlists Table

CHAPTER 4: IMPLEMENTATION & TESTING

4.1 Methodology

The methodology section of your project documentation outlines the approach and methods you plan to use in the development of the "DealOye" platform.

4.1.1 Proposed Algorithm

1. User Registration and Verification: The algorithm verifies new user registrations by checking the domain of their college email ID to confirm it is from a recognized college.
2. Product Listing and Categorization: The algorithm assists users in listing products for sale or rent by guiding them to input key details such as title, author, edition, condition, price, category, and description.
3. Search and Filtering: The algorithm allows users to search for academic materials based on keywords or apply filters for type (sale or rent), college, category, and price range.

4.2 Implementation Approach

In the implementation approach section, you provide details about the technologies, languages, Integrated Development Environments (IDEs), tools, and methodologies used in building the "DealOye" platform.

4.2.1 Introduction to Languages, IDEs, Tools, and Technologies

In the development of the "DealOye" platform, a range of technologies, programming languages, IDEs, and tools have been employed to create a robust and user-friendly system.

1. Programming Languages:
2. JavaScript: Used for dynamic and interactive components.
3. Node.js: Utilized for server-side development.
4. IDEs and Text Editors:
5. Visual Studio Code: Chosen IDE for development.
6. Database Management System:
7. MongoDB: Used as the database management system.
8. Version Control Software:
9. Git and GitHub: Employed for version control, enabling collaboration and code tracking.

4.3 Testing Approaches

In the testing approach section, you describe the testing methodologies employed to ensure the reliability and functionality of the "DealOye" platform.

4.3.1 Unit Testing

Unit testing is a crucial testing approach that focuses on evaluating the smallest functional components or units of the system.

a. Test Cases:

1. User Registration: Test the user registration process, including validation of college email domains, OTP generation, and verification.

2. Product Listing: Test the product listing feature, checking that users can add products with accurate information such as title, author, condition, and price.

3. Messaging System: Test the messaging system to ensure that users can send and receive messages, and that messages are delivered in real-time.

4.3.2 Integration Testing

Tests the integration of various components within the platform.

Integration testing evaluates how various components of the "DealOye" platform work together when integrated into the complete system.

b. Test Cases:

1. User Registration and Database Integration: Test the integration between user registration and the database.

2. Product Listing and Database Integration: Ensure that the product listing feature interacts effectively with the database.

3. Messaging System and Real-Time Communication: Test the integration of the messaging system with real-time communication.

.

CHAPTER 5: RESULTS & DISCUSSION

In this chapter, the focus shifts to the results of the "DealOye" platform's development and an in-depth discussion of these outcomes.

5.1 User Interface Representation

The user interface representation in "DealOye" is a pivotal aspect, as it directly impacts user experience and usability. Various modules and components contribute to the overall user interface. Here's a detailed description of these modules:

5.1.1 Brief Description of Various Modules

1. User Registration and Login: The user registration module allows new users to sign up by providing their college email ID and other necessary details.
2. Product Listing and Management: Users can list their academic materials for sale or rent using this module.
3. Search and Filtering:This module offers an intuitive search interface that allows users to search for academic materials using keywords.

5.2 Snapshot of System with Brief Description

In this section, a snapshot of the "DealOye" system is presented, accompanied by brief descriptions of the key elements and components that make up the system.

1. User Registration and Login: The user registration and login screens are the entry points to the "DealOye" platform.
2. Product Listing and Management: Users can easily list their academic materials for sale or rent through this module.
3. Search and Filtering: The search and filtering interface provides an efficient way for users to find academic materials.

5.3 Database Description

This section provides a detailed description of the database used in the "DealOye" platform.

5.3.1 Snapshot of Database Tables with Brief Description

1. User Information Table:This table stores user information, including user IDs, usernames, email addresses, and hashed passwords.

2. Product Listings Table: The product listings table contains information about products listed for sale or rent.

3. Message Conversations Table: To enable the messaging system, this table records message conversations between users.

5.4 Final Findings

The final findings section summarizes the key outcomes and observations from the development and implementation of the "DealOye" platform.

1. User Adoption and Interaction: "DealOye" successfully fosters user interaction, facilitating the exchange of academic materials and the building of a college community.
2. Sustainability Impact: By promoting the reuse and sharing of academic resources, "DealOye" contributes to a reduction in waste and environmental conservation, aligning with the project's initial goals.
3. User Engagement: The discussion forums, chat rooms, and discussion boards have been instrumental in encouraging users to engage in academic and college-related discussions.

CHAPTER 6: CONCLUSION & FUTURE SCOPE

In this final chapter of the project report, we present the conclusion and discuss the potential future scope for the "DealOye" platform.

6.1 Conclusion

The "DealOye" platform has been developed with the aim of addressing challenges faced by college students in India, particularly in managing resources, accessing affordable educational materials, and building a sustainable and engaged campus community

Key Conclusions

1. User Engagement: "DealOye" has garnered substantial user adoption and engagement, facilitating interactions between college students
2. Sustainability Impact: The platform has contributed to sustainability by promoting the reuse and sharing of academic materials.
3. Security and Efficiency: The implementation of security measures, including OTP verification and data encryption, has ensured that user data remains secure.

6.2 Future Scope

The "DealOye" platform has promising future scope that can further enhance its utility and impact. Some potential areas for future development include:

1. Geographical Expansion: The platform can be extended to cover more colleges and universities across India, making it accessible to a broader student population.
2. Enhanced Search and Discovery: Improving the search and filtering functionalities can make it even easier for users to discover academic materials and products of interest.

Refernces

1. The Economic Times. (n.d.). *How Circular Economy and Sustainability Are Changing E-commerce in India* [Online]. Available: https://economictimes.indiatimes.com.

2. Forbes India. (n.d.). *Rise of the College Marketplaces: Meeting Student Needs Online* [Online]. Available: https://forbesindia.com.

3. Financial Express. (n.d.). *Digital India: How E-commerce Is Transforming College Life* [Online]. Available: https://financialexpress.com.

4. The Times of India. (n.d.). *Green Campus Initiatives and the Role of Student Marketplaces* [Online]. Available: https://timesofindia.indiatimes.com.

5. Your Story. (n.d.). *Startups for College Students: New Trends in India's Youth Entrepreneurship* [Online]. Available: https://yourstory.com.

6. Mozilla Developer Network (MDN). (n.d.). *Mozilla Developer Network* [Online]. Available: https://developer.mozilla.org/en-US/.

7. Small Dev Tools. (n.d.). *Small Dev Tools* [Online]. Available: https://smalldev.tools/.

8. Medium. (n.d.). *Web Development on Medium* [Online]. Available: https://medium.com/tag/web-development.

9. YouTube. (n.d.). *Creating a Powerful E-Commerce Search and Filtering System with React* [Online]. Available: https://youtu.be/lfm_Hu0hEms?si=-pmXvpw0Annn_2YL.

10. YouTube. (n.d.). *Build Complete E-Commerce Web #api - Tools and Environment* [Online].
Available: https://youtu.be/N7EWJD1ghDY?si=obfJdfyAJWqT6IIa.

11. YouTube. (n.d.). *How To Select Data From MySQL In Node JS In Hindi* [Online]. Available: https://youtu.be/NOsro99NBew?si=1k58zEAk9uKpa4fZ.

GitHub

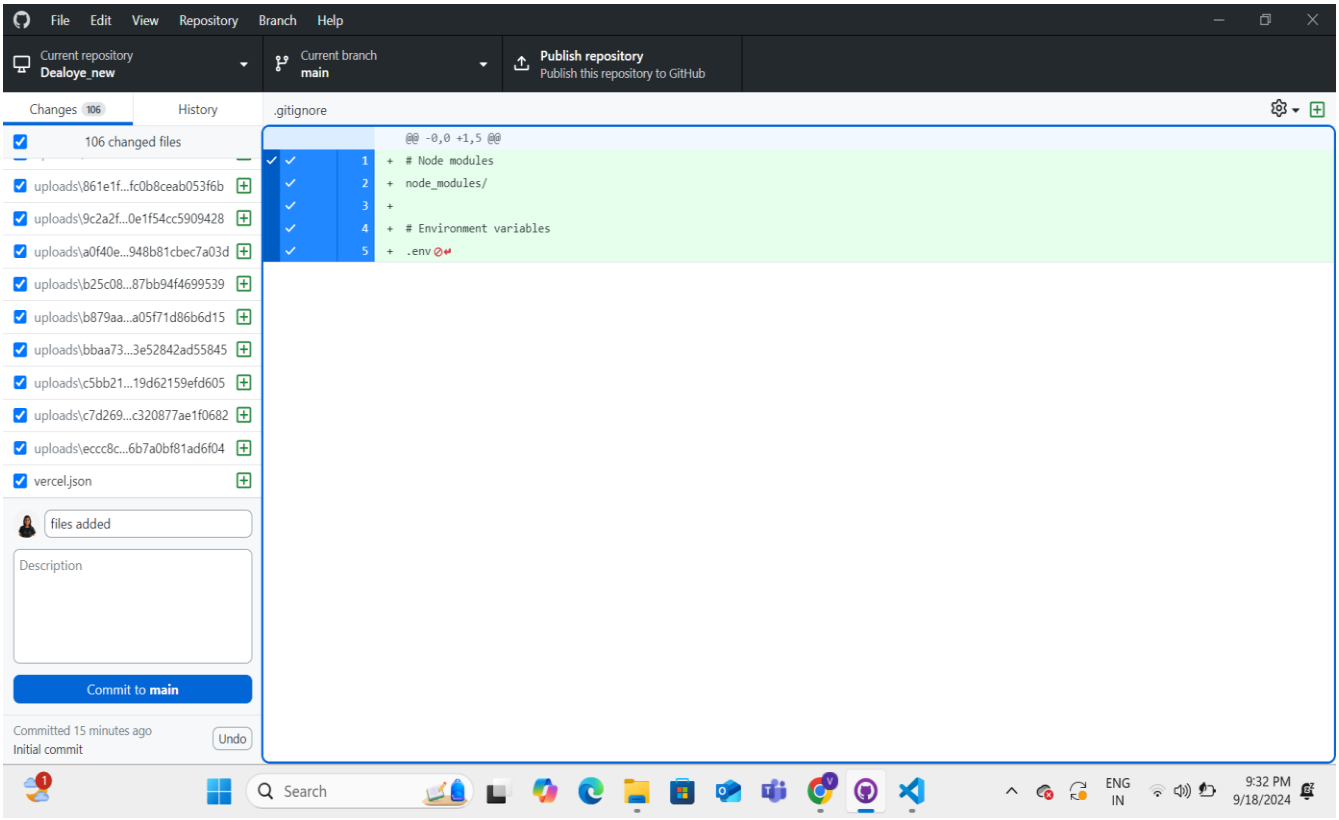

Figure 16: GitHub Commit Stats

GitHub ID: https://github.com/vidhigoyal619/Dealoye_new