

**HIMALAYA DARSHAN COLLEGE**

**Tribhuvan University**

**Institute of Science and Technology**



**A Project Report On**

**"Alnote"**

**A STUDY NOTES ARCHIVAL AND DISTRIBUTION SYSTEM**

In Partial Fulfilment of Requirements for the Bachelor Degree in Computer Science and  
Information Technology (BSc. CSIT)

**Submitted to**

Department of Computer Science and Information Technology

Himalaya Darshan College

Biratnagar, Nepal

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Date: 7<sup>th</sup> Falgun, 2081









**Tribhuvan University**

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## **Supervisor's Recommendation**

I hereby recommend that this project prepared under my supervision by dip chandra ojha (27319/077) , Gaurav Raj Bana (27320/077) and SaimanKatwal (27336/077) entitled “**STUDY NOTES ARCHIVAL AND DISTRIBUTION SYSTEM**” in partial fulfillment of the requirements for the degree of Bachelor of Science in Computer Science and information Technology is recommended for the final evaluation.

---

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### **LETTER OF APPROVAL**

This is to certify that this project prepared by Dip Chandra Ojha, Gaurav Raj Bana and Saiman Katwal entitled "**“STUDY NOTES ARCHIVAL AND DISTRIBUTION SYSTEM”**" in partial fulfillment of the requirements for the degree of Bachelor of Science in Computer Science and information Technology has been evaluated. In our opinion, it is satisfactory in the scope and quality as a project for the required degree.

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## **ABSTRACT**

Alnote is a web-based Study Notes Archival and Distribution System that provides a platform for students to upload, share, and access study materials in PDF format. Users can browse notes based on their academic needs, with Normal Users required to watch ads for access, while Premium Users enjoy direct search capabilities.

The platform ensures secure authentication and authorization, with an Admin and Moderator overseeing content moderation, user verification, and subscription management. Users can also review and rate uploaded notes, contributing to a quality-driven learning environment.

Alnote is developed using React, Tailwind CSS, and JavaScript for the front end, ASP.NET Core Web API for the back end, and PostgreSQL for database management. The system aims to enhance accessibility and organization in education by providing a structured, user-friendly, and efficient way to manage study materials.

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## List of Abbreviations

### **AbbreviationsFull Form**

UI	User Interface
VS	Visual Studio

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# **CHAPTER 1: INTRODUCTION**

## **1.1 Introduction**

In today's digital age, students and educators require quick and efficient access to study materials. Traditional methods of note-sharing are often unorganized, time-consuming, and lack accessibility. The proposed project, Alnote, is A Study Notes Archival and DistributionSystem designed to provide students with a seamless way to upload, share, and access study materials in PDF format.

The system eliminates the inefficiencies of manual note-sharing by offering a structured, user-friendly web platform where students can browse and download educational resources. Unlike traditional methods, Alnote ensures an organized and secure environment, reducing dependency on physical copies and scattered online resources. With subscription-basedaccess and ad-supported free viewing, the platform is tailored to provide an optimal experience for all users.

The system consists of three user roles:

- Admin and Moderator – Manages uploaded content, verifies accounts, and monitors platform activities.
- Normal Users – Can upload and view PDFs but must watch ads to access content.
- Premium Users – Have additional features such as direct search and the ability to download notes.

By streamlining the process of sharing academic materials, Alnote enhances accessibility and efficiency for students worldwide.

## **1.2 Problem Statement**

The development of an online study notes distribution system aims to address the challenges students face with traditional methods of accessing and sharing educational materials. The key issues include:

- i. Unorganized note-sharing – Students often struggle to find relevant study materials due to scattered resources.
- ii. Limited accessibility – Physical notes or materials stored in private folders limit access for other learners.

iii. Time-consuming process – Searching for the right study materials often requires navigating multiple sources.

iv. Lack of monetization options for content creators – Students who create high-quality notes do not have a structured way to benefit from their contributions.

The Alnote platform resolves these issues by providing an efficient, structured, and user-friendly system for students to upload, share, and access study materials.

### **1.3 Objectives**

The primary objectives of Alnote are:

- i. To provide a platform for students to share and access verified study materials.
- ii. To offer a user-friendly experience with subscription and ad support.

### **1.4 Scope and Limitations**

#### **1.4.1 Scope**

The Alnote system focuses on the efficient sharing of academic materials in PDF format. The platform provides:

- A structured note-sharing system with categorized subjects and topics.
- Subscription-based access for premium users.
- Admin moderation to prevent inappropriate content.
- Monetization for note creators via a structured buying/selling system.

#### **1.4.2 Limitations**

- The system does not provide live tutoring or interactive Q&A features.
- It does not manage handwritten notes or physical copies—only PDF uploads.
- Payment verification for subscriptions is done manually by the admin.
- Content moderation is dependent on admin reviews and user feedback.

### **1.5 Report Organization**

This report provides a detailed explanation of the Alnote system. It includes:

- System architecture and design diagrams for a clear understanding of the platform's

structure.

- Details on the tools and technologies used, including React, ASP.NET Core, PostgreSQL, and Tailwind CSS.
- Implementation details, feasibility studies, and testing results to ensure system functionality.

This document serves as a comprehensive guide to understanding the development, implementation, and benefits of the Alnote Study Notes Archival and Distribution System.

## 1.6 Report Organization

The report consists of five chapters which will cover the designing and development application.

- I. **Chapter One:** This chapter introduces the system and the problems, and gives an overview of the study.
- II. **Chapter Two:** This chapter covers the literature review which is the previous related work that has been done before.
- III. **Chapter Three:** This chapter explains the selected methodology that we are going for in this project. Planning through the methodology.
- IV. **Chapter Four:** This chapter discusses the implementation and testing.
- V. **Chapter Five:** This chapter discusses the conclusion, recommendations, and future works to improve this study.

## **CHAPTER 2: BACKGROUND STUDY AND LITERATURE REVIEW**

### **2.1 Background Study**

With the rapid advancement of digital technology, students and educators require more efficient methods to share and access academic materials. Traditional methods of distributing study notes—such as physical copies, scattered online resources, and social media groups—often lead to disorganization, limited accessibility, and difficulty in retrieving relevant materials.

The Alnote Study Notes Archival and Distribution System is designed to address these challenges by providing a structured online platform where students can upload, browse, and access study materials conveniently. By integrating a subscription-based model and an ad-supported free access system, Alnote ensures that both free and premium users can benefit from a seamless learning experience.

The key features of the system include:

- Easy upload and retrieval of PDF-based notes.
- Categorized study materials for structured browsing.
- Premium subscription model for enhanced accessibility, including direct search and download options.
- Review and rating system to maintain content quality.
- Admin moderation to ensure content security and credibility.

By shifting the focus to a digital platform, Alnote eliminates common inefficiencies, making it easier for students to find reliable study resources and for note creators to monetize their efforts.

### **2.2 Literature Review**

#### **i) Digital Learning Platforms for Efficient Knowledge Sharing**

**Author: John F. McMillan (2021)**

According to McMillan [1], the evolution of digital learning platforms has significantly enhanced the accessibility of educational resources. Many universities and online learning communities have integrated cloud-based repositories where students can share, access, and review study materials. However, existing platforms often lack a structured approach to

categorize and verify uploaded content. Alnote addresses this issue by implementing categorized notes, an admin-verification system, and a rating system, ensuring high-quality study materials.

## **ii) A Framework for Subscription-Based Educational Resource Platforms**

### **Author: Emily R. Stevens (2022)**

Stevens [2] discusses the growing adoption of subscription-based educational platforms, which provide ad-free access, direct search functionality, and exclusive content. Many digital education services, such as Coursera, Udemy, and Khan Academy, utilize a similar model. Alnote adopts this approach, offering premium users enhanced access and ad-free experiences while maintaining free access with advertisements for normal users.

## **iii) User Engagement and Content Monetization in Online Learning**

### **Author: Ahmed K. Alwani (2020)**

Alwani [3] explores the monetization of user-generated content in educational platforms. He states that students who create high-quality notes often struggle to benefit financially from their contributions. Alnote resolves this by allowing users to sell notes via a structured subscription model, creating opportunities for peer-to-peer knowledge sharing and financial incentives for contributors.

By analyzing these studies, Alnote builds upon proven digital learning methodologies, integrating a structured subscription model, efficient content verification, and an organized note-sharing system to enhance the academic experience for students worldwide.

# CHAPTER 3: SYSTEM ANALYSIS AND DESIGN

## 3.1 System Analysis

### 3.1.1 Development Methodology

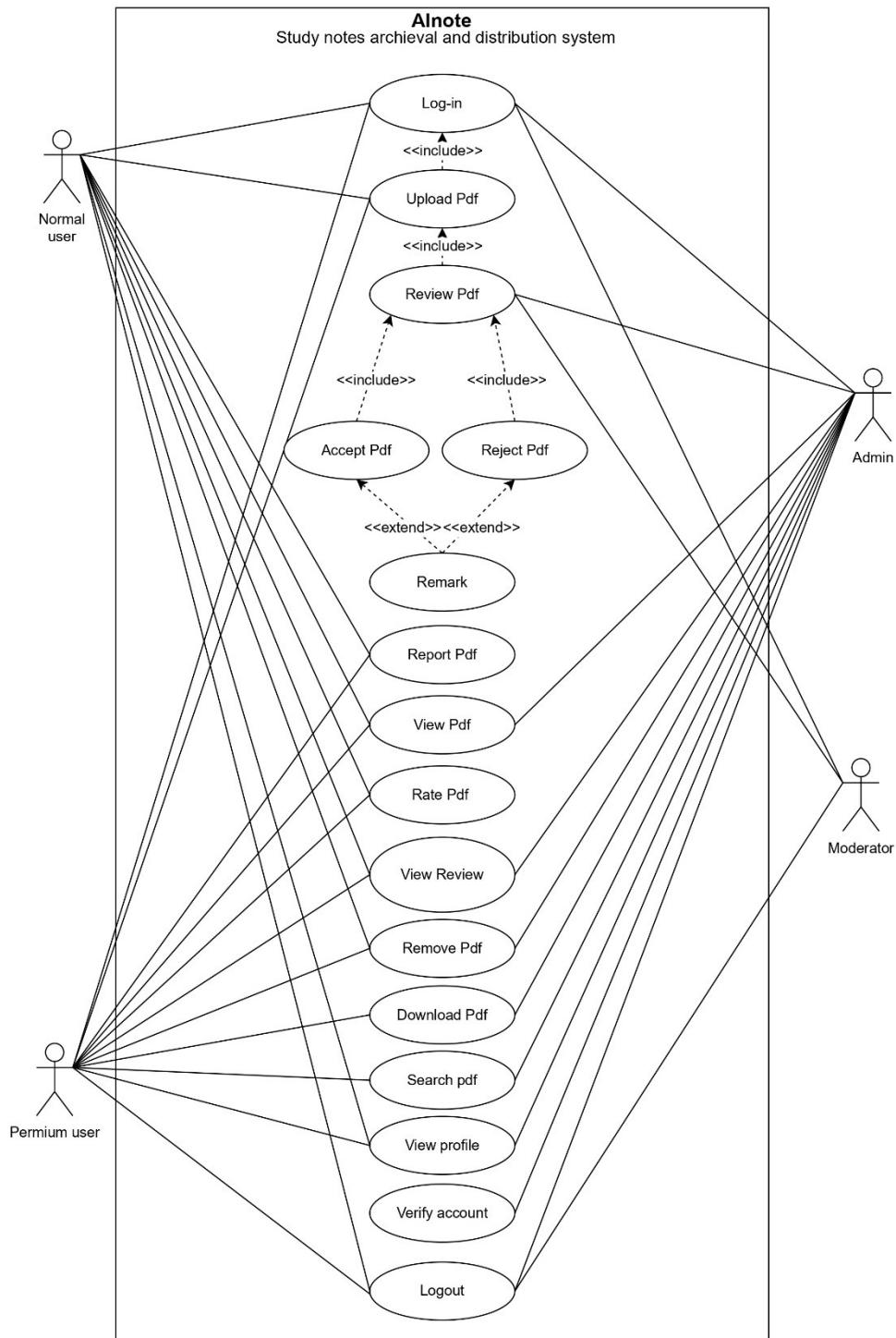
For the development methodology, we have selected, agile developmental methodology.

Agile methodology provides several key advantages in this project. Some of those advantages are:

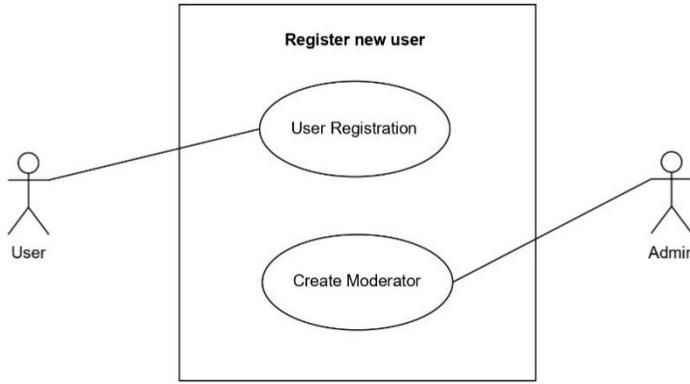
- The project can be developed and delivered in small increments, such as user registration, profile management and so on.
- Agile methodology allows for testing and feedback at each stage of development.
- The methodology manages evolving requirements as feedback is received from stakeholders or testers.
- Frequent feedback loops from stakeholders or users ensure the app meets user expectations.
- Agile methodology focuses on delivering high-priority features first, ensuring efficient resource utilization.



Figure 3.1: Agile Methodology



**Figure 3.2: Use Case Diagram**



**Figure 3.2.1: Use Case Diagram**

## Actors

- Normal User: Basic user with access to standard features.
- Premium User: Enhanced privileges (e.g., higher upload limits, exclusive features).
- Admin: Manages system-level actions (e.g., removing PDFs, user accounts).
- Moderator: Handles account verification and authentication processes.

## Key Use Cases

### Authentication & Account Management

- Sign-up: New users register. Likely *includes* Verify Account (to confirm credentials).
- Log-in: Authentication for existing users.
- Verify Account: Managed by the Moderator actor.
- Logout: Ends the session.

### PDF Management

- Upload PDF: Users submit study notes. Requires prior authentication (<<include>> relationship with Log-in).
- Download/View/Search PDF: Basic actions for accessing notes.
- Remove PDF: Likely restricted to *Super Admin*.

## **Review & Moderation**

- Review PDF: Base use case for evaluating submissions.
- Accept PDF: <<include>> relationship with Review PDF (approval).
- Reject PDF: <<extend>> relationship with Review PDF (conditional rejection, e.g., adding a Remark).
  - Report PDF: Flag inappropriate content.

## **User Interaction**

- Rate PDF: Users provide feedback.
- View Profile: Check user details.
- View Review: Access feedback on uploaded notes.

## **Relationships**

1. <<include>>:
  - Prerequisite actions. For example:
    - Upload PDF requires Log-in.
    - Accept PDF requires Review PDF.
2. <<extend>>:
  - Conditional extensions. For example:
    - Reject PDF extends Review PDF when a submission is declined (may trigger Remark).

## **Actor-Use Case Associations**

- Actor - Associated Use Cases Normal
- User - Sign-up, Log-in, Upload/View/Search/Download PDF, Rate, Report
- Premium User - All Normal User features + potential advanced privileges
- Admin Remove PDF, Review/Accept/Reject PDF, Manage users
- Authenticator Verify Account, Log-in authentication

## **Non-Functional Requirements**

These requirements define the criteria that the Alnote Study Notes Archival and DistributionSystem must meet for optimal functionality.

### **Performance:**

- The system efficiently handles multiple users simultaneously.
- Quick response time for searching, uploading, and downloading notes.
- Optimized database queries to ensure fast retrieval of study materials.

### **Security:**

- Users must authenticate using email and password before accessing premium features.
- Admin moderation ensures content integrity and prevents unauthorized uploads.
- Premium users' payment information is securely processed and verified by the Admin.

### **Usability:**

- A clean and simple UI ensures easy navigation for users.
- The platform is mobile-responsive, making it accessible on multiple devices.
- Categorized notes and a structured interface improve user experience and ease of access.

## **3.1.2 Feasibility Study**

### **3.1.2.1 Technical Feasibility:**

The Alnote system is a fully web-based platform. The technologies used include:

- **Frontend:** React, Tailwind CSS, JavaScript
- **Backend:** Web API with ASP.NET Core
- **Database:** PostgreSQL
- **Development Environment:** Visual Studio Code

Each of these technologies is open-source or widely used, making it technically feasible. The required technical skills are manageable, and the system's architecture is scalable to accommodate more users in the future.

### **3.1.2.2 Operational Feasibility:**

- Alnote simplifies the study material-sharing process by providing a centralized and well-organized platform.
- The system significantly reduces the effort needed to search for study materials.

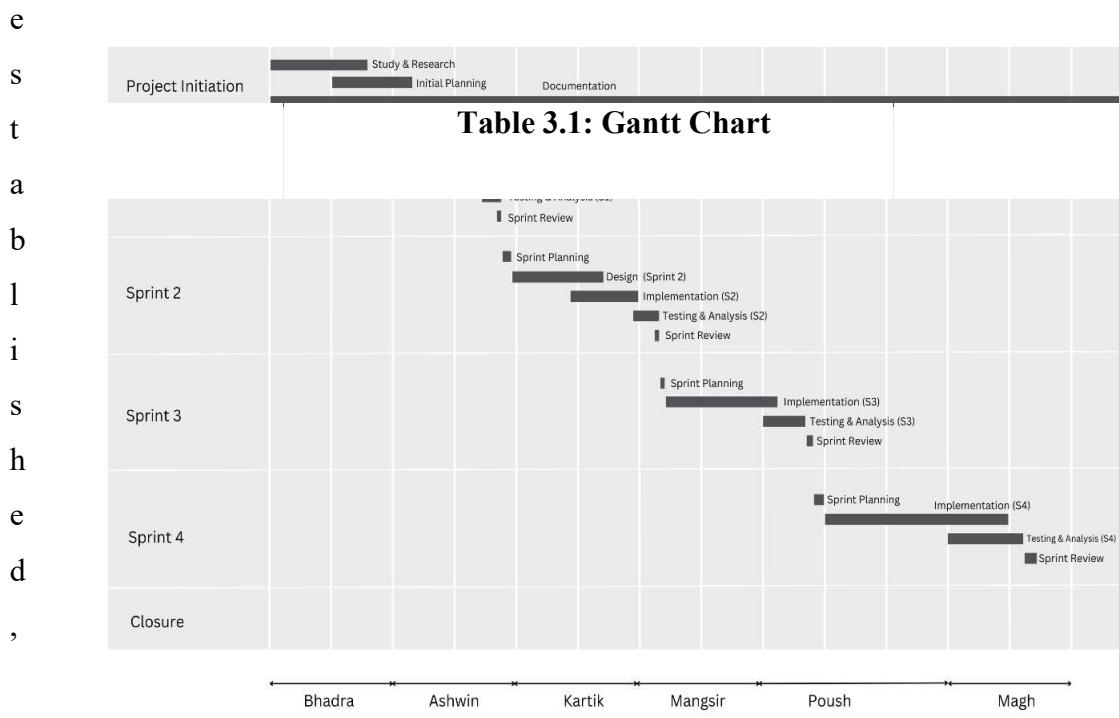
- The subscription model ensures a sustainable user experience, making the system operationally feasible.

### 3.1.2.3 Economic Feasibility:

- Alnote is a cost-effective platform with minimal development costs since most of its tools are open-source.
- The subscription-based revenue model ensures financial sustainability.
- Ad-based revenue for free users supports platform maintenance, making it economically feasible.

### 3.1.3 Schedule Feasibility

Schedule feasibility involves creating a proper timeline for the project's initial phase i.e., from study and research to the ending phases. A project timeline will be



outlining each phase's start and end dates.

#### **1.1.4 Class Diagram**

A class diagram describes the attributes and operations of a class and also the constraints imposed on the system. The class diagrams are widely used in the modeling of object-oriented systems because they are the only UML diagrams, which can be mapped directly with object-oriented languages.

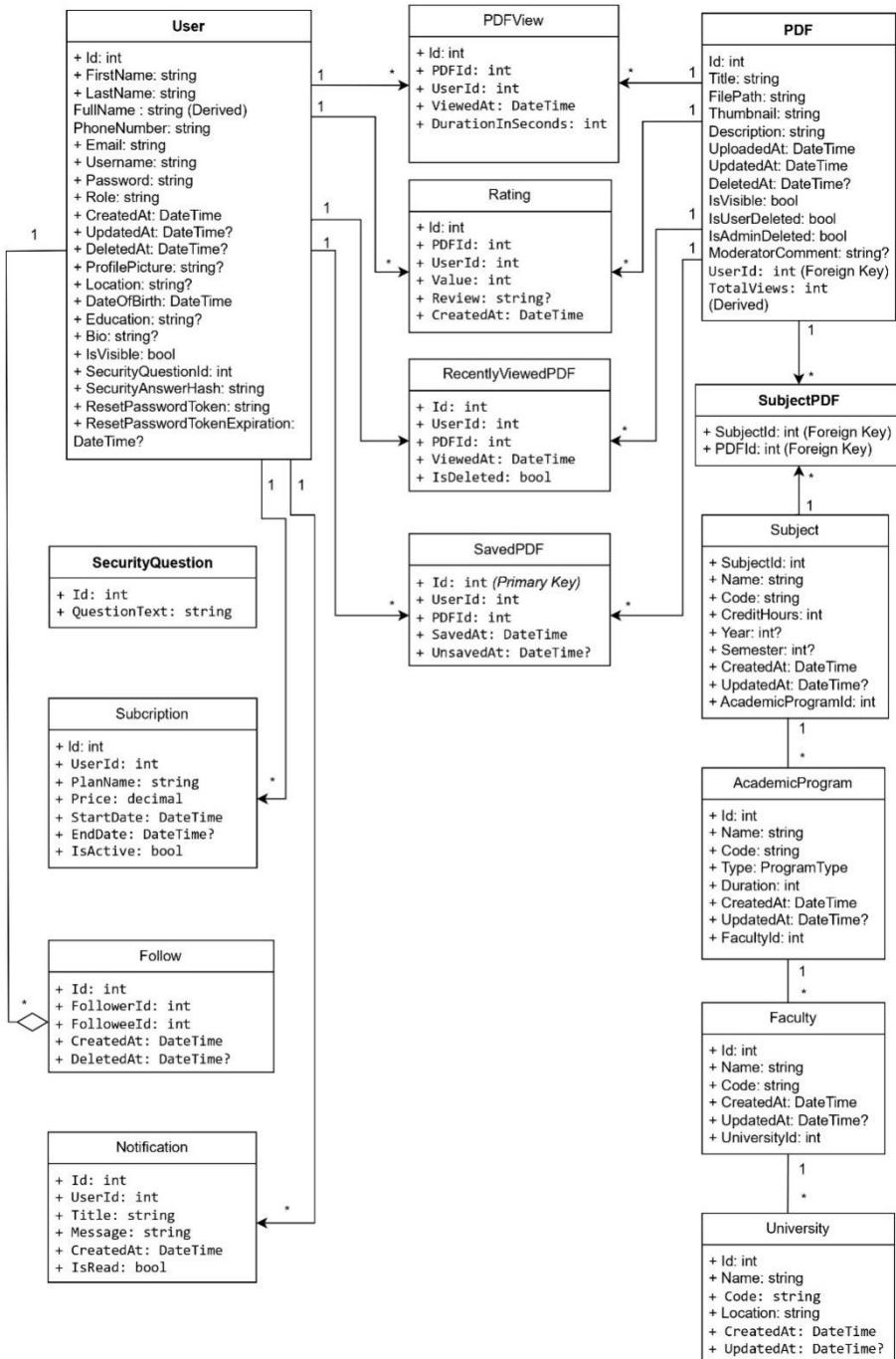
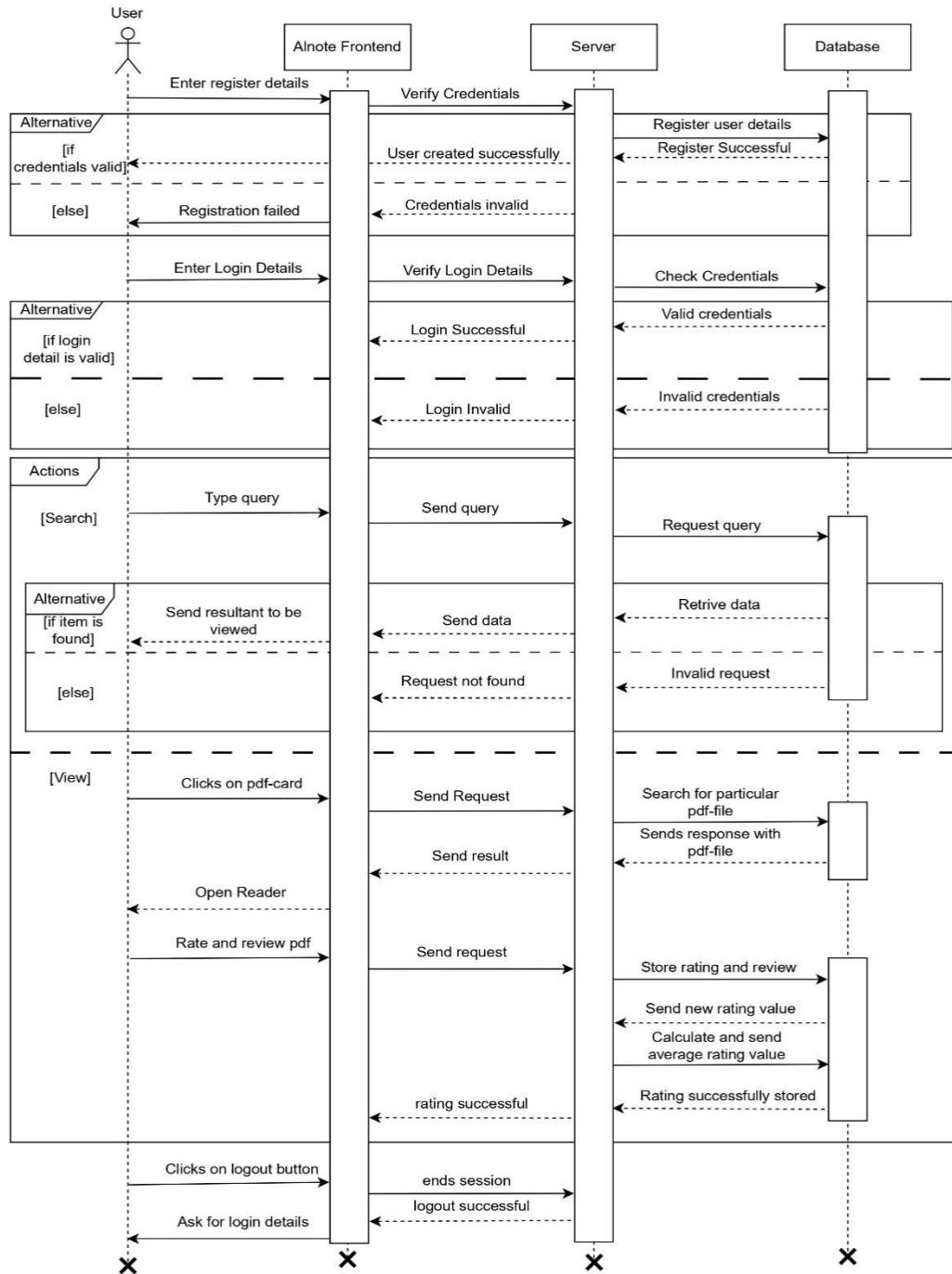


Figure 3.3: Class Diagram

### 3.1.4 Sequence Diagram

Sequence diagrams in UML specifically focus on *lifelines*, or the processes and objects that

live simultaneously, and the messages exchanged between them to perform a function before the lifeline ends.



**Figure 3.4: Sequences Diagram**

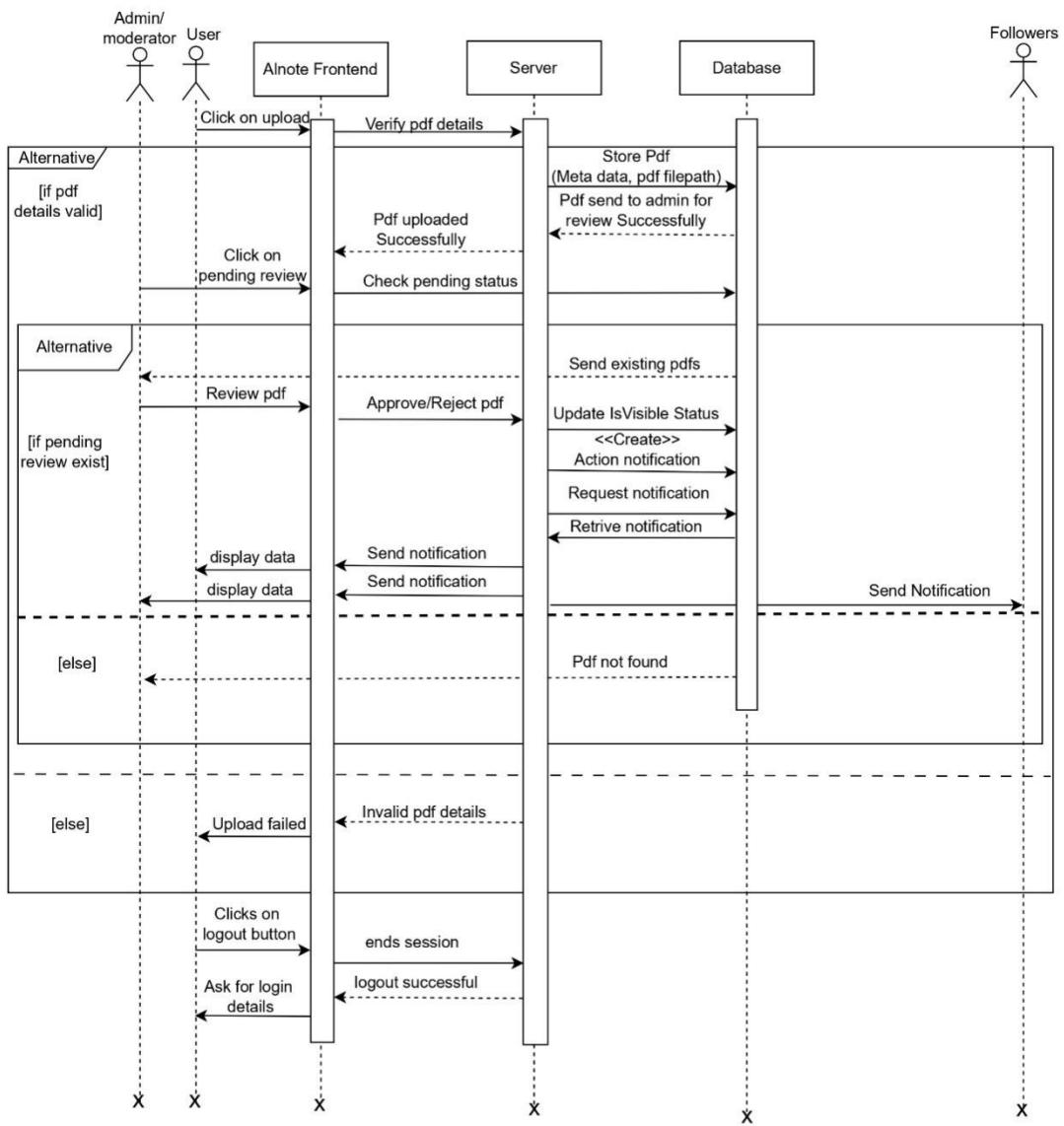
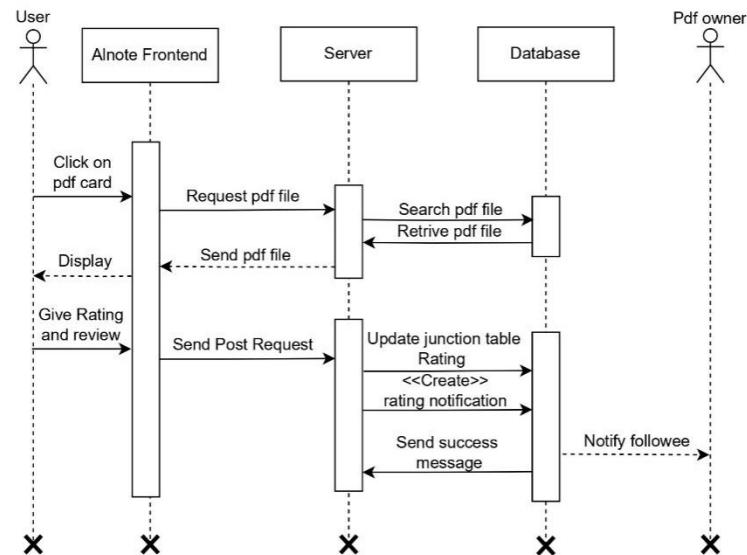
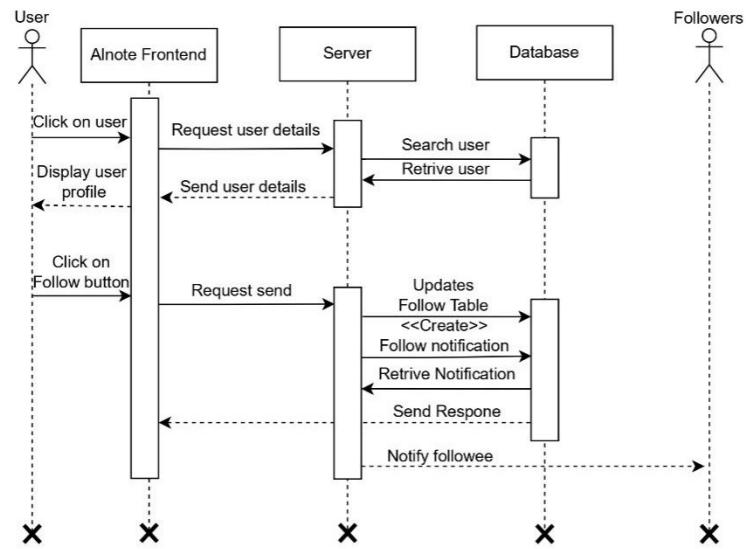


Figure 3.4.1: Sequences Diagram



**Figure 3.4.2: Sequences Diagram**

### 3.1.5 Flowchart Diagram

A flowchart is a diagram that visually represents a process or system, illustrating the sequence of steps and decisions. It uses different shapes to signify various elements: ovals for start and end points, rectangles for actions or processes, diamonds for decision points (like yes/no questions), and parallelograms for input/output operations. Flowcharts are useful tools for simplifying complex processes, making them easier to understand, analyze, and improve by clearly showing how each step flows into the next.

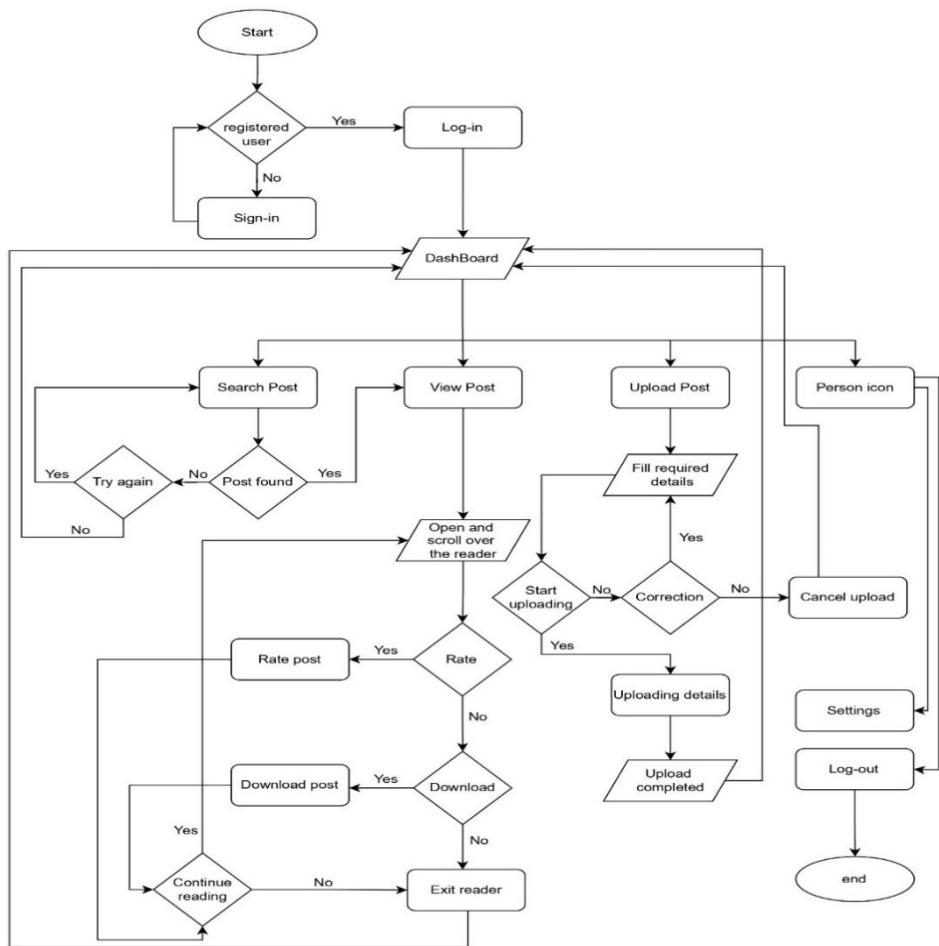
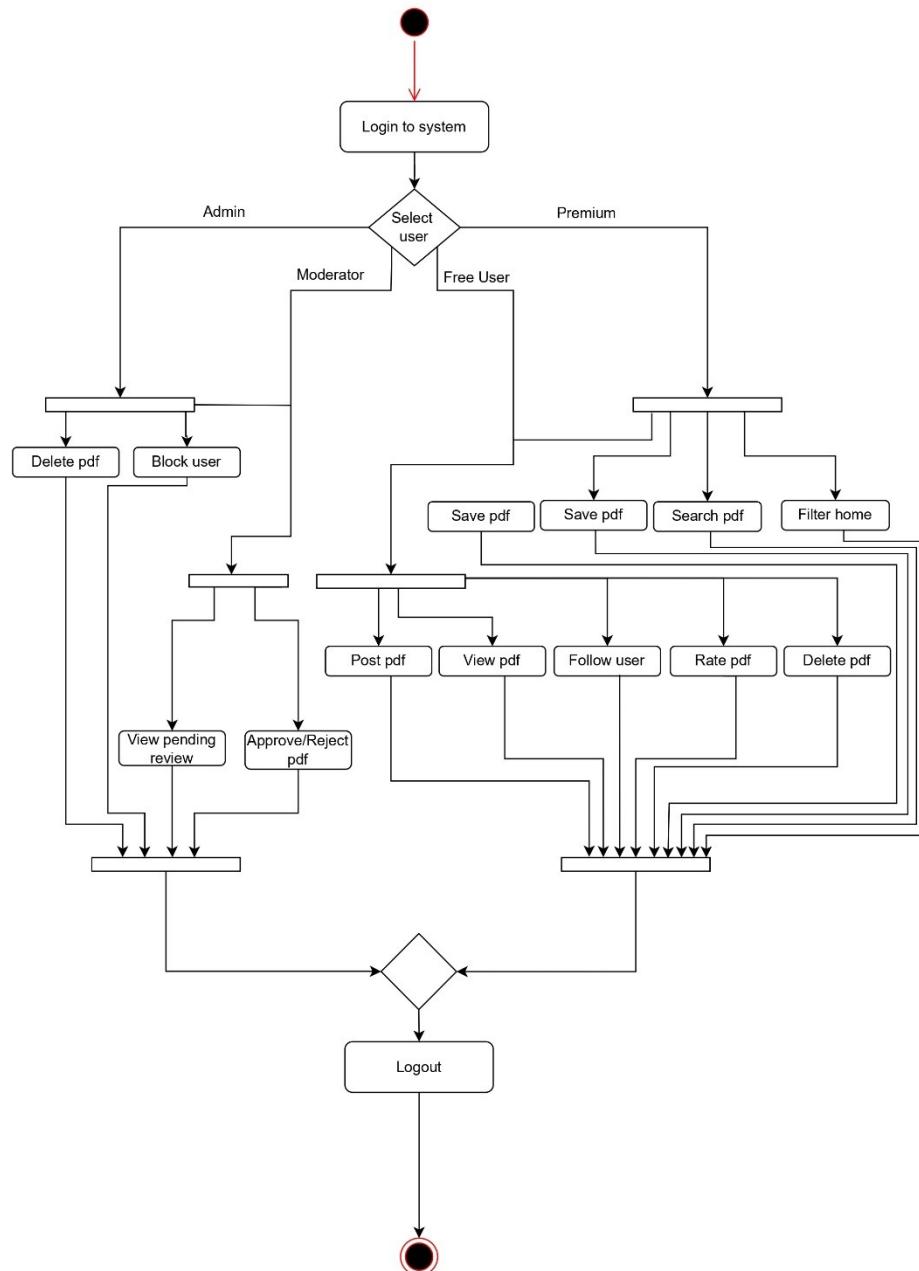


Figure 3.5: Flowchart Diagram

### 3.1.6 Activity Diagram

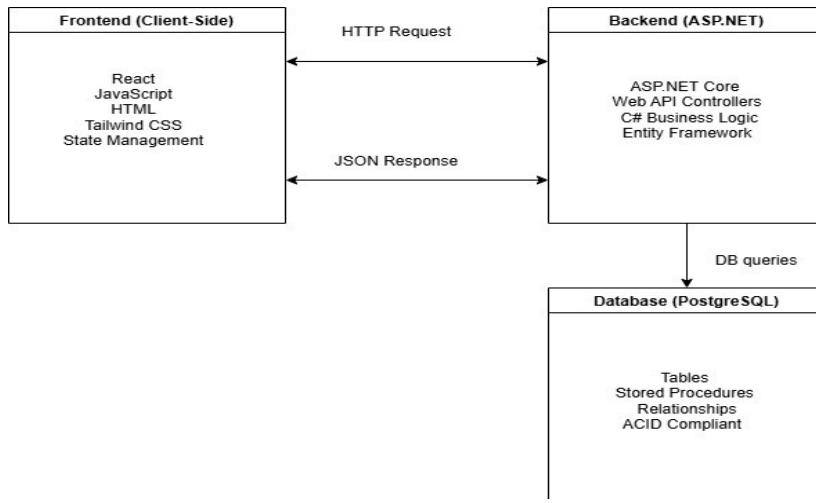
An Activity Diagram is a UML diagram that represents the flow of activities or tasks in a process. It captures the sequence of steps, decisions, and parallelism in a process. Activity diagrams are ideal for process modeling because they focus on control flow and workflow logic.



**Figure 3.6: Activity Diagram**

# CHAPTER 4: SYSTEM DESIGN

## 4.1 Design



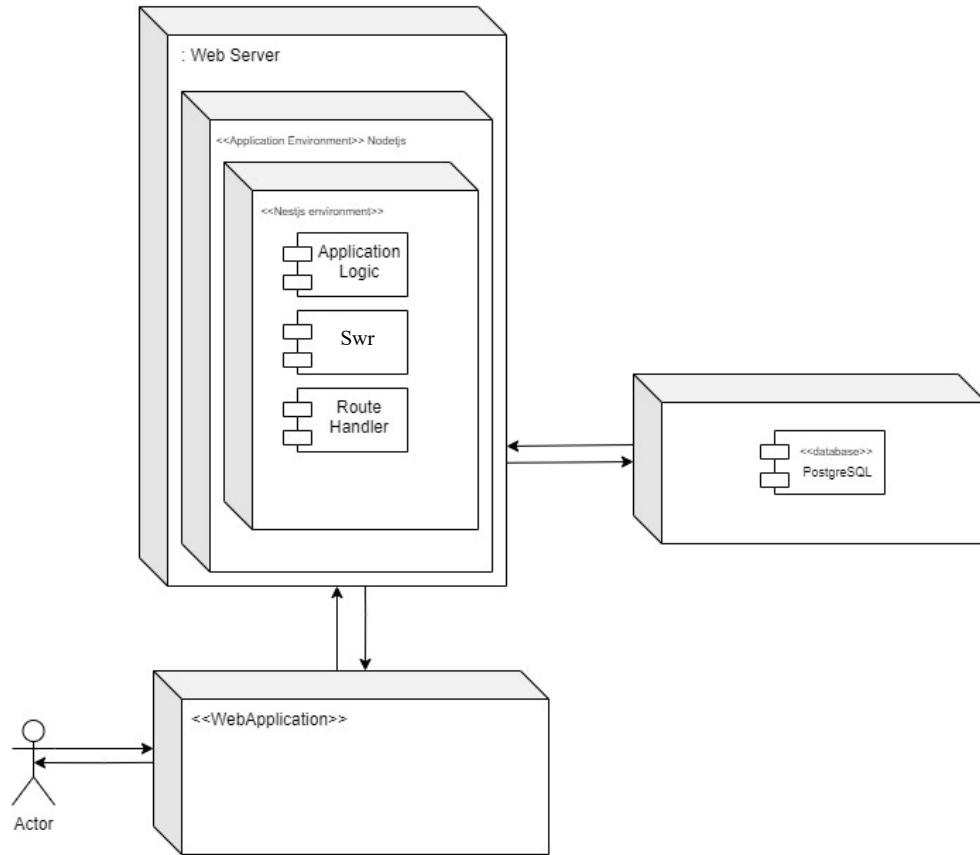
**Figure 4.1: Headless Architecture**

The design of the Alnote project is structured into three primary tiers: Frontend (Client-Side), Backend (ASP.NET), and Database (PostgreSQL). The Frontend is constructed with HTML, Tailwind CSS, and JavaScript, which is responsible for the user interface and interactive parts. It interacts with the Backend via HTTP requests and gets responses in JSON. The Backend, constructed with ASP.NET Core, is responsible for the business logic and request processing via Web API Controllers. The program employs C# to implement fundamental functions such as user authentication and note management and employs Entity Framework for database manipulation. The database, which is PostgreSQL-supported, stores data in tables, employs stored procedures for pre-defined special tasks, and establishes relationships among various tables. It adheres to ACID principles, hence guaranteeing data reliability and integrity. This structural design allows for an effortless flow of information among the user interface, server-side calculation, and database, thereby creating a stable and secure backbone of the Alnote system.

### 4.1.1 Deployment Diagram

A deployment diagram is a UML diagram type that shows the execution architecture of a system, including nodes such as hardware or software execution environments, and the middleware connecting them. It is typically used to visualize the physical hardware and software of a system. It helps to understand how the system will be physically deployed on

the hardware.



**Figure 4.2: Deployment Diagram**

## 4.2 Algorithm Details

The **Substring Search Algorithm** used in the system follows a Brute Force approach to check whether a given search query exists within a dataset of text records. This algorithm is straightforward but inefficient for large datasets, as it checks for substring matches sequentially.

The process involves the following key steps:

- Token Matching – Each record is checked to see if it contains the search term.
- Sequential Search – The algorithm scans each text entry from start to end, looking for a match.

- Filtering and Ranking – Records containing the search term are retrieved.

The algorithm ensures that users receive results where the search term is present, maintaining simplicity and usability.

## **Workflow of the Algorithm**

1. Fetch User Query – Retrieve the search string input by the user.
2. Retrieve Data – Fetch all relevant records from the database.
3. Perform Substring Search:
  - Scan each record and check if the search term exists within it.
  - If found, mark the record as a match.
4. Sort Results – Order results based on their natural order in the dataset.
5. Return Results – Display matching records to the user.

## **Substring Matching Formula**

The substring search algorithm follows this formula:

$$M(T, P) = \begin{cases} 1, & \text{if } p \text{ exists in } T \\ 0, & \text{otherwise} \end{cases}$$

Where:

- **T** = The text (record) being searched.
- **P** = The pattern (user query).
- **M(T, P)** = 1 if the pattern exists in the text, otherwise 0.

## **Brute Force Substring Search Steps**

For a text **T** of length **n** and a pattern **P** of length **m**, the brute-force approach works as follows:

1. Start at the first character of **T**.
2. Compare it with the first character of **P**.

3. If they match, compare the next character in **T** with the next character in **P**.
4. Continue until:
  - o All characters of **P** match → Pattern found.
  - o A mismatch occurs → Move to the next character in **T** and restart the comparison.
5. Repeat the process until the end of **T**.

The worst-case time complexity of this algorithm is  $O(n * m)$ , meaning it performs poorly for large datasets.

# CHAPTER 5: IMPLEMENTATION AND TESTING

## 5.1 Implementation

Software implementation is the process of integrating application into organization workflow structure. Implementation is very important because it provide access to businesses towards latest technology.

### 5.1.1 Tools used:

**1. PostgreSQL:** PostgreSQL is an object-relational database management system (ORDBMS) that is known for its robustness, scalability, and SQL compliance. It supports advanced data types like JSON, XML, and arrays, along with ACID (Atomicity, Consistency, Isolation, Durability) compliance, making it reliable for handling complex transactions and large datasets.

**2. GIT for version control:** Git allows multiple developers to work on the same codebase simultaneously, even if they are not connected to a central server. This means that developers can work on their own local copies of the code, making changes and committing them to their local repository. These changes can then be merged into the main repository when they are ready.

**3. NPM packages:** An npm package is a collection of code, resources, and metadata that can be installed using the NPM. These packages can contain any kind of code or resource that can be used by NodeJS applications or other npm packages. It is typically hosted on the npm registry, a public repository where developers can publish and share their packages with others. Developers can also create and host their own private registries to share packages within their organization or with selected users.

**4. Draw.io:** Draw.io is the web-based diagramming tools that allow users to create a wide range of diagrams, including flowcharts, network diagrams, mind maps, and more. While this tools have similar features and capabilities, there are some differences between them.

**5. Swagger:** Swagger is a widely adopted framework for designing, building, and documenting APIs. It allows developers to easily define API endpoints, perform testing, and generate documentation, ensuring seamless integration and interaction with APIs. With its user-friendly interface, Swagger helps developers to send HTTP requests, view responses,

and automate testing, making it an essential tool for API development and testing.

**6. ASP.NET:** open-source web framework developed by Microsoft for building dynamic web applications and APIs. It allows developers to create scalable, high-performance web solutions using .NET languages like C#. ASP.NET simplifies the development process by providing built-in tools for routing, authentication, data access, and more, enabling rapid development of robust web applications. Whether you're building simple websites or complex enterprise-level solutions, ASP.NET provides flexibility and efficiency for building modern, secure, and high-performance web applications.

## 5.2 Testing

Testing strategies are the approach for testing the system or application. It is the process to get some information about the key issues of the developed system and verify the application functions correctly. By running tests against our application consistently, we can verify our application's correctness, functional behavior, and usability before we release it publicly. Testing is the process of running a system with the intention of finding errors. Testing can be done using varieties of levels. Some of the levels of testing we carried out are:

### 5.2.1 Unit Testing

A unit is the smallest testable part of the software. It usually has one or a few inputs and usually a single output. Unit testing is a software development process in which the smallest testable parts of an application, called units, are individually and independently checked for proper operation. Unit testing increases confidence in changing/maintaining code. We have tested the module in an attempt to discover any error in the code.

**Table 5.1: Registration Testing**

Test Case ID	S.N.	Case Name	Registration
TC_01	1.	Purpose of Testing	Register users
TC_02	2.	Test Attribute	Filling out the required information asked during registration.

<b>Test Case ID</b>	<b>S.N.</b>	<b>Test Unit</b>	<b>Test Case</b>	<b>Test Result</b>
TC_03	3.	Register Button	Invalid format or missing values	Display appropriate message
TC_05	5.	Register Button	Valid Format and no missing values	Redirect to the Login Page and store the details in the database

**Table 5.2: Login Testing**

<b>Test Case ID</b>	<b>S.N.</b>	<b>Case Name</b>	<b>Login</b>	
TC_01	1.	<b>Purpose of Testing</b>	Login users	
TC_02	2.	<b>Test Attribute</b>	Filling out username and password.	
<b>Test Case ID</b>	<b>S.N.</b>	<b>Test Unit</b>	<b>Test Case</b>	<b>Test Result</b>
TC_03	4.	Login Button	Incorrect username and password	Display login unsuccessful message
TC_05	5.	Login Button	Correct username and password	Redirect to the Homepage

**Table 5.2: View and Edit User's Details Testing**

<b>Test Case ID</b>	<b>S.N.</b>	<b>Case Name</b>	View and Edit User's Details	
TC_01	1.	<b>Purpose of Testing</b>	Retrieval and Update of the database	
TC_02	2.	<b>Test Attribute</b>	Click on the profile and edit button	
TC_03	3.	<b>Test Unit</b>	<b>Test Case</b>	<b>Test Result</b>
	4.	Profile Display	Click on the profile	Display the detail of the user
TC_05	5.	Edit Button	Change the bio, location, education and save.	Display the save changes message and update the database.

**Table 5.3: Search and Algorithm Testing**

<b>Test Case ID</b>	<b>Case Name</b>	Search and Algorithm	
TC_01	<b>Purpose of Testing</b>	Retrieval and Update of the database	
TC_02	<b>Test Attribute</b>	Click on the profile and edit button	
TC_03	<b>Test Unit</b>	<b>Test Case</b>	<b>Test Result</b>
	Search	Type your suitable pdf	Display the list of pdf and allow them to choose one

4			
TC_05	Algorithm	Select the pdf required	Display the pdf based on the search and rating.

### 5.2.2 System Testing

System Testing is testing on a complete, integrated system to evaluate the system's compliance with its specific requirements. This testing is done to ensure that the system meets the requirements. System testing involves testing the software code for the following:

- Testing the fully integrated applications in order to check how components interact with one another and with the system as a whole.
- Verifying through testing every input in the application to check for desired outputs.
- Testing of the user's experience with the application.

**Table 5.4: System Testing**

Test Strategy	System Test			
Test Module	Complete application test includes registration, login, profile view and edit, pdf search, pdf recommendation based on search and rating.			
Test Case ID	Conditional Test	Expected Outcome	Actual Outcome	Remarks
TC_01	Register as a user	The details provided are stored in the database.	As per the expected result.	Pass
TC_02	Log in as a user	Redirect to the homepage of the application	As per the expected result	Pass

TC_03	Search for a pdf or select the pdf posted by user	Display a list of pdfs on the basis of the required pdf.	As per the expected result	Pass
TC_04	Log in as Admin	Redirect to the homepage of Admin.	As per the expected result	Pass
TC_05	Pdf upload request accept/ reject	Can accept or reject the request of pdf upload.	As per the expected result	Pass
TC_06	Ad management	Ad upload and display	As per the expected result	Pass
TC_07	User management	Admin can block the user.	As per the expected result	Pass
TC_08	Academic structure management	Admin can add, edit and delete academic structure	As per the expected result	Pass
TC_09	Log in as Moderator	Redirect to the homepage of Moderator.	As per the expected result	Pass
TC_10	Pdf upload request accept/ reject	Can accept or reject the request of pdf upload.	As per the expected result	Pass
TC_11	Ad management	Ad upload and display	As per the expected result	Pass

# **CHAPTER 6 : CONCLUSION AND RECOMMENDATION**

## **6.1 Conclusion**

The users that are involved in our application tremendously benefit from our system. Our proposed application is an effective, dependable, and easy-to-use. Accuracy, efficiency, usability, security, and scalability were all taken into consideration when developing the system. Our application provides a platform which enables students to **upload, share, and access** study materials in **PDF format**. Also, the system is web-based, thus users can access the web application's content at any time, day or night.

## **6.2 Future Recommendation**

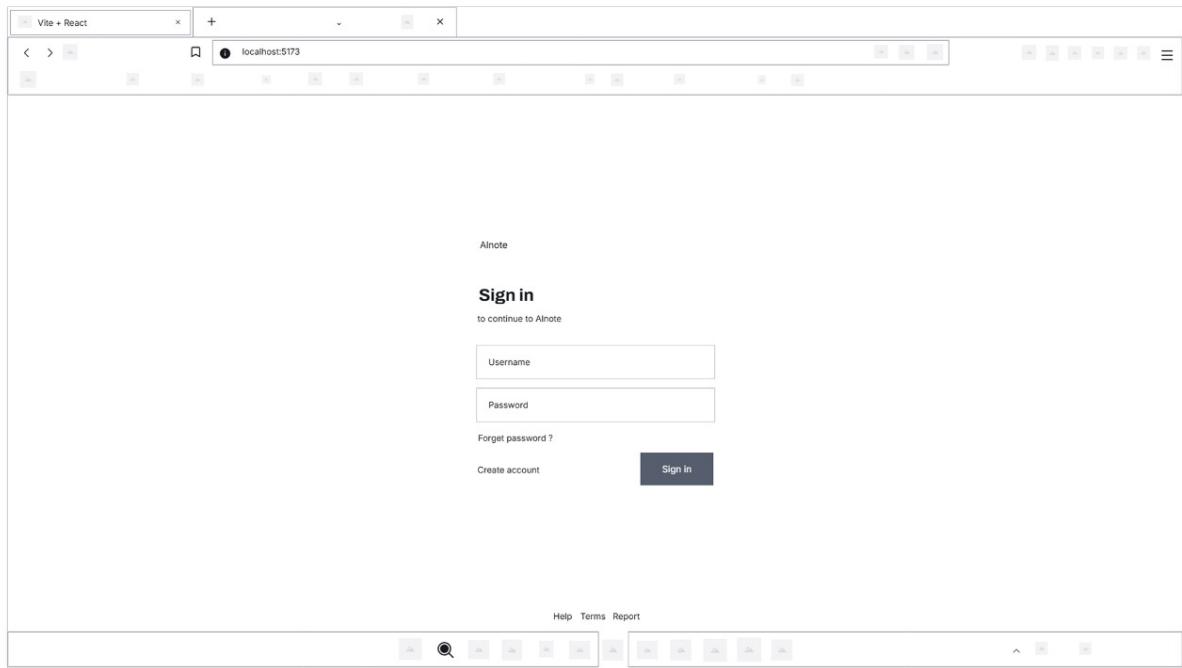
The project can be further developed and improved by working in the following mentioned areas:

1. Payment integrations.
2. Improving data security by implementing two-factor authentication.
3. Enhancing the user interface to provide better user-experience.
4. Introducing better mechanisms to verify notes.
5. Real time chat.
6. To generate revenue using subscription based and ad model.

## **References**

- [1] J. F. McMillan, "Digital Learning Platforms for Efficient Knowledge Sharing," in *Proceedings of the International Conference on Educational Technology*, 2021.
- [2] E. R. Stevens, "A Framework for Subscription-Based Educational Resource Platforms," in *Journal of Digital Learning and Educational Innovation*, vol. 15, no. 3, pp. 45-58, 2022.
- [3] A. K. Alwani, "User Engagement and Content Monetization in Online Learning," in *International Conference on Online Learning and Content Monetization*, 2020.

# APPENDIX



Vite + React

localhost:5173/register

### Create Account

Username  
Enter Your Username

Password  
Enter Your Password

Security Question  
Select a security question

Security Answer  
Enter your security answer

Profile Picture  
choose file / No file chosen

Back Create Account

This screenshot shows a 'Create Account' form. It includes fields for a username, password, security question, security answer, and profile picture. There is a 'Create Account' button at the bottom right.

Vite + React

localhost:5173/register

### Personal Information

First Name  
Enter Your First Name

Last Name  
Enter Your Last Name

Date Of Birth  
dd/mm/yyyy

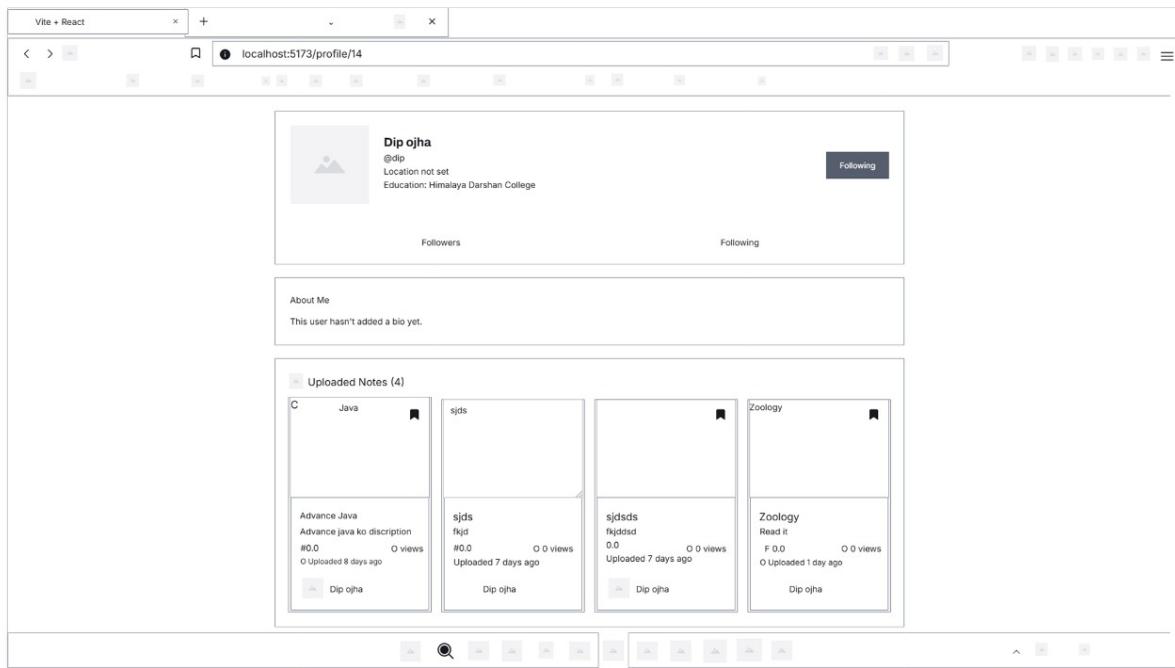
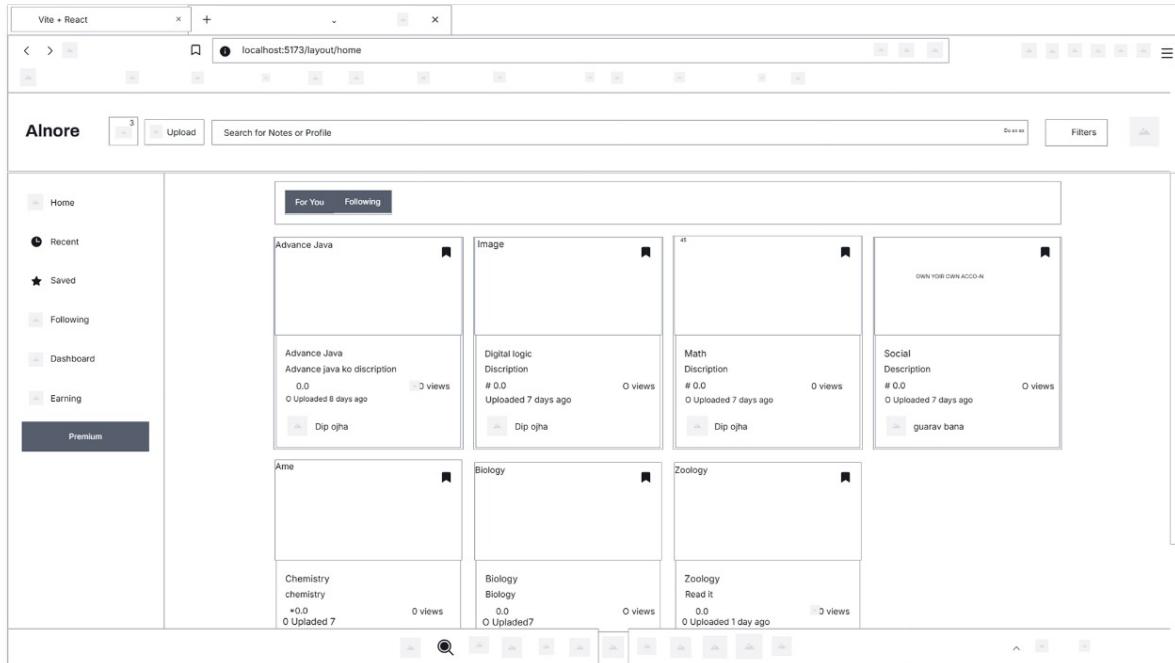
Phone Number  
Enter Your Phone Number

Email Address  
Enter Your Email Address

Education  
Enter Your Education

Next

This screenshot shows a 'Personal Information' form. It includes fields for first name, last name, date of birth, phone number, email address, and education. There is a 'Next' button at the bottom right.



Vite + React

localhost:5173/profile/15

guarav bana  
@bana  
bratnagar  
Education: TU

Follower Following

Edit Profile

About Me  
haha

Uploaded Notes (3)

Thumbnail	Title	Subject	Views
	feri pani yestai ta ho ni # 0.0	Chemistry	0 views
	Chemistry chemistry	Chemistry	0 views
	Biology Biology	Biology	0 views

guarav bana

Submit Upload Request

Title  
Enter title

Description  
Enter description

Thumbnail (Image)  
Choose file | No file chosen

PDF File  
Choose file | No file chosen

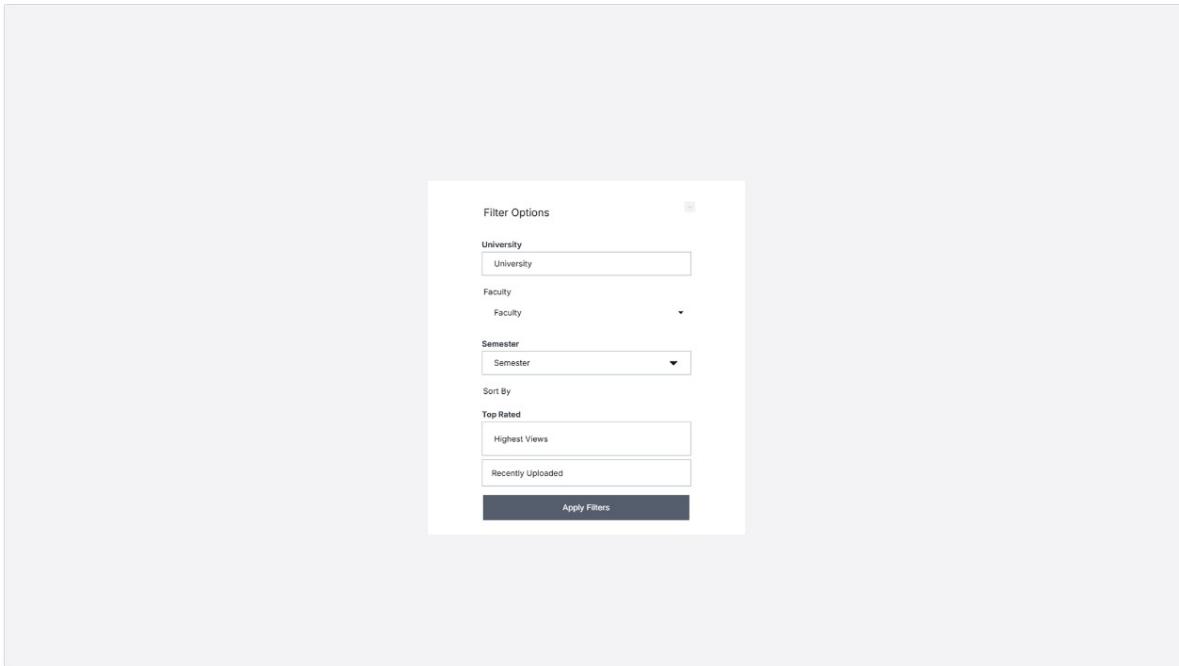
University  
Select University

Faculty  
Select Faculty

Program  
Select Program

Subject  
Select Subject

Submit Request



The screenshot shows the Admin Dashboard with the title 'Admin Dashboard' at the top. On the right, there is a 'Logout' button. Below the title, there are three navigation tabs: 'PDF Upload Requests', 'Ad Management', and 'User Management', with 'User Management' being the active tab.

The 'User Management' section has a header 'User Management' and a search bar with the placeholder 'Search users by name or email'. Below the search bar is a table listing user information:

NAME	EMAIL	STATUS	ACTIONS
baanana gauravvy	gauravbana840@gmail.com	Active	<span>Block</span>
guarav bana	bana@gmail.com	Active	<span>Block</span>
Admin User	admin@example.com	Active	<span>Block</span>
Moderator User	moderator@example.com	Active	<span>Block</span>
Dip ojha	dipojha00@gmail.com	Active	<span>Block</span>

At the bottom of the dashboard, there are various navigation icons and a timestamp '21:39 10/02/2025'.

The screenshot shows the Admin Dashboard with the title "Admin Dashboard" at the top right. A "Logout" button is located in the top right corner. Below the title, there are three navigation buttons: "PDF Upload Requests", "Ad Management", and "User Management". The main content area is titled "PDF Upload Requests" and displays a table with one row of data:

PDF ID	Title	Uploader	Upload Date	Actions
35	Digital Logic	bana	10/02/2025	

At the bottom of the dashboard are standard browser navigation buttons (back, forward, search, etc.) and a set of icons for file operations.

The screenshot shows the Admin Dashboard with the title "Admin Dashboard" at the top right. A "Logout" button is located in the top right corner. Below the title, there are three navigation buttons: "PDF Upload Requests", "Ad Management", and "User Management". The main content area is titled "Ad Management" and contains a form for adding a new ad:

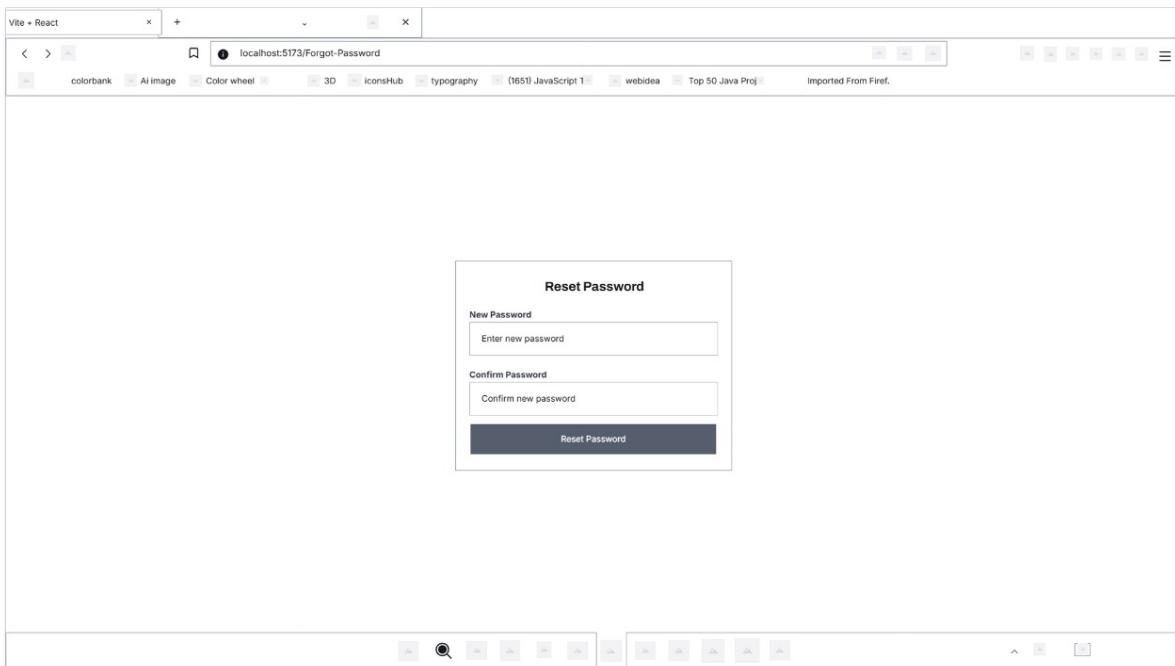
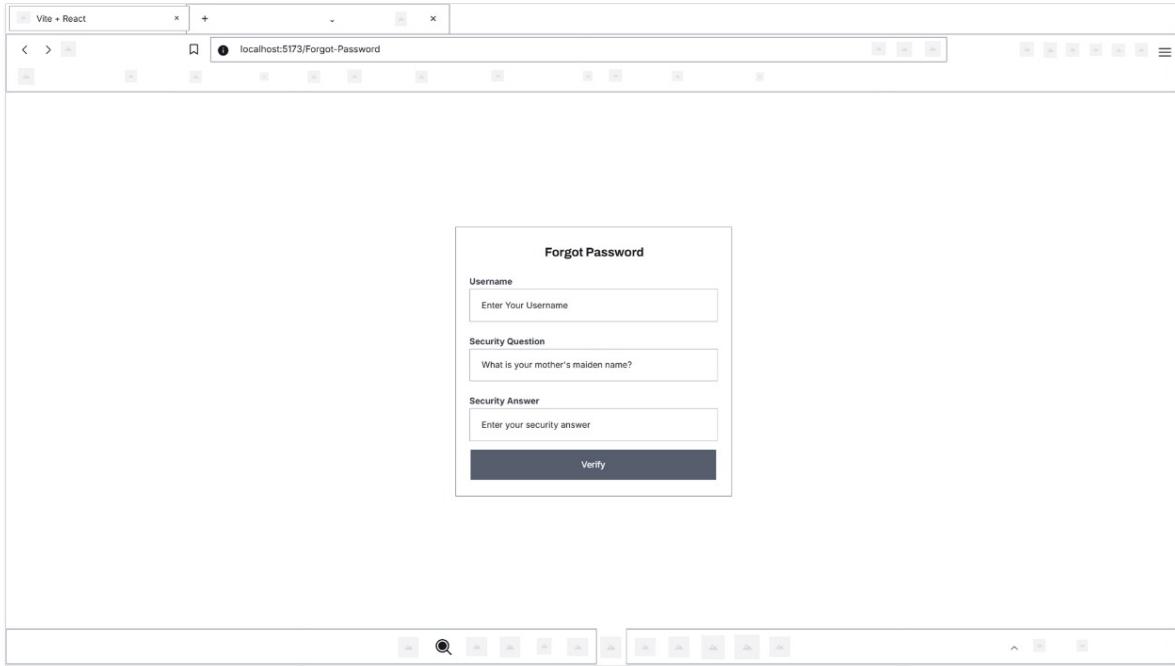
Ad Title:

Choose file:  No file chosen

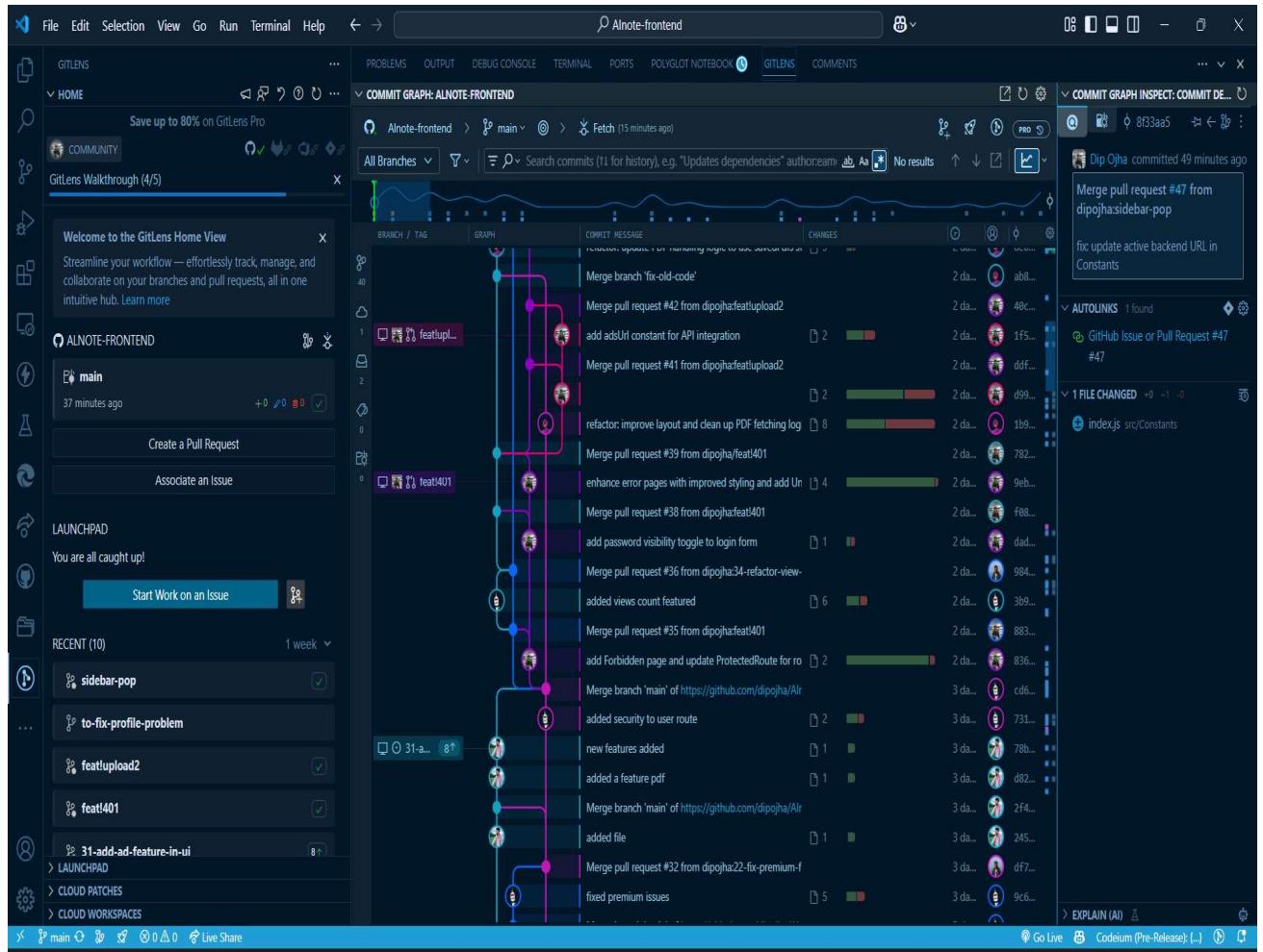
Priority:

Below the form is a table titled "AD NAME" with columns: AD NAME, PRIORITY, STATUS, and ACTIONS. The table displays the message "No ads found".

At the bottom of the dashboard are standard browser navigation buttons (back, forward, search, etc.) and a set of icons for file operations.



## **GIT LOG**



# GIT ACTIVITY LOG

The screenshot shows a GitHub project board titled 'Annote' under the 'Team items' tab. The board is filtered by assignee 'dipjha'. The tasks are organized into three columns: 'To-Do', 'In progress', and 'Done'. Each task includes a title, status, size, estimate, priority, start date, end date, and a link.

Title	Status	Size	Estimate	Priority	Start date	End date
Add Ad feature in ui #31	To-Do	-	-	P	-	-
remove all comments from the code #4	To-Do	-	-	P	-	-
refactor academic structure #44	To-Do	-	-	-	-	-
refactor pdf component in admin #49	To-Do	-	-	-	-	-
Add item	In progress	-	-	P	Feb 9, 2025	-
Add a chat feature #8	In progress	-	-	P	Feb 9, 2025	-
feat view count #33	In progress	-	-	-	-	-
feat-premium-user #20	Done	-	-	-	-	-
feat-premium-user #17	Done	-	-	-	-	-
feat/recently-viewed #15	Done	-	-	-	-	-
Add a toast notification #5	Done	-	(M)	P	Feb 8, 2025	Feb 10, 2025
Add following-follow	Done	-	-	-	-	-
fix premium-feature #22	Done	-	-	-	-	-
Profile inside layout #24	Done	-	-	P	-	-
UI for Premium	Done	-	-	P	-	-
feat viewing pdf for admin #37	Done	-	-	-	-	-

The image displays two side-by-side screenshots of the Swagger UI interface, both showing the same set of API endpoints for different entities.

**Top Screenshot (University API):**

- University:**
  - GET /api/University
  - PUT /api/University/{id}
  - DELETE /api/University/{id}
- Users:**
  - GET /api/Users
  - GET /api/Users/{id}
  - GET /api/Users/search
  - GET /api/Users/{userId}/profile-picture
  - PUT /api/Users/edit-profile
  - PUT /api/Users/change-profile-picture
  - GET /api/Users/{userId}/get-User-Overall-Rating
- Schemas:**
  - AcademicProgramDto >
  - AddRatingDto >
  - FacultyDto >

**Bottom Screenshot (Subject API):**

- Subject:**
  - GET /api/Subject/subjects-only
  - GET /api/Subject
  - POST /api/Subject
  - PUT /api/Subject/{id}
  - DELETE /api/Subject/{id}
- Subscription:**
  - POST /api/Subscription/subscribe
  - DELETE /api/Subscription/cancel
  - GET /api/Subscription/status
- University:**
  - POST /api/University
  - GET /api/University
  - PUT /api/University/{id}
  - DELETE /api/University/{id}
- Users:**
  - GET /api/Users

**Rating**

- POST** /api/Rating/rate-and-review
- GET** /api/Rating/{pdfId}/get-Pdf-RatingsAndReviews

**RecentlyViewedPDFs**

- POST** /api/RecentlyViewedPDFs/{userId}/{pdfId}
- DELETE** /api/RecentlyViewedPDFs/{userId}/{pdfId}
- GET** /api/RecentlyViewedPDFs/{userId}

**SavedPdfs**

- POST** /api/savedpdfs/{userId}/{pdfId}
- DELETE** /api/savedpdfs/{userId}/{pdfId}
- GET** /api/savedpdfs/{userId}

**Search**

- GET** /api/Search/search

**Subject**

- GET** /api/Subject/subjects-only
- GET** /api/Subject
- POST** /api/Subject

**Pdf**

- GET** /api/Pdf
- POST** /api/Pdf
- GET** /api/Pdf/followed-users
- GET** /api/Pdf/{id}/details
- GET** /api/Pdf/{userId}
- GET** /api/Pdf/{pdfId}/file
- GET** /api/Pdf/{pdfId}/thumbnail
- PATCH** /api/Pdf/{id}
- DELETE** /api/Pdf/delete/{id}
- POST** /api/Pdf/restore/{id}
- DELETE** /api/Pdf/{id}/admin-delete
- DELETE** /api/Pdf/cleanup
- POST** /api/Pdf/log-view
- GET** /api/Pdf/views/{pdfId}
- PATCH** /api/Pdf/update-view

**Rating**

The image displays two side-by-side screenshots of the Swagger UI interface for a .NET Web API, showing the available endpoints and their details.

**Top Screenshot (Left):**

- Follow:**
  - DELETE /api/Follow/{followeeId}
- Messages:**
  - POST /api/messages/send
  - GET /api/messages/conversation/{userId}/{adminId}
  - POST /api/messages/mark-as-read/{messageId}
- Notifications:**
  - GET /api/Notifications/{userId}
  - POST /api/Notifications
  - PUT /api/Notifications/{id}/mark-as-read
- Pdf:**
  - GET /api/Pdf
  - POST /api/Pdf
  - GET /api/Pdf/followed-users
  - GET /api/Pdf/{id}/details

**Bottom Screenshot (Right):**

- Auth:**
  - POST /api/Auth/reset-password
  - GET /api/Auth/security-questions
  - POST /api/Auth/security-questions
  - GET /api/Auth/{id}/security-questions
- Faculty:**
  - GET /api/Faculty
  - POST /api/Faculty
  - GET /api/Faculty/{id}
  - PUT /api/Faculty/{id}
  - DELETE /api/Faculty/{id}
- Follow:**
  - GET /api/Follow/{userId}/followers
  - GET /api/Follow/{userId}/following
  - POST /api/Follow/{followeeId}
  - DELETE /api/Follow/{followeeId}
- Messages:**

The image shows two screenshots of the Swagger UI interface, both titled "backend v1".

**backend v1**

- AcademicProgram**
  - GET /api/AcademicProgram
  - POST /api/AcademicProgram
  - GET /api/AcademicProgram/{id}
  - PUT /api/AcademicProgram/{id}
  - DELETE /api/AcademicProgram/{id}
- Ads**
  - GET /api/Ads
  - POST /api/Ads

**Auth**

- Ads**
  - GET /api/Ads
  - POST /api/Ads
- Auth**
  - POST /api/Auth/login
  - POST /api/Auth/register
  - POST /api/Auth/{pdfId}/approve
  - POST /api/Auth/{pdfId}/reject
  - GET /api/Auth/pending-reviews
  - POST /api/Auth/{userId}/activate
  - POST /api/Auth/{userId}/deactivate
  - POST /api/Auth/forgot-password
  - POST /api/Auth/reset-password
  - GET /api/Auth/security-questions
  - POST /api/Auth/security-questions
  - GET /api/Auth/{id}/security-questions







