VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELAGAVI - 590018

DBMS Mini Project Report on

"DSATM ClassroomConnect"

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

Bachelor of Engineering

In

Computer Science and Engineering

Submitted By

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DAYANANDA SAGAR ACADEMY OF TECHNOLOGY AND MANAGEMENT

Udayapura, Kanakapura Road, Bangalore-560082

(Affiliated to VTU, Belagavi and Approved by AICTE, New Delhi)

CE, CSE, ECE, EEE, ISE, ME Courses Accredited by NBA, New Delhi, NAAC A+

Department of Computer Science and Engineering

Academic Year: 2023-24

DAYANANDA SAGAR ACADEMY OF TECHNOLOGY AND MANAGEMENT

Udayapura, Kanakapura Road, Bangalore-560082

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CERTIFICATE

Certified that the Mini Project titled **"DSATM ClassroomConnect"** carried out by **SUKHI M**, bearing **USN 1DT21CS162, TRISHALA C**, bearing **USN 1DT21CS172, VARUN KULKARNI**, bearing **USN 1DT21CS176,** bonafide students of Dayananda Sagar Academy 0f Technology and Management, is in partial fulfillment for the award of the **BACHELOR OF ENGINEERING** in **Computer Science and Engineering** from Visvesvaraya Technological University, Belagavi during the year 2023-2024.It is certified that all the corrections/suggestions indicated for Internal Assessment have been incorporated in the report submitted to the department. The Project report has been approved as it satisfies the academic requirements in respect of the Mini Project Work prescribed for the said Degree.

Prof. Shylaja B Assistant Professor Department of CSE DSATM, Bengaluru.	Dr. Kavitha C Professor & HOD Department of CSE DSATM, Bengaluru.	Dr. M. Ravishankar Principal DSATM, Bengaluru.

Examiner 1:

Name…….……..

Signature……

Examiner 2:

Name…….

Signature……...

DAYANANDA SAGAR ACADEMY OF TECHNOLOGY AND MANAGEMENT

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DECLARATION

We, **SUKHI M** bearing **USN 1DT21CS162, TRISHALA C**, bearing **USN 1DT21CS172, VARUN KULKARNI** bearing **USN 1DT21CS176,** students of Fifth Semester B.E, Department of Computer Science and Engineering, Dayananda Sagar Academy of Technology and Management, Bengaluru, declare that the Mini Project Work titled **"DSATM ClassroomConnect"** has been carried out by us and submitted in partial fulfilment of the course requirements for the award of degree in **Bachelor of Engineering** in **Computer Science and Engineering** from **Visvesvaraya Technological University, Belagavi** during the academic year **2023- 2024**.

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Place: Bengaluru

Date: 15-03-2024

ABSTRACT

In the contemporary educational landscape, there exists a growing need for an integrated digital platform that not only serves as a comprehensive student database but also facilitates the sharing of achievements, study materials, and seamless communication among students and teachers. This project aims to address these needs by developing a web-based application designed specifically for college level students and faculty members.

The proposed platform will feature a user-friendly interface allowing students and teachers to create and manage their profiles. Users will have the capability to upload and update their profile pictures, personal information, academic achievements, and professional experiences. Additionally, the platform will incorporate a feature for users to share their accomplishments with friends within the college community, fostering a sense of camaraderie and encouragement among peers.

One of the key functionalities of the platform will be the provision of a virtual room where users can upload and access study materials. This feature will be particularly beneficial for students preparing for seminars or presentations, as they can collaborate with peers and teachers, share resources, and refine their presentations collectively. Moreover, teachers can utilize this virtual space to disseminate course materials, lecture notes, and additional resources, thereby enhancing the learning experience for students.

The development of this project will involve leveraging modern web development technologies such as HTML, CSS, JavaScript, Node js and backend frameworks like Postgres SQL for robust functionality and scalability. Security measures will also be implemented to ensure the privacy and integrity of user data.

In conclusion, the proposed college student database and achievement sharing platform will serve as a centralized hub for students and teachers to manage their academic profiles, share accomplishments, and collaborate on study materials. By fostering a collaborative and supportive digital environment, the platform aims to enhance the overall educational experience within the college community.

ACKNOWLEDGEMENT

The satisfaction and the euphoria that accompany the successful completion of any task would be incomplete without the mention of the people who made it possible. The constant guidance of these people and encouragement provided, crowned us with success and glory. We take this opportunity to express our gratitude to one and all.

It gives us immense pleasure to present before you our project titled "**DSATM ClassroomConnect**". The joy and satisfaction that accompanies the successful completion of any task would be incomplete without the mention of those who made it possible. We are glad to express our gratitude towards our prestigious institution **DAYANANDA SAGAR ACADEMY OF TECHNOLOGY AND MANAGEMENT** for providing us with utmost knowledge, encouragement and the maximum facilities in undertaking this project.

We wish to express a sincere thanks to our respected Principal **Dr. M Ravi Shankar**, Principal, DSATM for all his support.

We express our deepest gratitude and special thanks to **Dr. Kavitha C,** H.O.D, Dept. of Computer Science Engineering, for all her guidance and encouragement.

We sincerely acknowledge the guidance and constant encouragement of our mini-project guide, **Prof. Shylaja B,** Assistant Professor, Dept. of Computer Science & Engineering.

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CHAPTER 1

INTRODUCTION

An integrated platform for students and teachers to share academic achievements and study materials, accessible to all. Facilitates seamless communication and collaboration within the educational community. Features user-friendly interface for easy navigation and interaction. Promotes knowledge-sharing and fosters a culture of support and excellence. Enhances the learning experience by democratizing access to resources and expertise.

1.1 Purpose:

The purpose of the project is to create a centralized platform that facilitates seamless communication and collaboration between students and teachers by enabling them to share academic achievements and study materials. By providing universal access to this platform, the project aims to democratize educational resources and foster a culture of knowledge-sharing within the educational community. Additionally, the project seeks to enhance the learning experience by promoting collaboration, supporting academic growth, and encouraging peer-to-peer learning opportunities. Ultimately, the goal is to create an inclusive and equitable educational environment where students and teachers can collaborate effectively to achieve academic success.

1.2 Scope:

The scope of the project involves the development and implementation of a user-friendly digital platform accessible to both students and teachers. Key features include functionality for users to share academic achievements, upload study materials, and engage in seamless communication. The platform will encompass various academic disciplines and educational levels to cater to a diverse audience. Additionally, the project may involve integrating security measures to protect user data and ensure privacy. Scalability and adaptability will be considered to accommodate potential future growth and advancements in technology. The scope also encompasses user training and support to ensure effective utilization of the platform across educational institutions. Overall, the project aims to provide a comprehensive solution for fostering collaboration and enhancing the educational experience for all stakeholders.

CHAPTER 2

REQUIREMENT SPECIFICATION

2.1 Hardware Configuration

The Hardware requirements are very minimal and the program can be run on most of the machines.

- Processor - Intel 486/Pentium Processor or better
- Processor Speed - 500 MHz or above
- Hard Disk - 20 GB (approx.)
- RAM - At least 2GB
- Storage Space - Approx. 2MB

2.2 Software Configuration

Software requirements refer to the programs, applications, and operating systems needed for a system to function. These include:

- Technology Implemented : Apache Server, MySQL Server
- Backend Language : PHP and JQuery
- Database : MySQL
- User Interface Design : HTML, CSS, Bootstrap
- Web Browser : Google Chrome, Firefox
- Software : XAMPP Version: 7.1.10 and VS Code

CHAPTER 3

SYSTEM ANALYSIS AND DESIGN

3.1 SCHEMA DIAGRAM

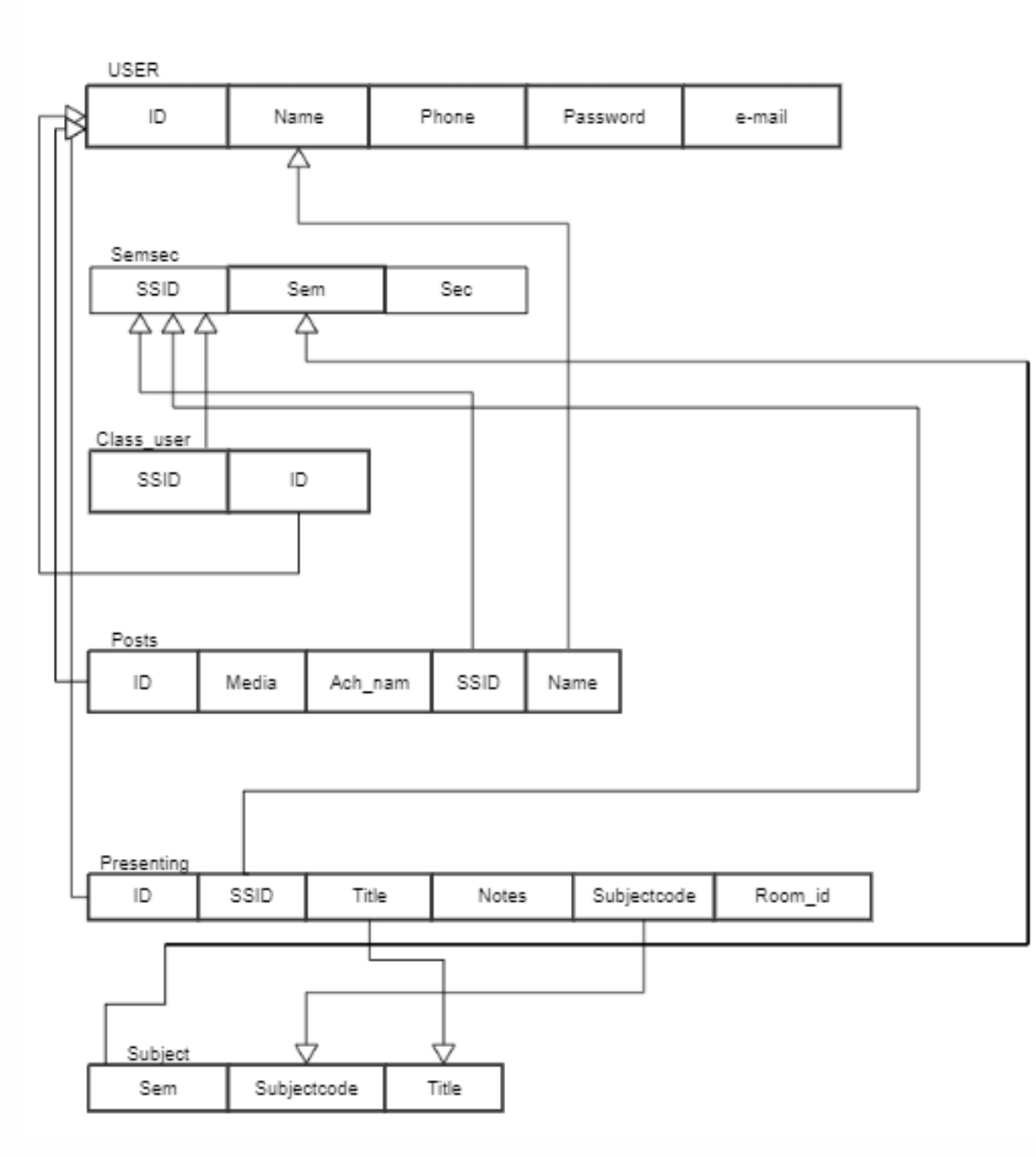

Figure 3.1 Schema Diagram

3.2 ER diagram

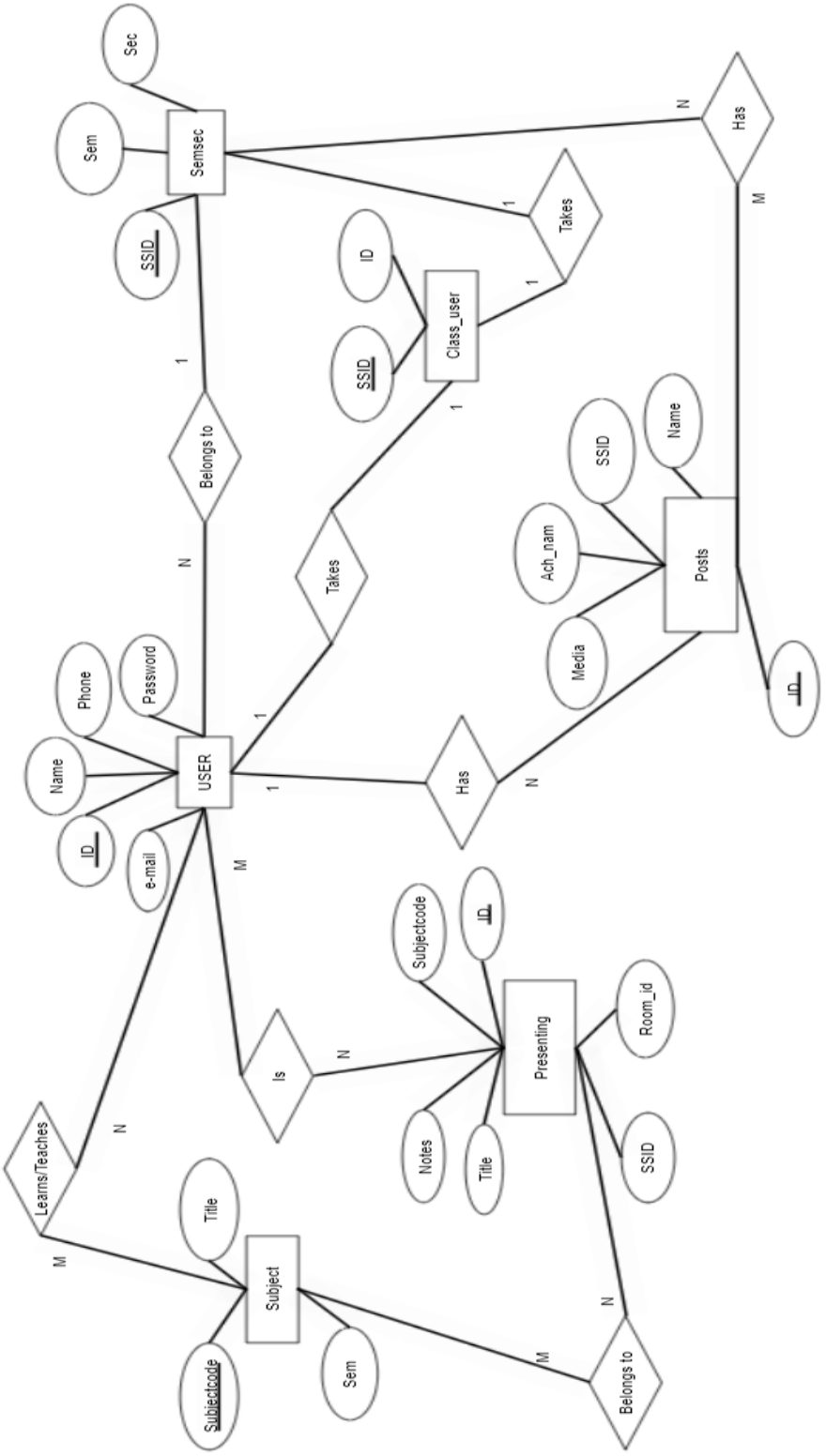

Figure 3.2 ER Diagram

3.1 Table description

users

#	id	name	ph_no	email	password	profile_pic_path
1	155	sharath	7892917346	sole@gmail.com	8	
2	133	goutam	7892917346	goutam123@gmail.com	5678	
3	177	Vedant Khandelwal	8457891478	vedantskhandelwal@gmail.com	vedant123	profile-pics\1710739494705-337685772.jpg
4	176	Varun Kulkarni	7892917346	varunkulkarni30@gmail.com	1102	profile-pics\1710948872419-933635419.jpg
5	162	sukhi	8105420333	sukhi.m24@gmail.com		profile-pics\1710987645207-581717978.jpg
6	162			varunkulkarni30@gmail.com	asdf	profile-pics\1710987645207-581717978.jpg
7	162	Sukhi M	8105420339	sukhi.m2409@gmail.com	0401	profile-pics\1710987645207-581717978.jpg

3.1.1 users

semsec

#	ssid	sem	sec
1	CSE8A	8	A
2	CSE8B	8	B
3	CSE8C	8	C
4	CSE7A	7	A
5	CSE7B	7	B
6	CSE7C	7	C
7	CSE6A	6	A
8	CSE6B	6	B
9	CSE6C	6	C
10	CSE5A	5	A
11	CSE5B	5	B
12	CSE5C	5	C
13	CSE4A	4	A
14	CSE4B	4	B
15	CSE4C	4	C
16	CSE3A	3	A
17	CSE3B	3	B
18	CSE3C	3	C
19	CSE2A	2	A
20	CSE2B	2	B
21	CSE2C	2	C
22	CSE1A	1	A
23	CSE1B	1	B

3.1.2 semsec

class_user

#	user_id	ssid
1	176	CSE5C
2	162	CSE6C
3	162	CSE6C

3.1.1 class_user

posts

#	id	user_id	content	image	created_at
1	13	162	I'm delighted to share that our project paper, centered around the vital theme of hashtag#LifeMatters , has been accepted for presentation at the prestigious IEEE Conference on Integrated Intelligence and Communication Systems! This opportunity to showcase our work on utilizing technology for societal betterment is both thrilling and rewarding. Being part of this conference is not just a milestone but a chance to contribute meaningfully to technology's advancement for a greater cause.	1710995738665-176959555.jpg	2024-03-21 04:35:38.588956
2	14	176	Hi connections! I successfully completed a internship on full stack web development at varcons technology. I have been exposed and well trained in html , css, JS , Figma. I have also learned about data bases such as mongo db.	1710995889557-281482093.jpg	2024-03-21 04:38:09.485196

3.1.2 posts

presenting

#	user_id	ssid	title	notes	subject_code	room_id
1	176	CSE5C	CN	presenting\Python 5 (1).pdf	21CS52	941508
2	162	CSE6C	DBMS	presenting\@vtucode.in-module-3-2021-scheme-DBMS-5th-semester.pdf	21CS52	929952
3	162	CSE6C	ATC	presenting\aiml5 VEDD.pdf	21CS51	202415

3.1.3 presenting

CHAPTER 4

IMPLEMENTATION

4.1 USER REGISTRATION AND LOGIN MODULE

User registration and user login modules are fundamental components of any web application that involve user authentication and access control. In the user registration module, users can create accounts by providing necessary information such as User ID, password, and possibly additional details like r profile picture. This information is typically stored securely in a database after being validated and sanitized to prevent security vulnerabilities.

The user login module allows registered users to access their accounts by entering their credentials, usually a combination of User ID and password. The login process involves verifying the user's credentials against the stored data in the database. If the credentials match, the user is authenticated and granted access to their account's functionalities.

Both modules play crucial roles in ensuring the security and integrity of the web application. User registration ensures that only authorized individuals can access the system, while user login verifies the identity of users during each session, preventing unauthorized access. Implementing these modules effectively involves robust password hashing techniques, input validation, session management, and secure communication protocols to protect sensitive user data from potential threats such as unauthorized access or data breaches.

4.2 USER OPERATIONS

Our users engage in essential operations for a collaborative web experience, starting with user registration and login. During registration, users provide basic information like name, email, and password, securely stored in the database. After login, users can update their profiles, including profile pictures and personal details. They can also upload files for collaboration, such as documents or presentations.

The collaborative features allow users in the same section to share resources and work together in rooms. Users can create, manage, and join rooms, engaging in discussions and activities specific to each room. This functionality promotes efficient collaboration, knowledge sharing, and interactive learning or work experiences.

4.3 SOURCE CODE

```
CREATE TABLE posts(
id varchar  NOT NULL
user_id varchar  NOT NULL,
image varchar  NOT NULL,
created_at int  NOT NULL,);

create table class_user(
user_id integer primary key,
SSID varchar (20));

create table presenting(
user_id integer,
SSID varchar(10),
title varchar(20),
notes varchar(200),
subject_code varchar(20),
room_id integer);

CREATE TABLE Semsec (
SSID varchar  NOT NULL,
Sem int  NOT NULL,
Sec varchar  NOT NULL,
CONSTRAINT Semsec_pk PRIMARY KEY (SSID));

-- Table: User
CREATE TABLE User (
    ID varchar  NOT NULL,
    Name varchar  NOT NULL,
    Phone int  NOT NULL,
    e-mail varchar  NOT NULL,
    Password varchar  NOT NULL,
    CONSTRAINT User_pk PRIMARY KEY (ID)
);
```

DATABASE CONNECTIVITY:

```
const { Client } = require('pg');

const client = new Client({
  host: 'ep-jolly-hill-a5vd1iv1.us-east-2.aws.neon.tech',
  database: 'Student_teacher',
  user: 'varunkulkarni30',
  password: '3tFgRIq0kxYm',
  port: 5432,
  ssl: true,
});

// Connect to the PostgreSQL server
client.connect()
  .then(() => {
    console.log('Connected to PostgreSQL server');
  })
  .catch(error => console.error('Error connecting to PostgreSQL server:', error));


module.exports= client;
```

LANDING PAGE:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Home</title>
    <link rel="stylesheet" type="text/css" href="styles.css">
  </head>
  <nav class="linkedin-navbar">

    <img src="../images/ClassroomConnect-removebg-preview.png" height="90px" >
  <ul class="nav-list">
    <li><a href="/home">Home</a></li>
    <li><a href="/join">Create Rooms</a></li>
    <li><a href="/dashboard">Upload Posts</a></li>
    <li><a href="/presenting">Presenting</a></li>
  </ul>

  <div class="user-actions">
    <a href="/profile">My Profile</a>
    <a href="/login">Sign Out</a>
  </div>
  </nav>
<body>
    <div class="container">
        <div class="left-column">
            <!-- User info section -->
            <h2 align="center">User Info</h2>
```

```
<html lang="en">
<body>
    <div class="container">
        <div class="right-column">
            <% if (posts.length > 0) { %>
                <% posts.forEach(function(post) { %>
                    <div class="post">
                        <p class="user-id">User ID: <%= post.user_id %></p>
                        <p class="content">Content: <%= post.content %></p>
                        <img id="post_image" src="/uploads/<%= post.image %>" alt="Post Image" class="pos
                        <form action="/delete_post" method="POST">
                          <input type="hidden" name="postId" value="<%= post.id %>">
                          <button type="submit">Delete</button>
                        </form>
                    </div>
                <% }); %>
            <% } else { %>
                <p>No posts found</p>
            <% } %>
        </div>
    </div>
    <script>
      document.getElementById('searchForm').addEventListener('submit', (event) => {
  event.preventDefault(); // Prevent default form submission
  const searchTerm = document.getElementById('search').value.trim();
  window.location.href = `/search?query=${searchTerm}`;
});
    </script>
</body>
</html>
```

CHAPTER 5

System Settings:

TESTING

During the testing phase of the DSATM ClassroomConnect for the database management system (DBMS) project, several key steps are undertaken to ensure the system's functionality, performance, and security.

Initially, unit testing is conducted to verify the correctness of individual components, such as database queries and user interfaces. Integration testing follows, ensuring that different modules of the system work together seamlessly, including their interactions with the database.

System testing is then performed to evaluate the entire system against the project requirements, including database operations. Performance testing is crucial to ensure the system performs well under expected load, including database performance under concurrent access. User acceptance testing (UAT) involves end-users testing the system to ensure it meets their needs and is user-friendly.

Security testing is conducted to verify that the system is secure, including database security measures like access controls and data encryption. Regression testing is also performed to re-test previously working parts of the system after changes to ensure new features or bug fixes haven't introduced issues.

Additionally, database backup and recovery testing are conducted to ensure that database backups can be created and restored properly in case of data loss. Each of these testing phases is critical to ensuring the DSATM ClassroomConnect is robust, performs well, and meets the project requirements.

CHAPTER 6

RESULT ANALYSIS AND SCREENSHOTS

User Register Page: Where the user can Register.

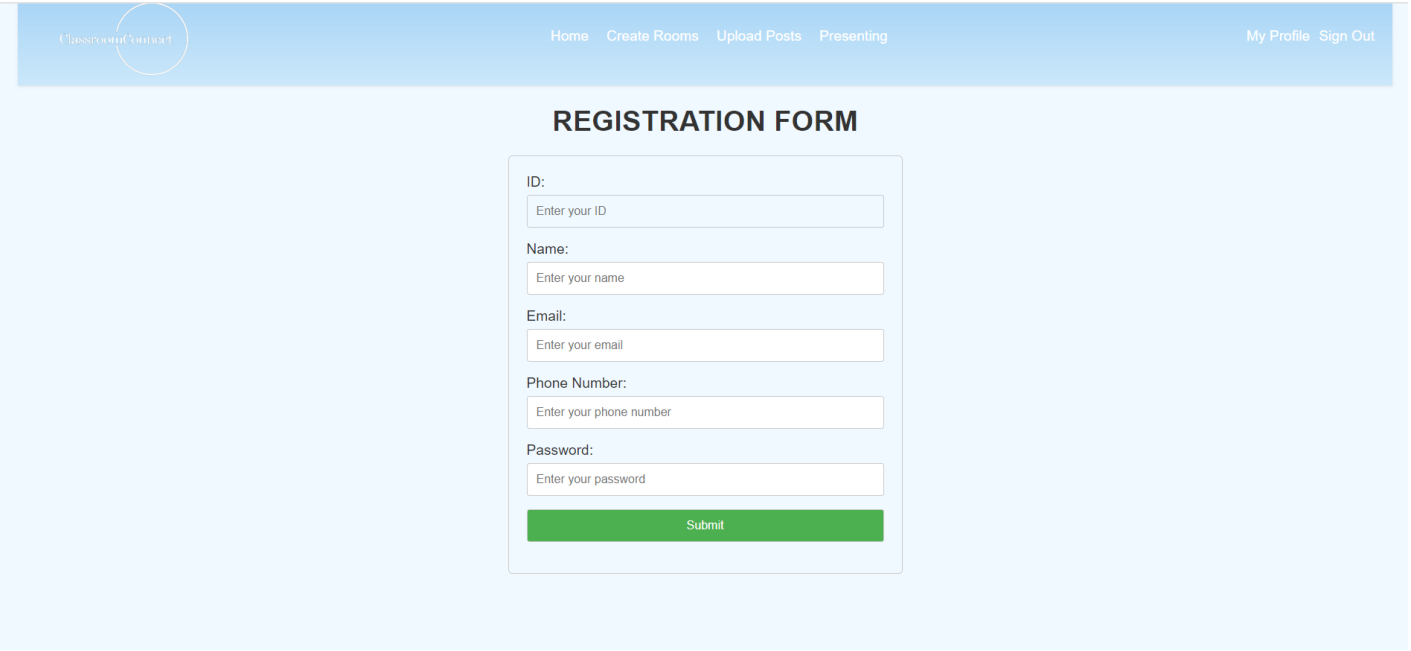

Figure 6.1

User Login Page: After Registration the User can login from this page.

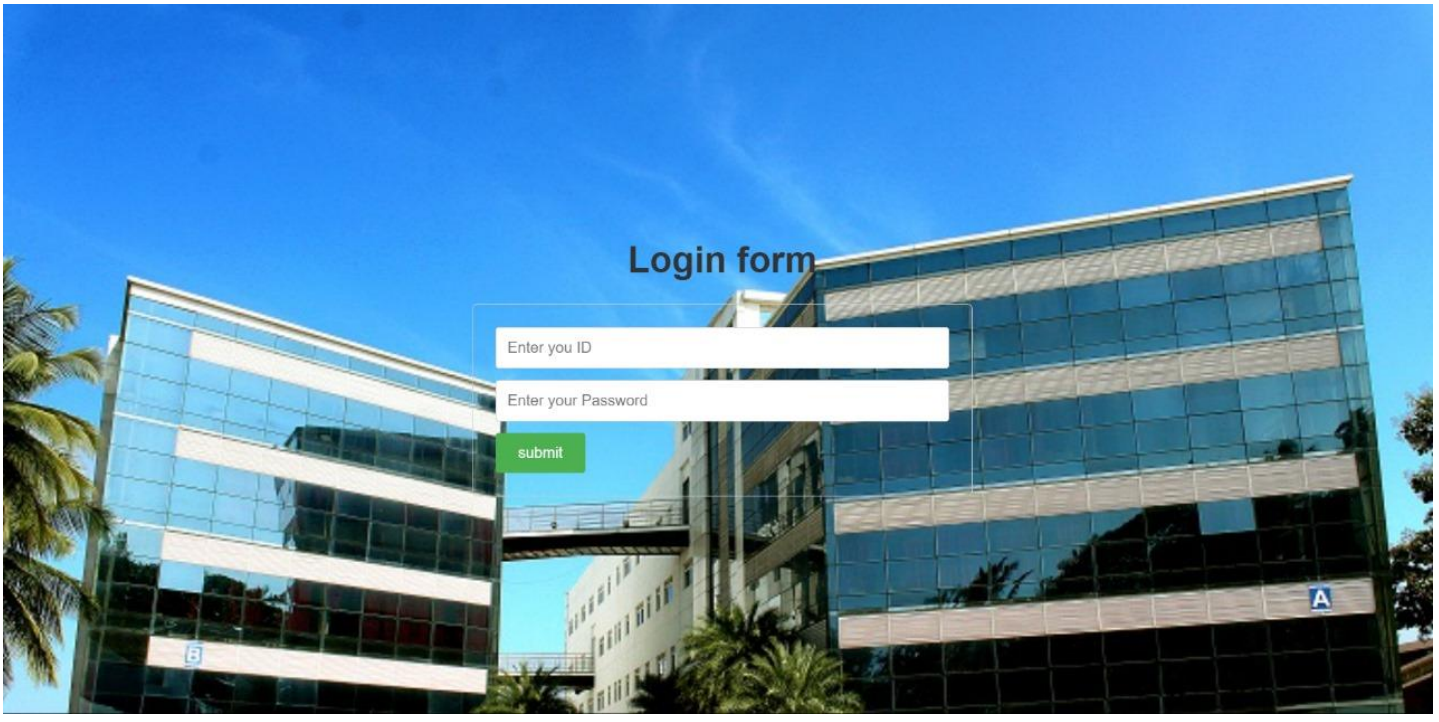

Figure 6.2

Home page: The landing page which consists of a navigation bar that includes the following 20 s: Home,Create Rooms, Upload Posts, Presenting, My Profile, Sign Out.

The page shows all the recent posts uploaded and the user information of the specific user who has logged in.

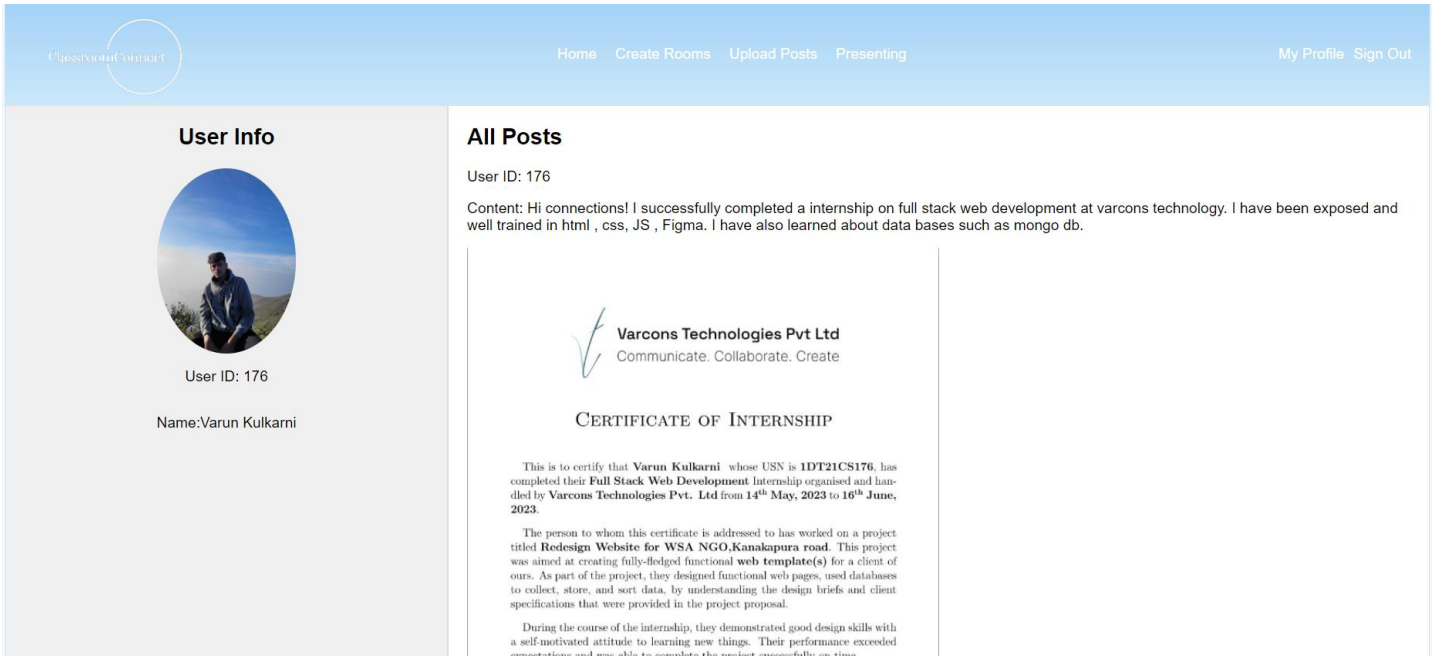

Figure 6.3

Profile page: In the profile page you can make changes in your profile such as adding a new profile photo, about and adding your sem and section by which the SSID will be assigned.

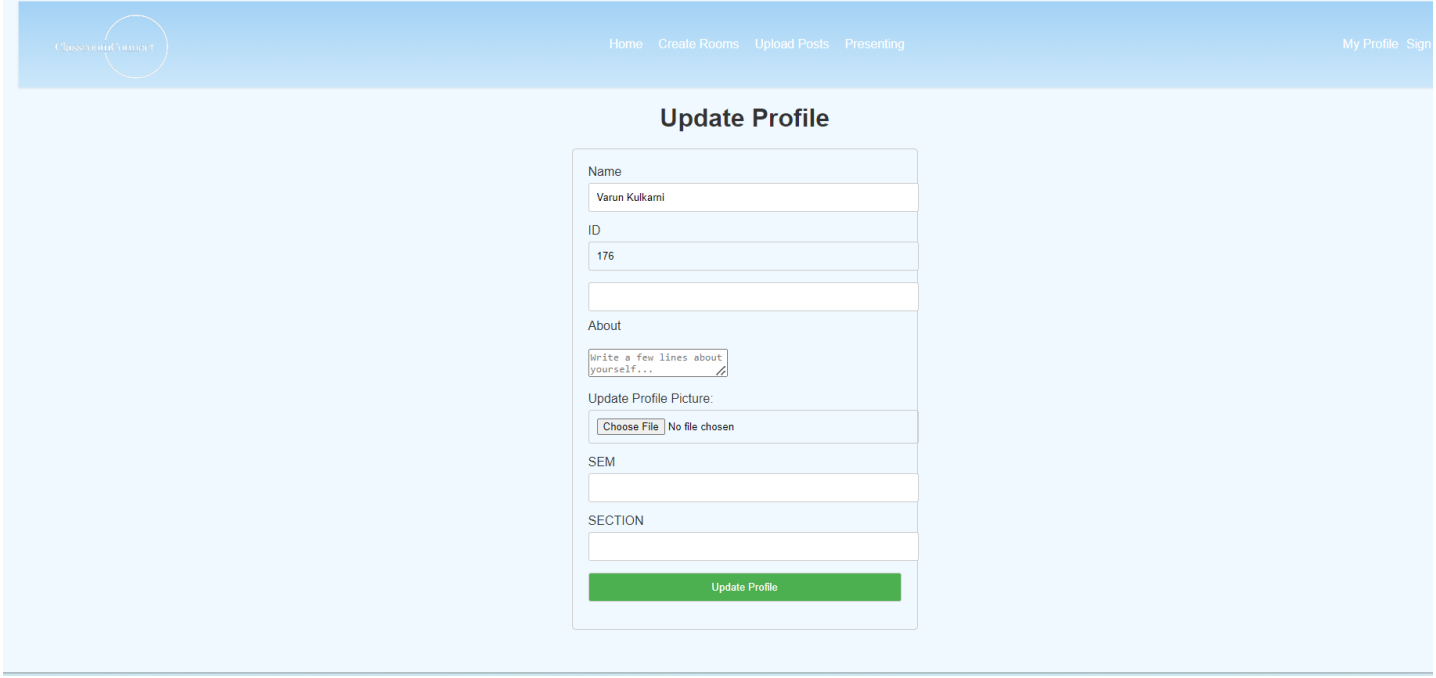
Home
Create Rooms
Upload Posts
Presenting
My Profile
Sign
Update Profile
Name
Varun Kulkarni
ID
176
About
Write a few lines about yourself...
Update Profile Picture:
Choose File
No file chosen
SEM
SECTION
Update Profile

Figure 6.4

Upload post page: In this page you can upload a new post with its content in jpg format only.

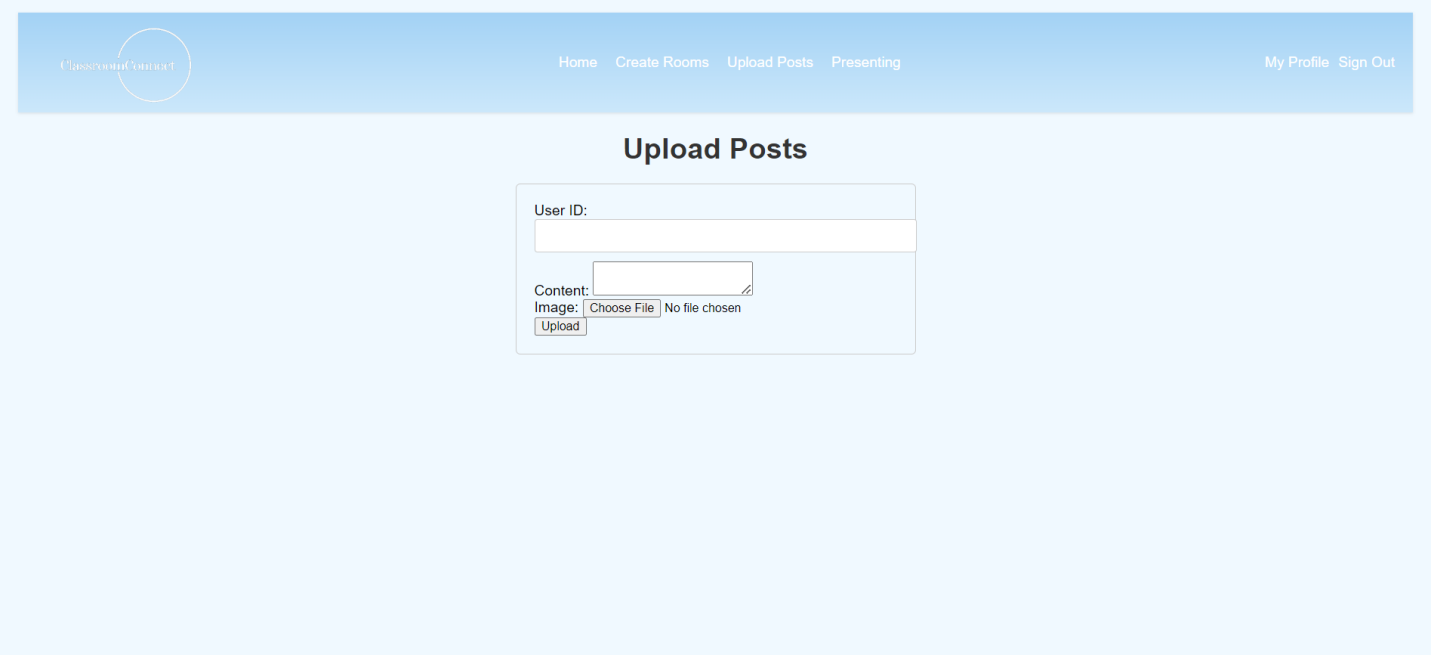

Figure 6.5

Create room page: In this page you can create a new room with a title and subject code with uploading a file into the room.

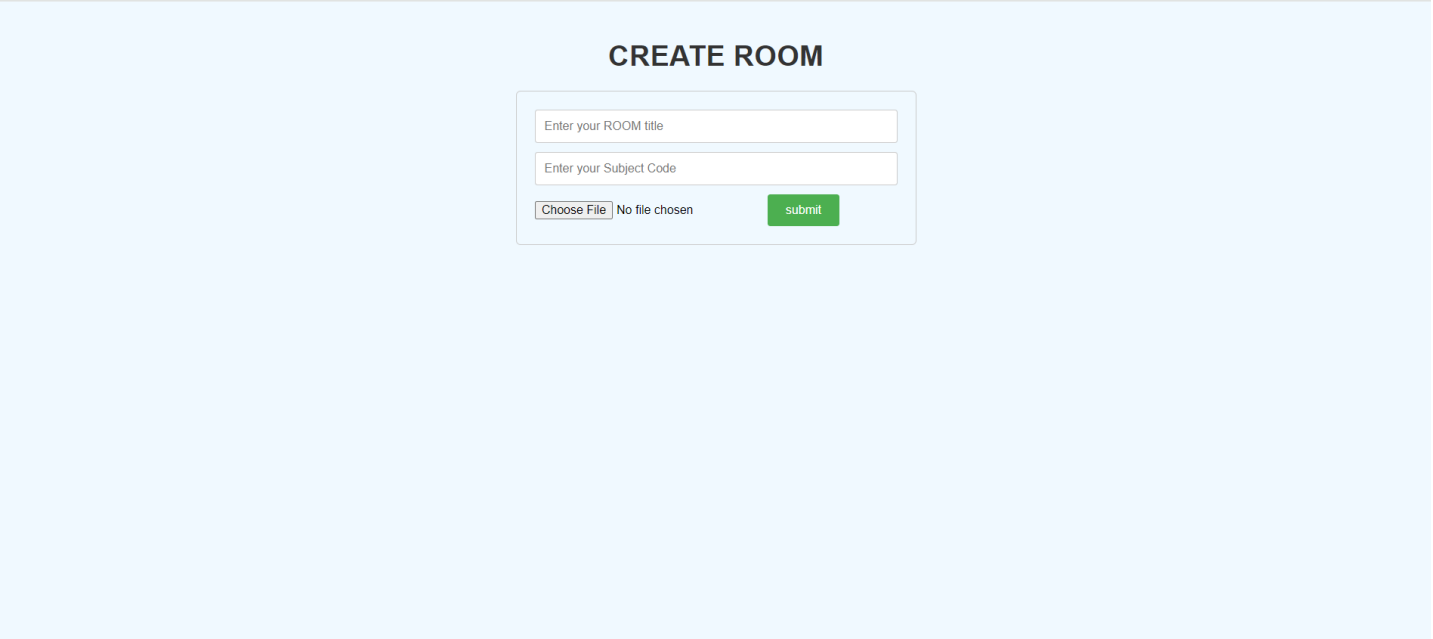

Figure 6.6

Presenting page: In the presenting page we can join the room through the room id and view the existing files uploaded in the room id. We can also add more files to the room id over there.

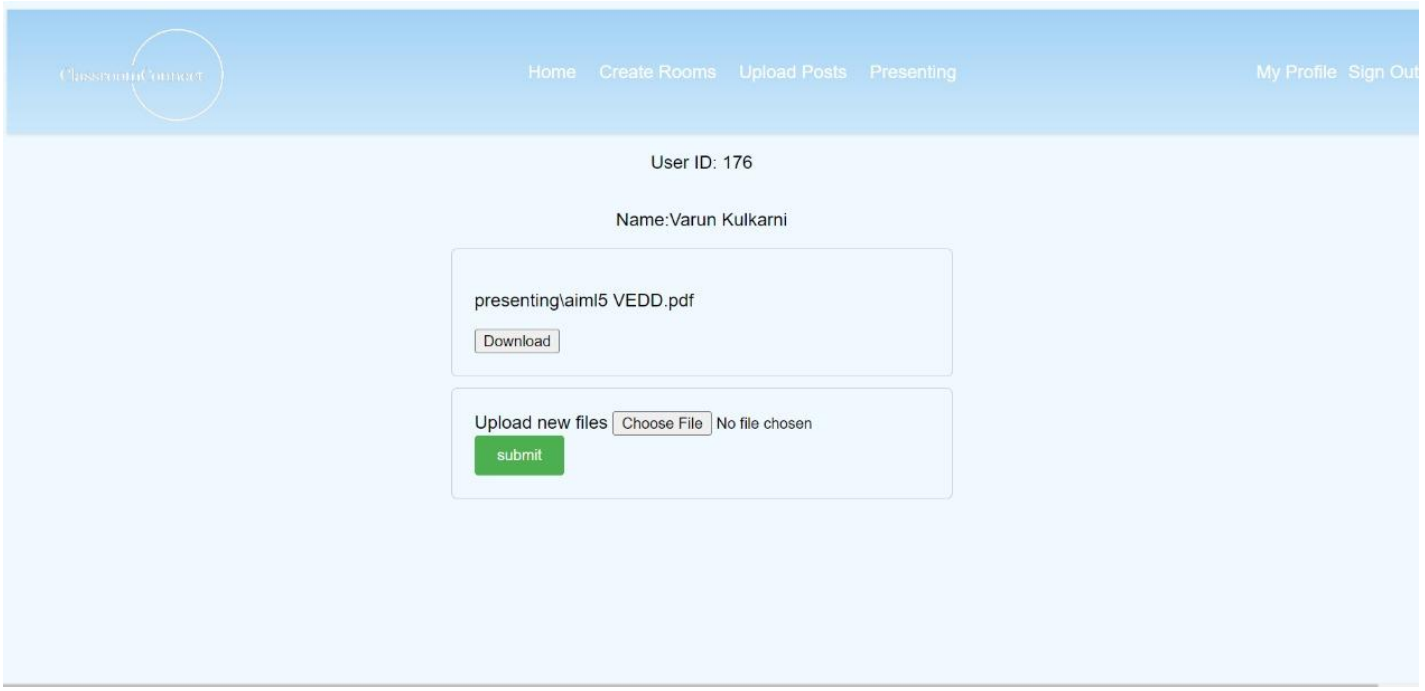

Figure.6.7

CHAPTER 7

CONCLUSION

The project represents a transformative endeavor poised to reshape the educational landscape by harnessing the power of digital collaboration and knowledge-sharing. In recognizing the inherent value of facilitating seamless communication and resource exchange among students and teachers, our platform endeavors to cultivate a dynamic ecosystem where academic achievements and study materials are readily accessible to all stakeholders.

By providing a centralized hub accessible to both students and teachers, our platform not only streamlines the sharing of academic accomplishments and study materials but also fosters a sense of community and interconnectedness within educational institutions. Through this initiative, we aspire to cultivate an environment where collaboration thrives, barriers to access are dismantled, and the collective wisdom of the educational community is democratized.

Furthermore, our commitment extends beyond mere technological innovation; it encompasses a vision for a more inclusive and equitable educational experience. By leveraging technology to bridge gaps and foster collaboration, we seek to empower students and educators alike, facilitating their growth, enrichment, and success. As we embark on this journey toward educational transformation, we remain steadfast in our dedication to leveraging technology as a catalyst for positive change and advancement within the realm of education.

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