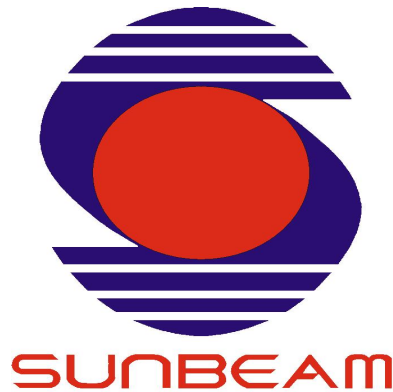


**A
PROJECT REPORT ON
E-Learning Platform**

**SUBMITTED IN
PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE COURSE
DIPLOMA IN ADVANCED COMPUTING (PG-DAC)**



SUNBEAM INSTITUTE OF INFORMATION TECHNOLOGY

Hinjewadi

SUBMITTED BY:

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UNDER THE GUIDANCE OF

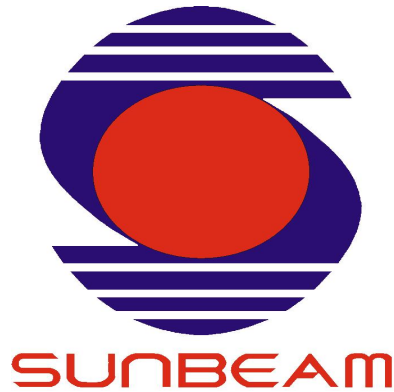
Mrs. Pooja Jaiswal

(Faculty Member)

AT

**SUNBEAM INSTITUTE OF INFORMATION TECHNOLOGY,
PUNE**

**SUNBEAM INSTITUTE OF INFORMATION TECHNOLOGY,
PUNE.**



CERTIFICATE

This is to certify that the project work under the title 'E-Learning Platform' is done by Mr. Neeraj Mahajan, Mr. Shwetank Joshi, Mr. Gaurav Lokhande, Mr. Himanshu Patil in partial fulfillment of the requirement for award of Diploma in Advanced Computing Course.

In partial fulfillment of the requirement for the Course of **PG Diploma in Advanced Computing (PG-DAC AUG2024)** as prescribed by The **CDAC ACTS, PUNE.**

Place: Pune

Date: 10-FEB-2025

Mrs. Pooja Jaiswal
Project Guide

Mr. Yogesh Kolhe
Course Co-ordinator

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ABSTRACT

The project "E-Learning Platform" aims to provide a dynamic, responsive, and intuitive platform for online learning. Developed using ReactJS and TailwindCSS, the front-end offers a user-friendly interface, ensuring an engaging and interactive experience. The backend is powered by Spring Boot, enabling efficient course management, user authentication, and seamless API integration for smooth functionality. MySQL is employed for secure and structured data storage, facilitating efficient content delivery and user progress tracking. Role-based access control is integrated to manage user permissions effectively, ensuring that administrators, instructors, and learners have appropriate access. The platform is optimized for performance and scalability, ensuring it can handle high user engagement seamlessly. This project highlights the fusion of modern technologies to build an e-learning system capable of providing a reliable and high-quality educational experience.

The platform supports various multimedia content types, such as videos, quizzes, and assignments, to enhance the learning process. Real-time notifications ensure that users are always up to date with course updates and progress. A user-friendly dashboard provides personalized insights and progress tracking for both learners and instructors. Additionally, the system incorporates data encryption methods to maintain the privacy and security of user information. Overall, this project offers a complete, flexible, and secure solution for online education.

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INTRODUCTION

The rapid growth of online education has created a need for efficient and scalable platforms that can cater to the diverse needs of learners and educators. Traditional classroom-based learning is being complemented with digital learning environments, making it crucial to develop platforms that offer flexibility, accessibility, and interactivity. The E-Learning Platform aims to address this need by providing a user-friendly and feature-rich solution for online education.

This project was developed to create an engaging and responsive e-learning platform that supports various educational content types, including videos, quizzes, assignments, and discussions. The platform ensures seamless user experiences through a well-structured interface and optimized backend services. ReactJS and TailwindCSS were selected for the front-end to build a dynamic and responsive UI, while Spring Boot was chosen for the backend to manage course content and user interactions efficiently. MySQL is used as the database to securely store user data, progress, and course materials.

The system incorporates role-based access control to manage user permissions effectively, enabling different access levels for administrators, instructors, and learners. The platform is designed with performance and scalability in mind to accommodate a large number of users without compromising on speed or reliability. Through this project, we aim to provide a robust solution that enhances the online learning experience and meets the growing demands of modern education.

2. PRODUCT OVERVIEW AND SUMMARY

2.1 Purpose

The purpose of this project is to create an easy-to-use and efficient **E-Learning Platform** that enhances the online learning experience. The platform aims to provide a place where students can access educational content, track their progress, and interact with instructors. It also helps instructors manage courses, assignments, and student performance. The goal is to build a scalable, secure system that works well for both learners and educators, making online education more accessible and effective.

2.2 Scope

The scope of this **E-Learning Platform** project includes the development of a fully functional online learning system that caters to students and instructors. The platform will allow students to register, access course materials, complete assignments, and track their progress. Instructors will be able to upload content, create assignments, and monitor student performance. The system will have role-based access control to ensure secure and proper access to features for administrators, instructors, and learners. Additionally, the platform will be scalable, ensuring that it can handle a growing number of users. The project will also focus on providing a user-friendly interface, ensuring a smooth and engaging learning experience.

2.3 User Classes and Characteristics

Admin:

- **Role:** Manages the overall platform, including user accounts and course settings.
- **Characteristics:** Has full access to all system features, including adding/removing users, managing courses, and viewing reports on student progress.

Instructor:

- **Role:** Creates and manages courses, assigns tasks, and tracks student progress.
- **Characteristics:** Has access to features related to course management, content creation, and student performance tracking, but cannot manage platform-wide settings.

Learner (Student):

- **Role:** Accesses courses, completes assignments, and tracks their progress.
- **Characteristics:** Can view and interact with course materials, submit assignments, and check their learning progress, but has limited access to platform settings.

2.4 Design and Implementation Constraints

1. Technology Constraints:

The project is developed using ReactJS for the front-end and Spring Boot for the back-end, with MySQL as the database management system. These technologies must be used as the core components of the system. TailwindCSS is chosen for styling and must be used for consistent UI design.

2. Performance Constraints:

The platform must be capable of handling up to 500 simultaneous users without significant performance degradation. Load times for pages should not exceed 3 seconds for optimal user experience.

3. Security Constraints:

The platform must implement role-based access control to ensure secure and differentiated access levels for users (Admins, Instructors, and Learners). User data, including personal information and progress tracking, must be stored securely in the MySQL database with encryption for sensitive information like passwords.

4. UI/UX Constraints:

The user interface must be responsive, ensuring a seamless experience across both desktop and mobile devices. The design should be simple, intuitive, and consistent, following TailwindCSS standards for responsiveness and design consistency.

5. Time Constraints:

The project must be completed within 1 month. Specific features such as user authentication, course management, and progress tracking must be implemented within the first two weeks.

6. Software/Hardware Constraints:

The platform should be tested on common web browsers such as Google Chrome, Mozilla Firefox, and Safari. Hosting can be done on cloud platforms (e.g., AWS, Heroku), with server configurations supporting the Spring Boot backend and MySQL database.

3.1 Functional Requirements

3.1.1 Use Case for Administrator:

The Administrator is responsible for managing and overseeing the entire e-learning platform. This role includes the ability to register new users, such as instructors and learners, and manage their permissions. Administrators can create and manage courses, including adding new course content, editing existing content, and organizing course structures. They also have the ability to monitor user progress, track course completion, and generate reports based on user activity. The Administrator can assign or remove roles, ensuring that instructors and learners have the appropriate access to platform features. Additionally, the Administrator manages system settings, such as ensuring platform security, monitoring the performance of the system, and enforcing compliance with data privacy regulations. Administrators also handle user support issues, responding to user queries and maintaining the platform's overall integrity and functionality.

3.1.2 Use Case for Instructor:

The Instructor plays a crucial role in managing and delivering course content to learners on the platform. Instructors can create new courses, upload course materials such as videos, documents, and quizzes, and organize them into modules or lessons. They are responsible for setting deadlines for assignments and exams, as well as evaluating learner performance. Instructors can grade assignments, provide feedback, and track students' progress throughout the course. They also have the ability to interact with learners by responding to questions, facilitating discussions, and offering additional learning support. The Instructor can view detailed reports on individual learners, including their participation and grades, to ensure that students are engaging with the material. They are also responsible for maintaining the quality of the course, updating it regularly with new content, and ensuring it aligns with the latest trends and educational practices. Overall, the Instructor's primary role is to ensure that students have a rich and engaging learning experience, provide timely feedback, and manage their courses efficiently.

3.1.3 Use Case for Customer (Learner):

The Customer or Learner has access to all educational content and resources on the e-learning platform. Learners can register and create their accounts, after which they can browse through available courses based on their interests or previous learning history. Once enrolled in a course, the learner can access video lectures, assignments, quizzes, and other learning materials. They can track their learning progress, view grades, and complete assignments according to the course timeline. Learners can also interact with instructors through discussion forums or direct messaging. Additionally, they can receive notifications about new course updates, deadlines, and performance feedback. The Learner has the flexibility to manage their account settings, such as updating personal details or changing their password, and can view a history of their completed courses and achievements. Their overall experience is designed to be seamless and personalized to ensure they stay engaged and motivated throughout their learning journey.

3.2 Non-Functional Requirements

3.2.1 Usability Requirement:

The usability of the platform is crucial to ensure an engaging and efficient experience for all users. The platform must be designed with a simple, intuitive user interface that enables users (learners, instructors, and administrators) to easily navigate and interact with the system. It should be easy for learners to find and enroll in courses, complete assignments, and track their progress. Instructors should be able to create and manage courses without a steep learning curve. Administrators must be able to manage users, courses, and system settings efficiently. The platform should also be accessible, ensuring that users with different levels of technical skills can operate it without difficulty. Comprehensive support, such as tutorials or help sections, should be available to assist users in utilizing the platform effectively.

3.2.2 Performance Requirement:

The performance of the e-learning platform is critical to ensure a smooth and responsive experience, especially under high traffic conditions. The platform should load within 3 seconds to prevent users from experiencing delays, which could lead to frustration. It must handle a high number of concurrent users, with the system capable of supporting up to 500 active users at once, without significant degradation in performance. The backend must efficiently handle tasks such as course content loading, user authentication, and data processing. Additionally, the platform should be optimized to minimize the load on servers, using techniques like caching, lazy loading, and database query optimization.

3.2.3 Reliability Requirement:

The reliability of the platform is essential to ensure that it operates consistently and correctly over time. The system should be highly available, with minimal downtime, and must be able to recover from unexpected failures without data loss. Regular backups of the database should be implemented to prevent any loss of learner or course data. Error logging and monitoring should be in place to detect issues early, allowing for quick resolution and reducing the risk of user disruption. The platform must also handle user inputs and actions correctly, ensuring that functionality is robust even with invalid or unexpected data.

3.2.4 Portability Requirement:

The portability of the e-learning platform ensures that it can be easily deployed and used across different environments and devices. The system must be designed to work across multiple operating systems (such as Windows, macOS, and Linux) and on various web browsers (such as Google Chrome, Mozilla Firefox, and Safari). The platform must also be mobile-responsive, meaning it should adapt seamlessly to different screen sizes, allowing learners and instructors to use the system on smartphones and tablets. This ensures that the platform remains accessible to a wider range of users, regardless of their device preferences.

3.2.5 Security Techniques:

The security of the platform is vital to protect user data and ensure safe transactions. The system should implement strong encryption for sensitive data, including user passwords, personal details, and course-related information. HTTPS should be used to secure communication between the client and the server. User authentication should be handled through a secure login system, using techniques such as JWT (JSON Web Tokens) or OAuth for token-based authentication. The platform must also include role-based access control (RBAC) to ensure that only authorized users can access specific sections of the platform based on their roles (e.g., administrator, instructor, learner). Regular security audits should be conducted to identify and address potential vulnerabilities, and data privacy regulations (e.g., GDPR) must be adhered to in order to safeguard personal data.

4.1 Data Model

4.1.1 Database Design

1. Users

Field	Type	Null	Key	Default	Extra
user_id	bigint	NO	PRI	NULL	auto_increment
created_on	date	YES		NULL	
updated_on	datetime(6)	YES		NULL	
bio	varchar(255)	YES		NULL	
contact_info	varchar(100)	YES		NULL	
email	varchar(50)	YES		NULL	
password	varchar(50)	YES		NULL	
profile_picture	tinytext	YES		NULL	
role	varchar(50)	YES		NULL	
username	varchar(50)	YES		NULL	
firstname	varchar(50)	YES		NULL	
lastname	varchar(50)	YES		NULL	

2. Courses

Field	Type	Null	Key	Default	Extra
course_id	bigint	NO	PRI	NULL	auto_increment
created_on	date	YES		NULL	
updated_on	datetime(6)	YES		NULL	
course_description	varchar(255)	YES		NULL	
course_name	varchar(255)	YES		NULL	
instructor_id	bigint	YES		NULL	
module_id	bigint	YES	MUL	NULL	
lesson_id	bigint	YES	MUL	NULL	

3. Modules

Field	Type	Null	Key	Default	Extra
module_id	bigint	NO	PRI	NULL	auto_increment
created_on	date	YES		NULL	
updated_on	datetime(6)	YES		NULL	
module_description	varchar(255)	YES		NULL	
module_name	varchar(255)	YES		NULL	
course_id	bigint	NO	MUL	NULL	

4. Enrollments

Field	Type	Null	Key	Default	Extra
enrollment_id	bigint	NO	PRI	NULL	auto_increment
course_status	bit(1)	YES		NULL	
enrollment_date	date	YES		NULL	
lesson_progress	decimal(5,2)	YES		NULL	
module_progress	decimal(5,2)	YES		NULL	
course_id	bigint	YES	MUL	NULL	
student_id	bigint	YES	MUL	NULL	

5. Questions

Field	Type	Null	Key	Default	Extra
question_id	bigint	NO	PRI	NULL	auto_increment
question_text	varchar(255)	NO		NULL	
quiz_id	bigint	NO	MUL	NULL	

6. Answers

Field	Type	Null	Key	Default	Extra
answer_id	bigint	NO	PRI	NULL	auto_increment
correct_option_id	bigint	NO	MUL	NULL	
question_id	bigint	NO	UNI	NULL	

7. Options

Field	Type	Null	Key	Default	Extra
option_id	bigint	NO	PRI	NULL	auto_increment
option_text	varchar(255)	NO		NULL	
question_id	bigint	NO	MUL	NULL	

8. Lessons

Field	Type	Null	Key	Default	Extra
lesson_id	bigint	NO	PRI	NULL	auto_increment
created_on	date	YES		NULL	
updated_on	datetime(6)	YES		NULL	
assessment_title	varchar(255)	YES		NULL	
assessment_type	varchar(255)	YES		NULL	
lesson_content	varchar(255)	YES		NULL	
lesson_title	varchar(255)	YES		NULL	
quiz_description	varchar(255)	YES		NULL	
quiz_title	varchar(255)	YES		NULL	
module_id	bigint	NO	MUL	NULL	

9. Feedback

Field	Type	Null	Key	Default	Extra
feedback_id	bigint	NO	PRI	NULL	
comment	varchar(255)	YES		NULL	
created_at	date	YES		NULL	
rating	bigint	YES		NULL	
course_id	bigint	YES	MUL	NULL	
student_id	bigint	YES	MUL	NULL	

10. Progress Reports

Field	Type	Null	Key	Default	Extra
report_id	bigint	NO	PRI	NULL	
assessment_score	decimal(5,2)	YES		NULL	
created_at	date	YES		NULL	
progress_percentage	decimal(5,2)	YES		NULL	
quiz_score	decimal(5,2)	YES		NULL	
couse_id	bigint	YES	MUL	NULL	
lesson_id	bigint	YES	MUL	NULL	
module_id	bigint	YES	MUL	NULL	
student_id	bigint	YES	MUL	NULL	

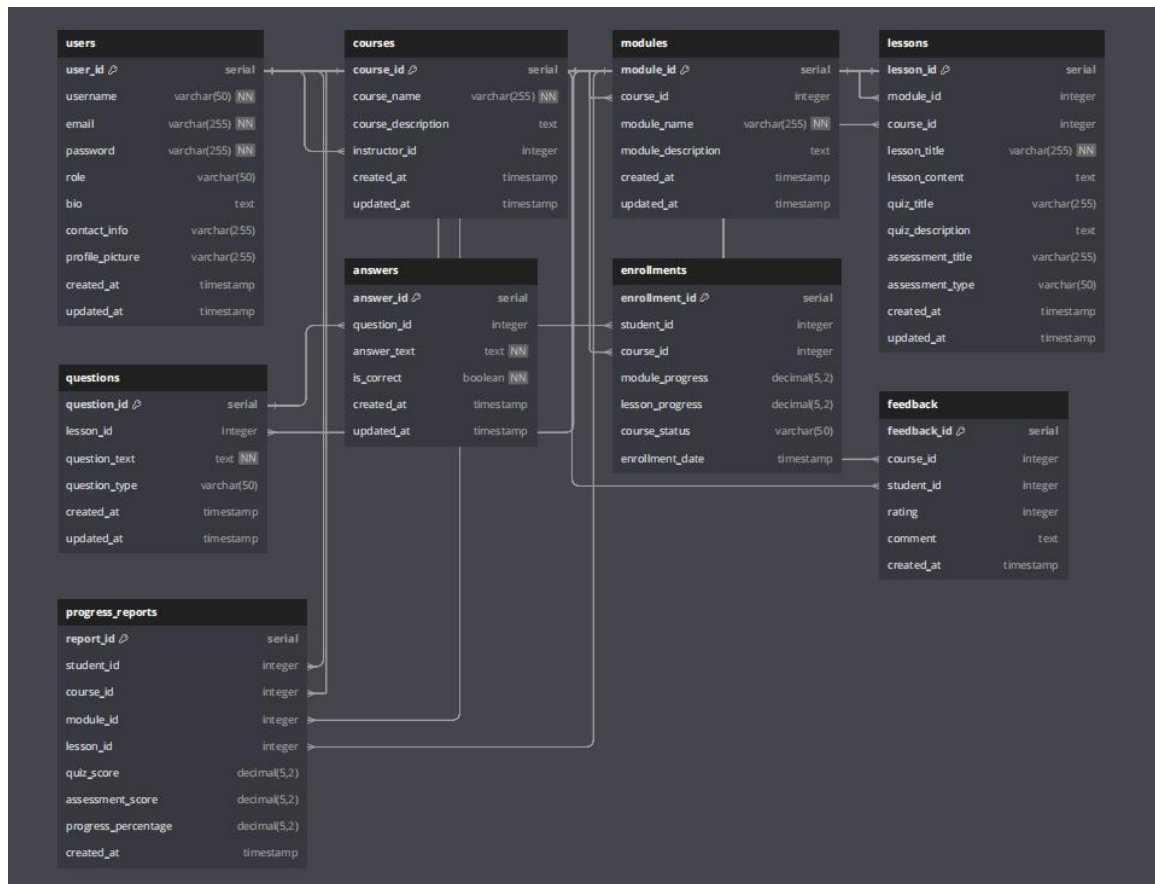
11. Quizzes

Field	Type	Null	Key	Default	Extra
quiz_id	bigint	NO	PRI	NULL	auto_increment
quiz_description	varchar(255)	YES		NULL	
quiz_title	varchar(255)	NO		NULL	
instructor_id	bigint	NO	MUL	NULL	
module_id	bigint	NO	UNI	NULL	

12. Results

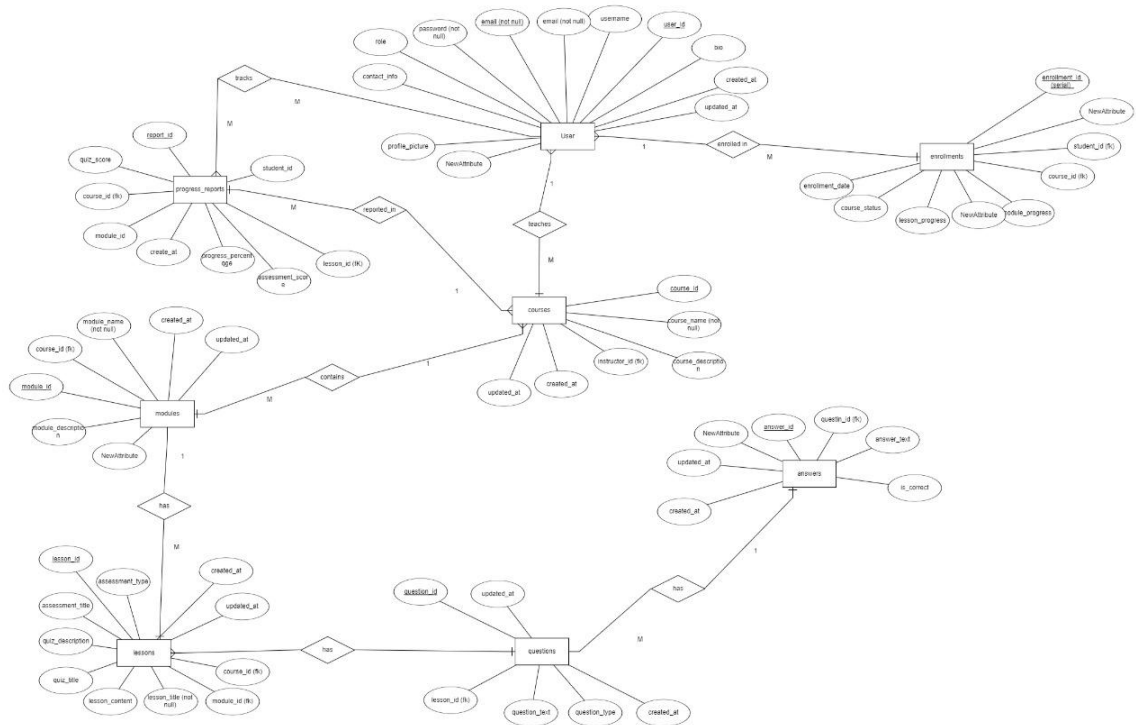
Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
total_marks	int	NO		NULL	
quiz_id	bigint	NO	MUL	NULL	
module_id	bigint	NO	MUL	NULL	
user_id	bigint	NO	MUL	NULL	

● Database Design -



4.2 Process Model

4.2.2 Data Flow Diagram (DFD)



5. Test Report

Sr No.	Test Case	Expected Result	Actual Result	Status	Error Message
1.	User Login	Successful Login	Login Successful	OK	-
2	Course Creation	Course Added Successfully	Course added successfully	OK	-
3	Course Content Loading	Contents loads properly	Content loads properly	OK	-
4	Module Creation	Module Added Successfully	Module Added Successfully	OK	-
5	Quiz Creation	Quiz Added Successfully	Quiz Added Successfully	OK	-
6	Edit Profile	Profile Edited Successfully	Profile Edited Successfully	OK	-

7	User Management	All Actors Managed Successfully by Admin	All Actors Managed Successfully by Admin	OK	-
8	Course Management	Course Managed by Admin Successfully	Course Managed by Admin Successfully	OK	
9	Graph Analysis	Data Displayed using Graphs	Unable to Integrate Data Coming from backend to frontend	Incomplete	-

6. Project Related Statistics

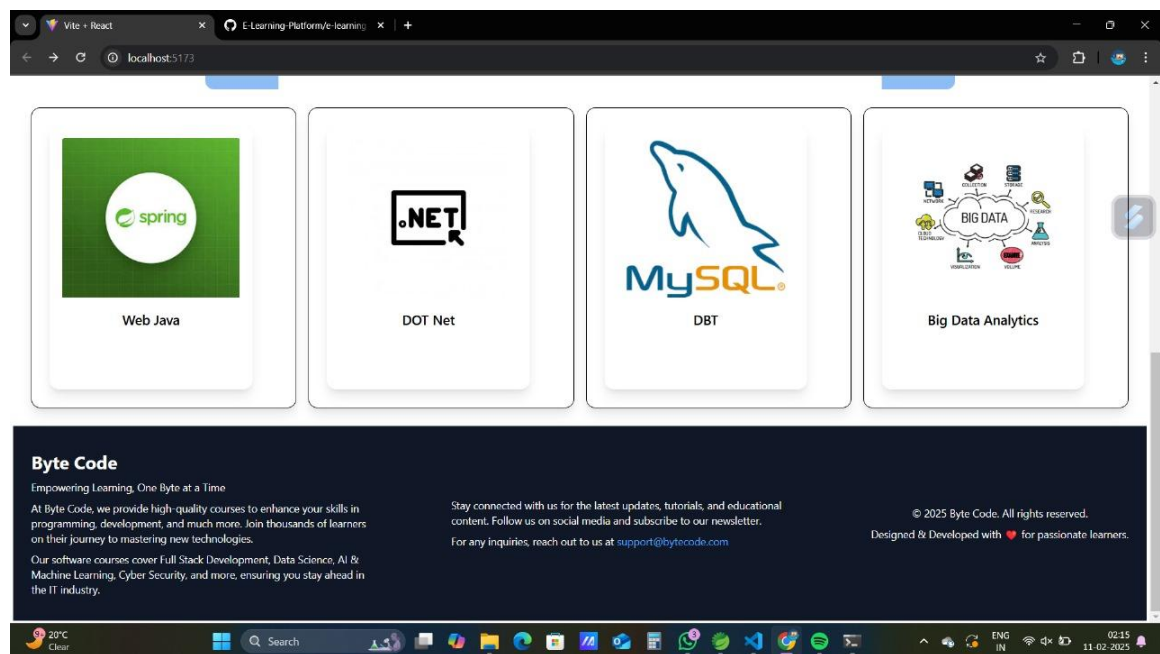
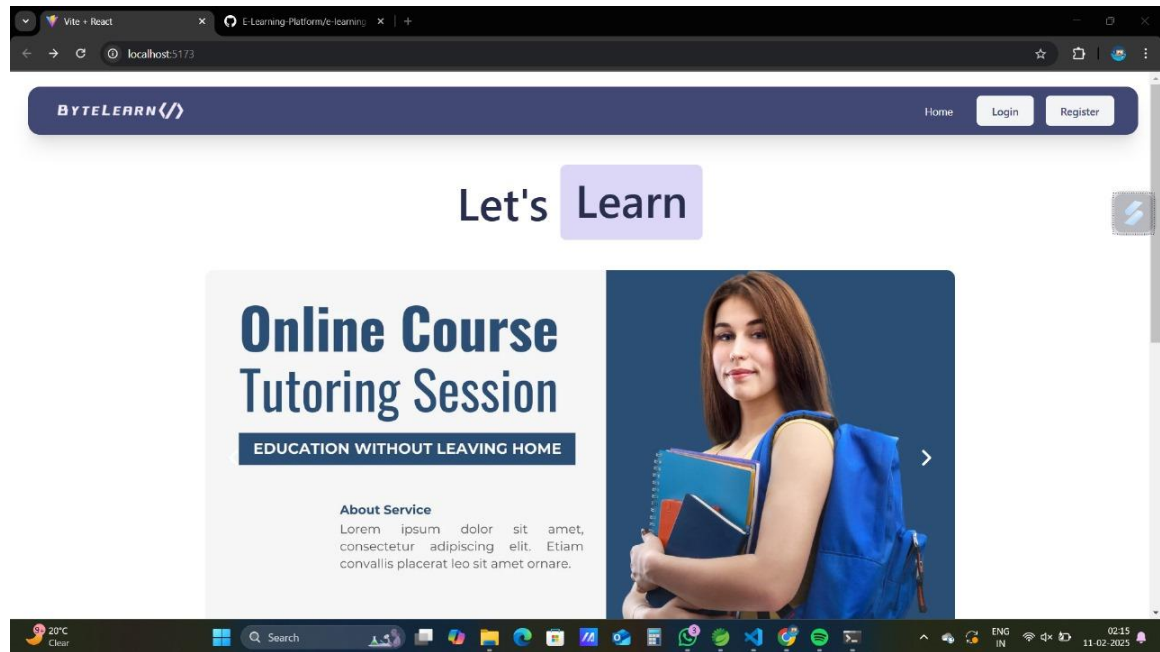
Date	Work Performed	SLC Phase	Additional Notes
2024-01-01	Requirement gathering	Planning	Initial meetings with stakeholders completed.
2024-01-05	System design	Design	Created wireframes and database schema.
2024-01-10	Backend development	Development	Implemented diff. API module.
2024-01-15	Frontend development	Development	Designed UI for course management.
2024-01-20	Database integration	Development	Connected database with application logic.
2024-01-25	Testing	Testing	Conducted unit tests for login module.
2024-01-28	Bug fixes	Testing	Resolved UI glitches and API errors.
2024-02-2	Development	Development	Implemented Additional Functionalities
2024-02-5	Bug Fixes	Testing	Conducted Units tests
2024-02-8	Deployment	Deployment	Deployed the Website

7. Screenshots-

- Student -

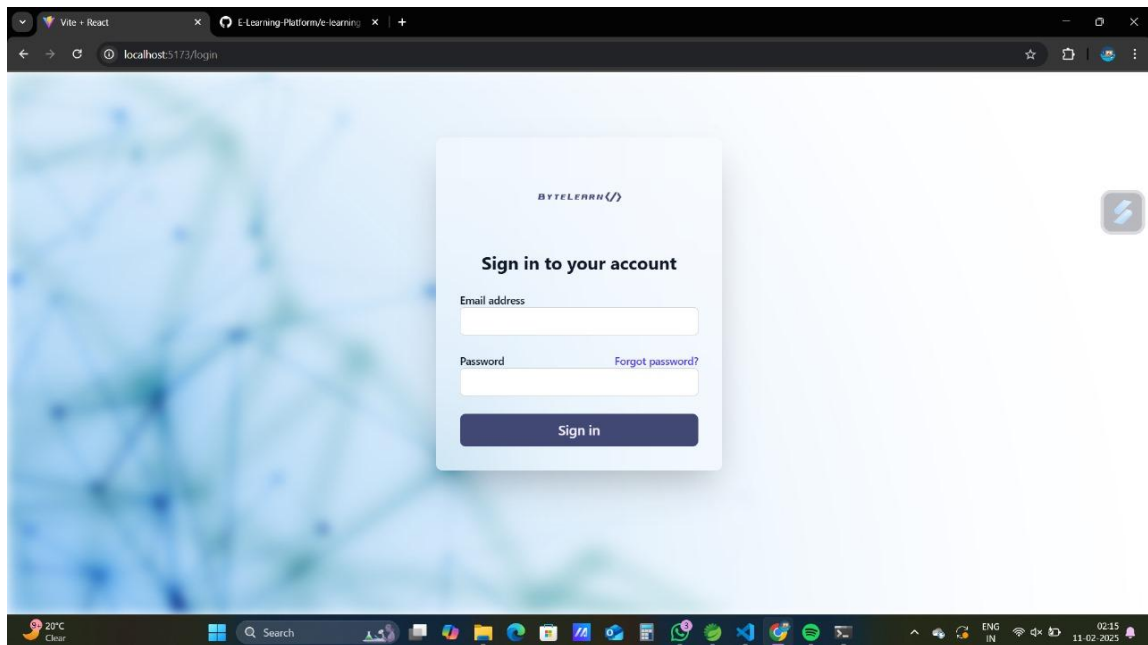
7.1 Student Home Page

URL: Localhost:5173/



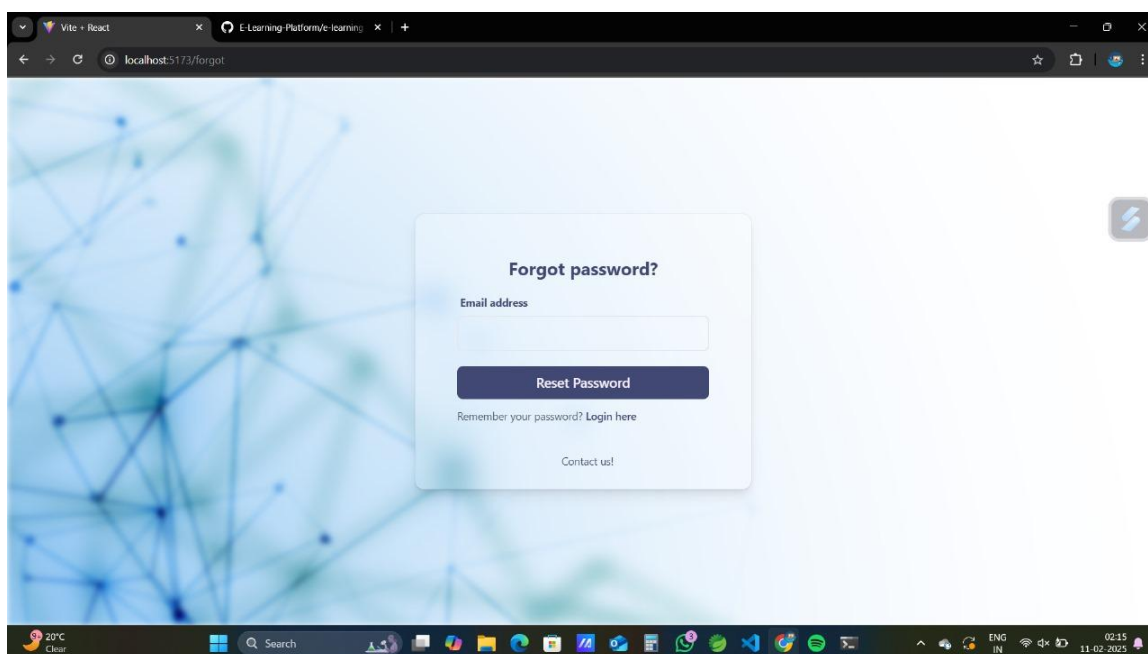
7.2 Login Password

URL : localhost:5173/login



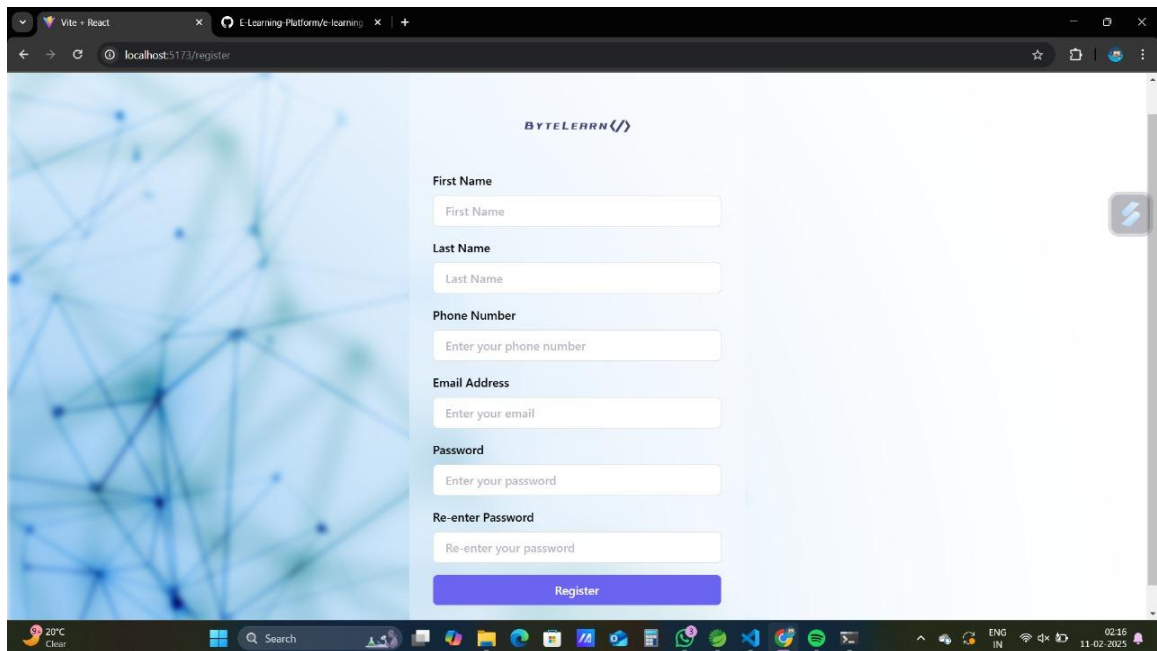
7.3 Password Recovery

URL : localhost:5173/forgot



7.4 Registration Page

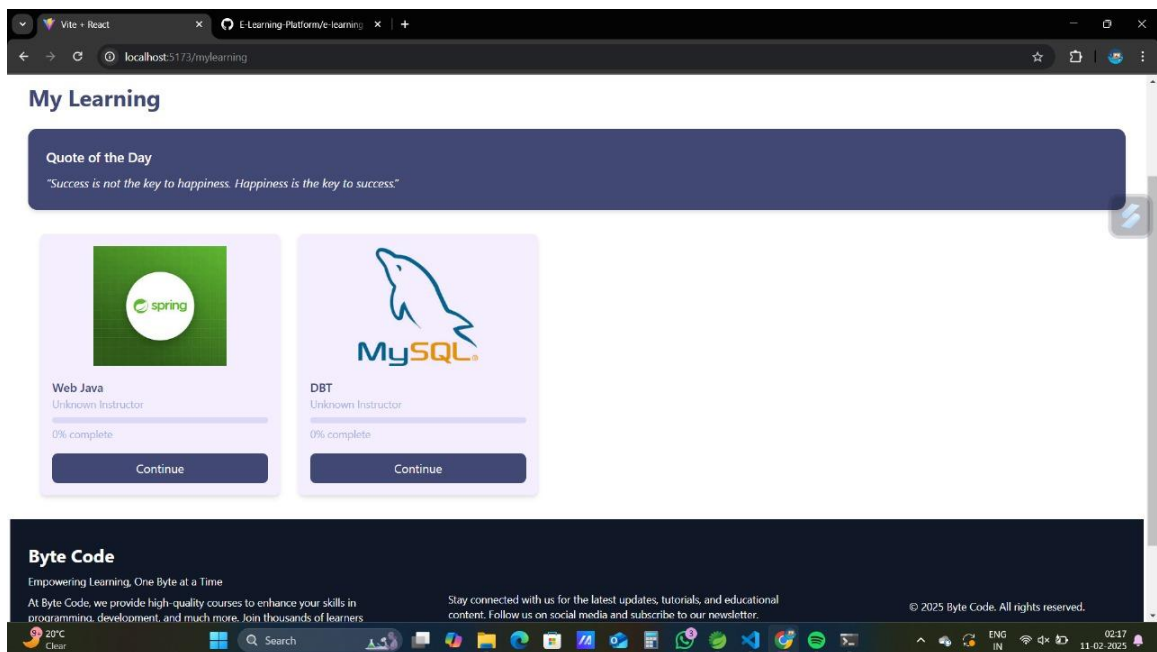
URL : localhost:5173/register



The screenshot shows a web browser window with the address bar displaying 'localhost:5173/register'. The page features a light blue background with a network diagram on the left. The registration form is titled 'BYTELEARN()' and includes the following fields: 'First Name', 'Last Name', 'Phone Number' (with placeholder 'Enter your phone number'), 'Email Address' (with placeholder 'Enter your email'), 'Password' (with placeholder 'Enter your password'), and 'Re-enter Password' (with placeholder 'Re-enter your password'). A purple 'Register' button is at the bottom of the form. The Windows taskbar at the bottom shows the date and time as 02:15 on 11-02-2025.

7.5 Courses Enrolled

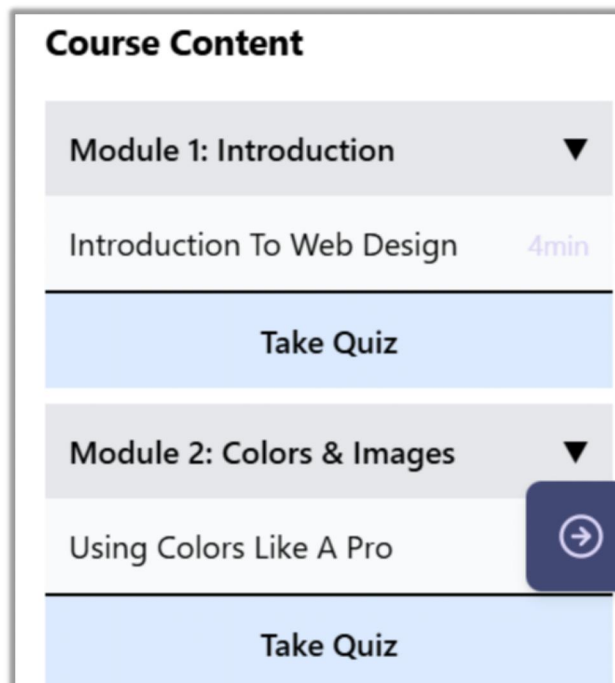
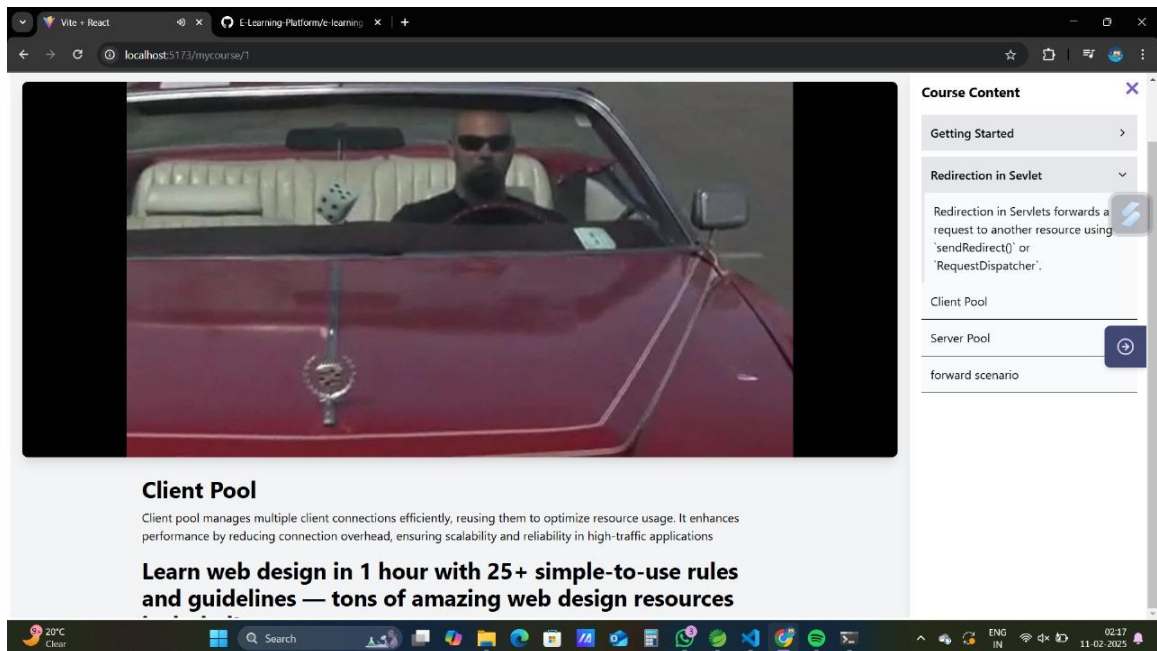
URL : localhost:5713/mylearning



The screenshot shows a web browser window with the address bar displaying 'localhost:5713/mylearning'. The page is titled 'My Learning' and features a dark blue header with a 'Quote of the Day' section containing the text: "Success is not the key to happiness. Happiness is the key to success." Below this, there are two course cards. The first card is for 'Web Java' by an 'Unknown Instructor', showing '0% complete' and a 'Continue' button. The second card is for 'DBT' by an 'Unknown Instructor', also showing '0% complete' and a 'Continue' button. At the bottom, there is a 'Byte Code' footer with the tagline 'Empowering Learning. One Byte at a Time' and a brief description of the platform. The Windows taskbar at the bottom shows the date and time as 02:17 on 11-02-2025.

7.6 Course Content, Content Playback, Sidebar

URL : localhost:5713/mycourse/{userid}



7.7 Student Quiz Sections

URL: localhost:5173/quiz/{userid}

Quiz

1. First Natural Number is ____

☐ 1

☐ 2

☐ 3

☐ 4

2. What's your Favourite Color?

☐ red

☐ yellow

☐ Black

☐ Pink

3. HCF of 8 and 10

☐ 5

☐ 10

☐ 80

☐ 50

4. Aptitude?

☐ yes

☐ no

Course Content

Module 1: Introduction ▶

Module 2: Colors & Images ▶

hi

Java Server Pages

Pink

6. LCM of 3 & 4

☐ 5

☐ 50

☐ 60

☐ 30

7. What's your City Name?

☐ Jalgaon

☐ Pune

☐ Nashik

☐ Dhule

8. Three plus Five is

☐ 5

☒ 8

☐ 10

☐ 56

Submit Answers

Course Content

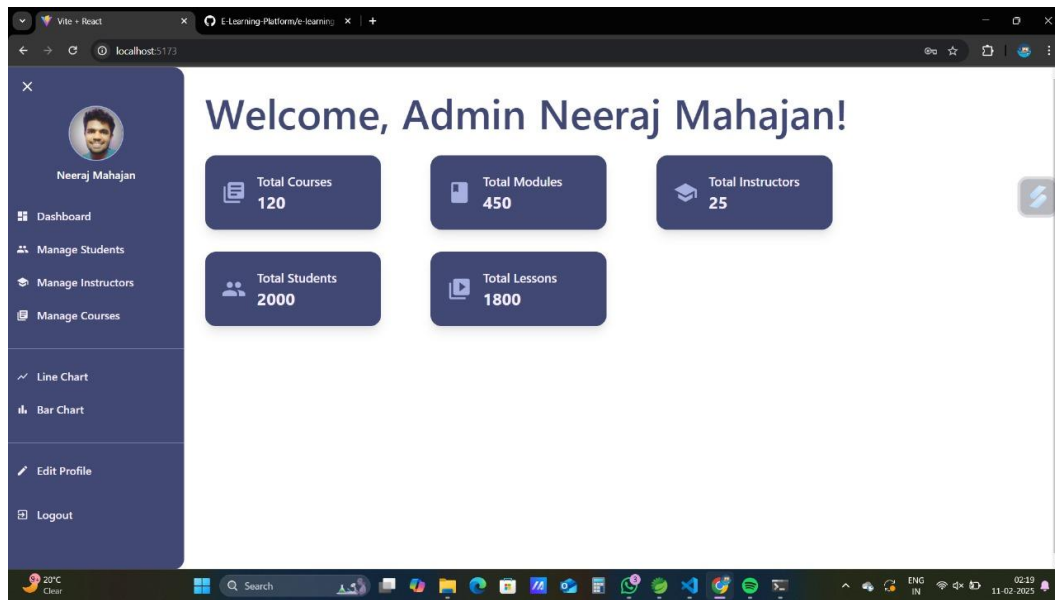
Module 1: Introduction ▶

Module 2: Colors & Images ▶

● Admin -

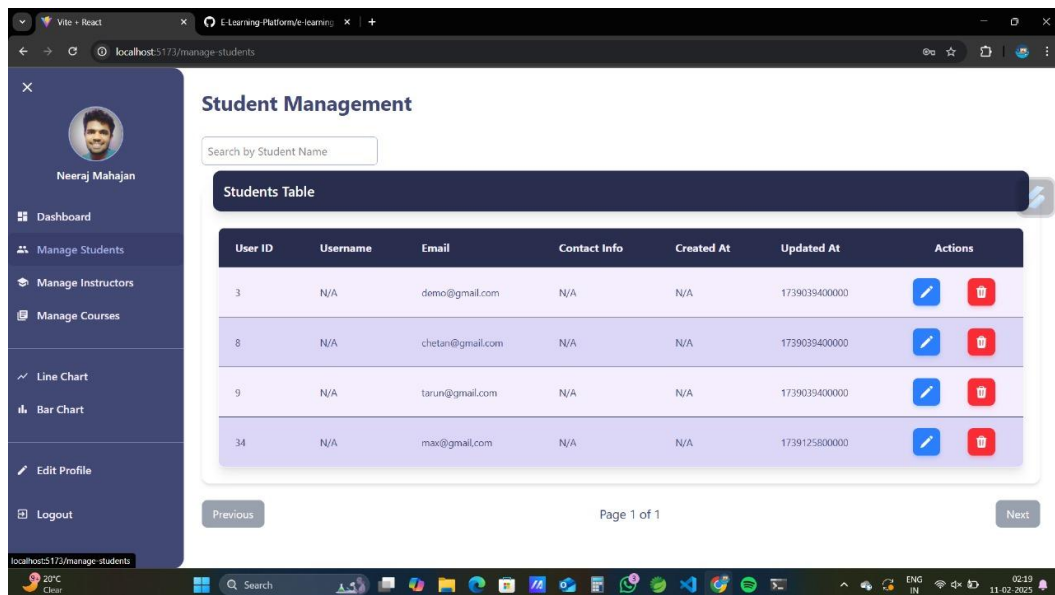
7.8 Admin Home Page

URL: localhost:5173/



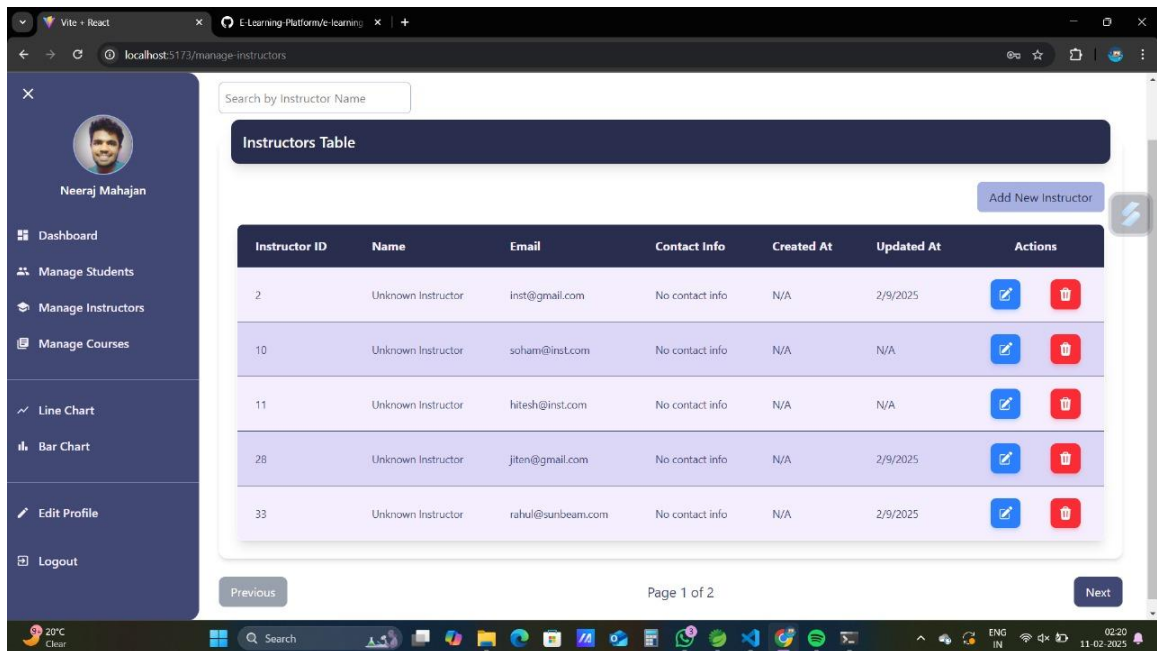
7.9 Admin's Student Management Page

URL : localhost:5173/manage-students



7.10 Admin's Instructor Management Page

URL : localhost:5173/manage-instructors



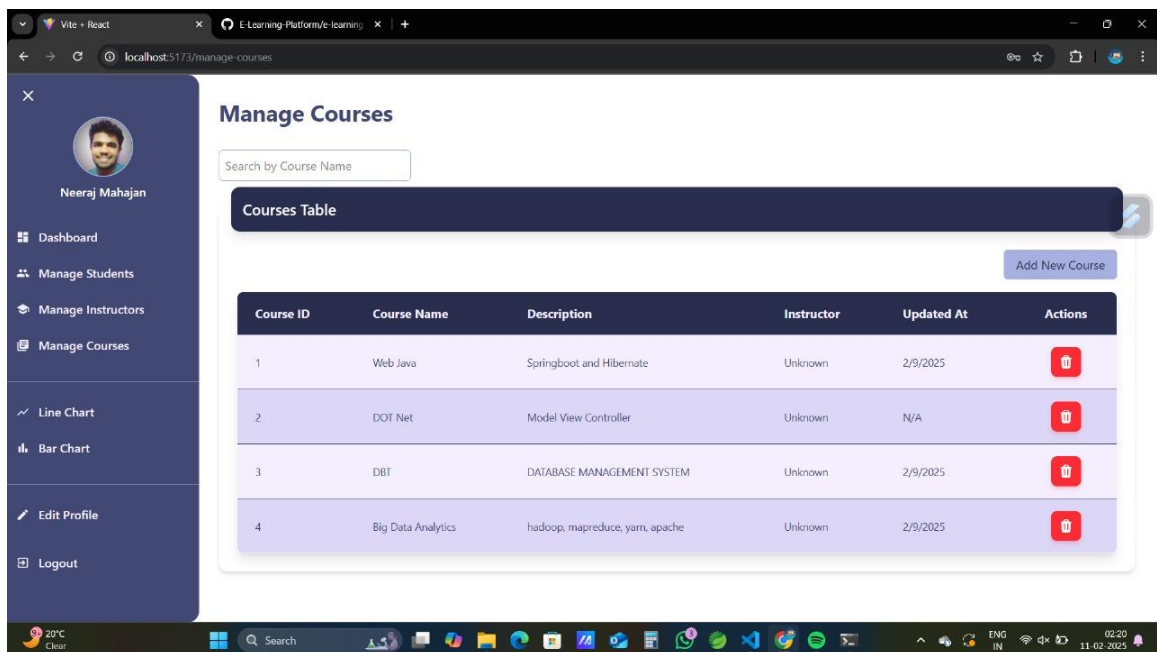
The screenshot shows the 'Manage Instructors' page of an E-Learning Platform. The left sidebar contains a user profile for Neeraj Mahajan and navigation links: Dashboard, Manage Students, Manage Instructors (active), Manage Courses, Line Chart, Bar Chart, Edit Profile, and Logout. The main content area features a search bar for 'Instructor Name' and an 'Add New Instructor' button. Below is the 'Instructors Table' with the following data:

Instructor ID	Name	Email	Contact Info	Created At	Updated At	Actions
2	Unknown Instructor	inst@gmail.com	No contact info	N/A	2/9/2025	Edit Delete
10	Unknown Instructor	soham@inst.com	No contact info	N/A	N/A	Edit Delete
11	Unknown Instructor	hitesh@inst.com	No contact info	N/A	N/A	Edit Delete
28	Unknown Instructor	jiten@gmail.com	No contact info	N/A	2/9/2025	Edit Delete
33	Unknown Instructor	rahul@sunbeam.com	No contact info	N/A	2/9/2025	Edit Delete

At the bottom of the table, there are 'Previous' and 'Next' pagination buttons, and a 'Page 1 of 2' indicator.

7.11 Admin's Course Management Page

URL: localhost:5173/manage-courses

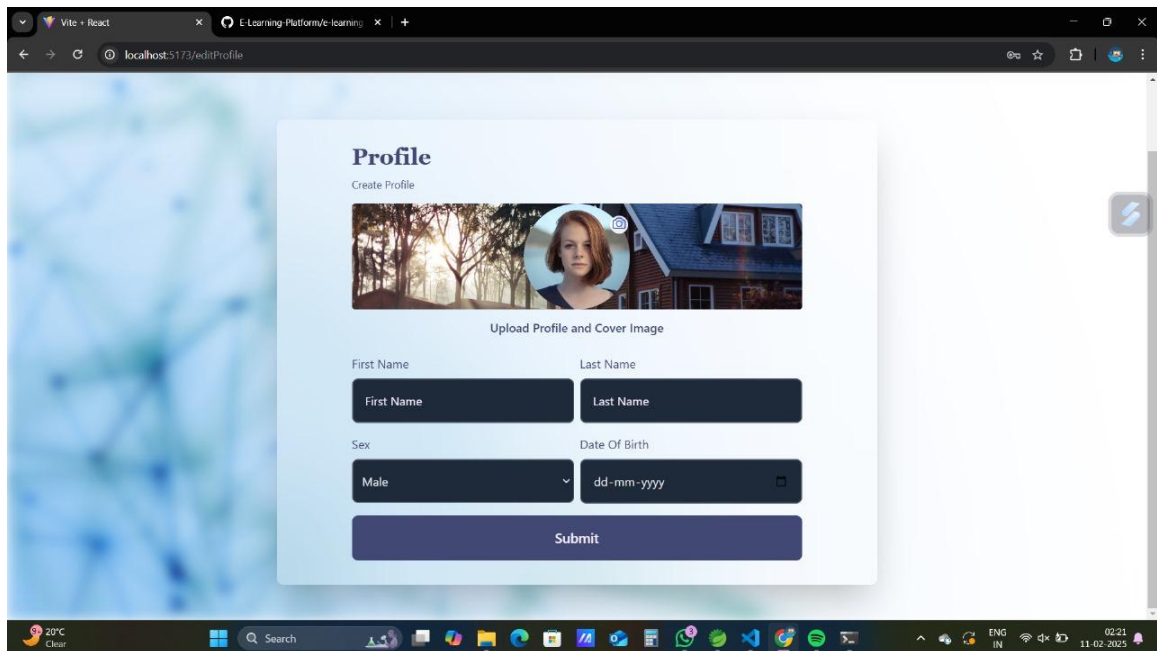


The screenshot shows the 'Manage Courses' page of the E-Learning Platform. The left sidebar is identical to the previous page. The main content area features a search bar for 'Course Name' and an 'Add New Course' button. Below is the 'Courses Table' with the following data:

Course ID	Course Name	Description	Instructor	Updated At	Actions
1	Web Java	Springboot and Hibernate	Unknown	2/9/2025	Delete
2	DOT Net	Model View Controller	Unknown	N/A	Delete
3	DBT	DATABASE MANAGEMENT SYSTEM	Unknown	2/9/2025	Delete
4	Big Data Analytics	hadoop, mapreduce, yarn, apache	Unknown	2/9/2025	Delete

7.12 Edit Profile Page for all Users

URL : localhost:5173/editProfile



Profile
Create Profile

Upload Profile and Cover Image

First Name:

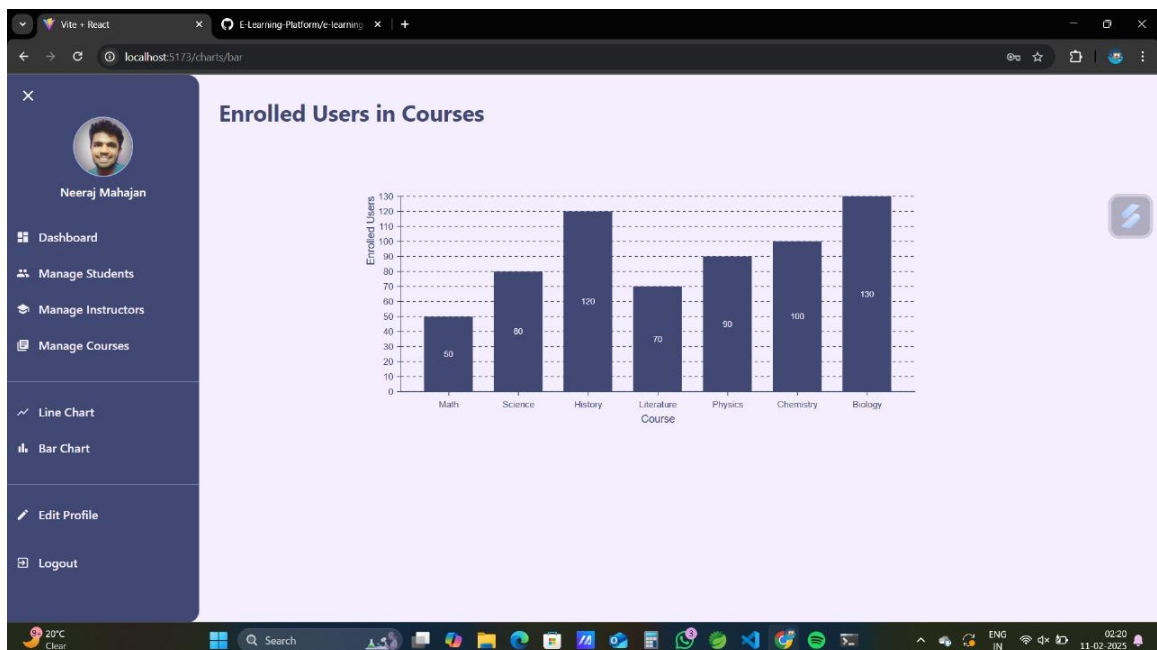
Last Name:

Sex:

Date Of Birth:

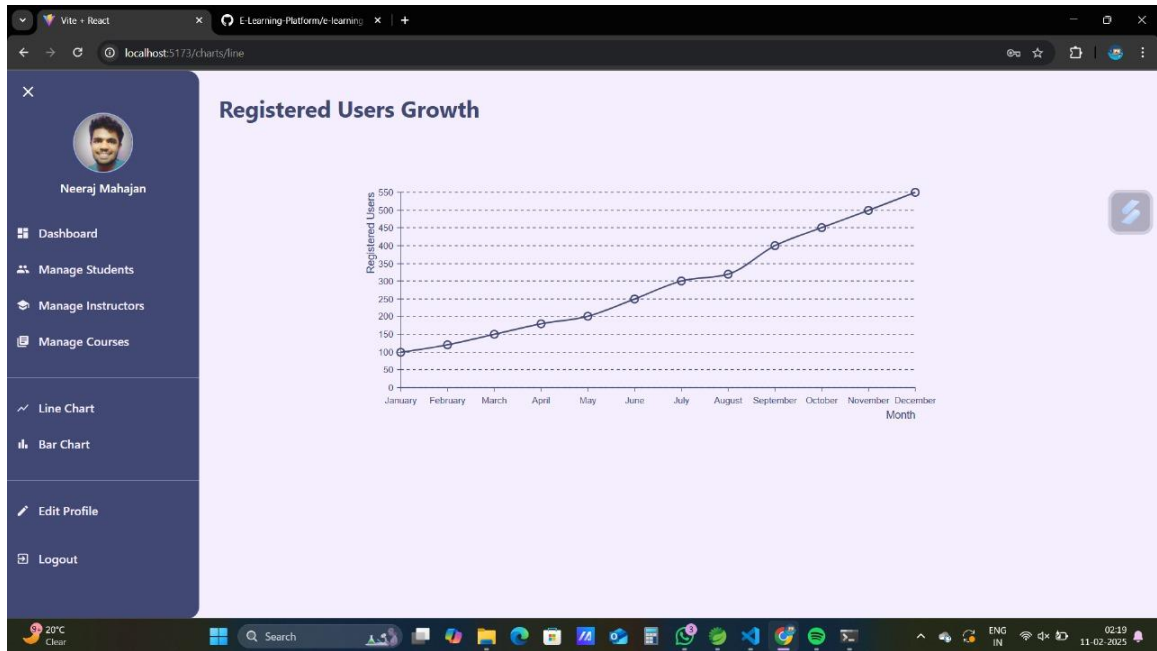
7.13 Enrolled User's in Courses (For Analysis)

URL : localhost:5173/charts/bar



7.14 Registered User's Growth (For Analysis)

URL : localhost:5173/charts/bar



7.15 Instructor Home Page

URL : localhost:5713/instructor

The screenshot shows the 'Instructor Home Page' for 'John Doe'. The page features a dark blue header with the 'BYTELEARN' logo and navigation links: Home, Manage Courses, My Students, and a user profile icon. The main content area is white and displays a large welcome message: 'Welcome, Instructor John Doe!'. Below this, there is a section titled 'Recent Uploads' which lists three items: 'Exception handling' (Course: Java Programming), 'File Handling' (Course: Java Programming), and 'primitive Types' (Course: Java Programming). The footer is dark blue and contains the 'Byte Code' logo, a tagline 'Empowering Learning. One Byte at a Time', a paragraph about the platform, a copyright notice '© 2025 Byte Code. All rights reserved.', and a note about being designed and developed with passion for passionate learners.

7.16 Instructor Alloted Courses

URL : localhost:5173/instructor/courses

My Courses

ID	Course Name	Modules	Students	Status	Last Updated	Actions
1	React for Beginners	5	120	Completed	23/04/23	
2	Advanced Django	3	45	Ongoing	12/01/24	

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7.17 Instructor's Add Module Page

URL : localhost:5173/instructor/modules

Add New Module

Module Name
python

Description
Basic Python Language

Cancel Add Module

7.18 Instructor's Add Lesson Page

URL : localhost:5173/instructor/lessons

Add New Lesson

Select Module

DataTypes in Java

Lesson Title

Learning Primitive Types

Lesson Content

simple values like numbers, characters, and boolean values directly in memory. Common types include int (integers), float/double (decimal numbers), char (single character), and bool (true/false). These types are efficient, fast, and used for fundamental operations in coding. Unlike objects, primitive types do not have methods or additional functionalities.

Thumbnail URL

C:\Users\RAHUL.PATIL\Desktop\Pictures\Screenshots\Screenshot (1).png

Video URL

C:\Users\RAHUL.PATIL\Desktop\Pictures\video\datatype.mp4

CancelAdd Lesson

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7.19 Module Dashboard (Instructor)

URL : localhost:5173/instructor/courses/1/modules

Vite + Reactlocalhost:5173/instructor/courses/1/modules

Course Modules

ID	Module Name	Lessons	Status	Actions
1	Introduction to React	4	Completed	
2	React Components	6	Ongoing	

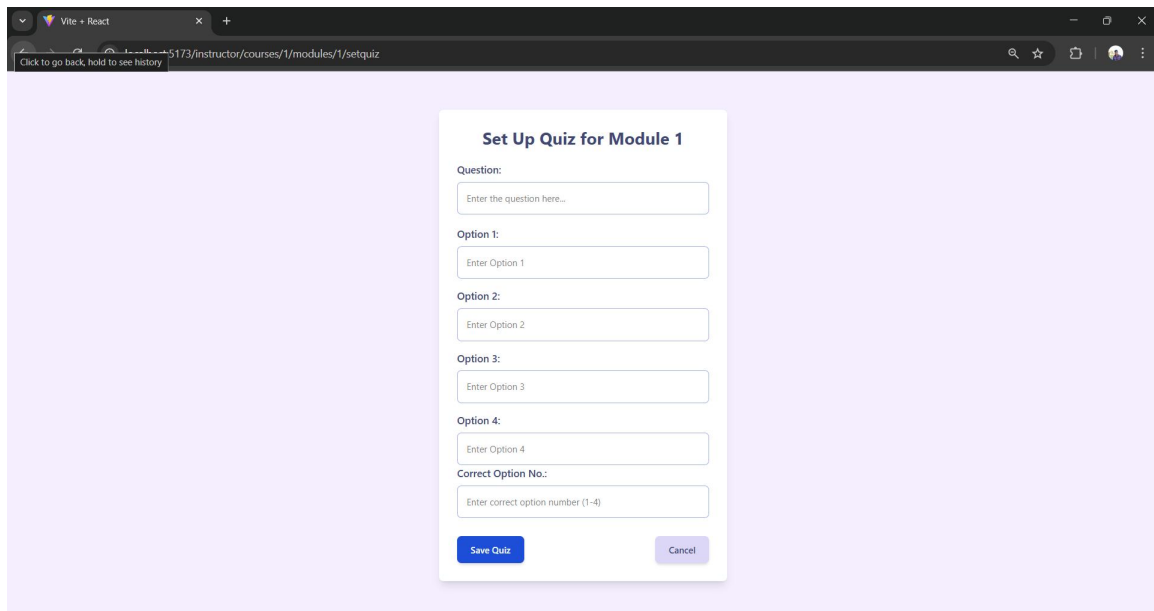
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7.20 Instructor's Quiz Setup Page

URL : localhost:5173/instructor/courses/{courseid}/modules/{moduleid}/setquiz



The screenshot shows a web browser window with the URL `localhost:5173/instructor/courses/1/modules/1/setquiz`. The page displays a form titled "Set Up Quiz for Module 1". The form contains the following fields:

- Question:** A text input field with the placeholder "Enter the question here..".
- Option 1:** A text input field with the placeholder "Enter Option 1".
- Option 2:** A text input field with the placeholder "Enter Option 2".
- Option 3:** A text input field with the placeholder "Enter Option 3".
- Option 4:** A text input field with the placeholder "Enter Option 4".
- Correct Option No.:** A text input field with the placeholder "Enter correct option number (1-4)".

At the bottom of the form, there are two buttons: "Save Quiz" (in blue) and "Cancel" (in light purple).

CONCLUSION

The E-Learning Platform successfully integrates modern technologies to provide a seamless and engaging online learning experience. With ReactJS and TailwindCSS, the user interface is dynamic and intuitive, while Spring Boot and MySQL ensure secure and efficient backend operations. The platform supports multimedia content, real-time notifications, and personalized dashboards, making learning interactive and effective. Security features like role-based access control and data encryption enhance user safety. Optimized for performance and scalability, this project demonstrates how technology can transform education, making quality learning accessible to everyone.

8. REFERENCES

1. Spring Boot Documentation

URL: <https://spring.io/projects/spring-boot>

2. React.js Documentation

URL: <https://reactjs.org/docs/getting-started.html>

3. Java Programming Language

URL: <https://www.oracle.com/java/>

4. MySQL Workbench Documentation

URL: <https://dev.mysql.com/doc/workbench/en/>

5. Spring Boot with React and Redux

URL: <https://www.baeldung.com/spring-boot-react-and-redux>

6. Java Persistence API (JPA) Documentation

URL: <https://www.eclipse.org/eclipselink/documentation/2.7/>

7. Swagger Documentation for Spring Boot

URL: <https://springdoc.org/>

8. MDN Web Docs

URL: <https://developer.mozilla.org/>

9. TailWindCSS

URL: <https://tailwindcss.com/>

10. Material-UI

URL : <https://mui.com/material-ui/getting-started/>

11. React-Bytes

URL : <https://www.reactbytes.com/>

12. React-Icons

URL : <https://react-icons.github.io/react-icons/>

13. Hero-Icons

URL : <https://heroicons.com/>

14. Nivo Rocks

URL : <https://nivo.rocks/>