

Software Development Lab Report



Group 8

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INTRODUCTION

Purpose:

The purpose of this SRS is to provide a detailed description of the requirements for the e-learning platform, including the functional and non-functional requirements, as well as the constraints and assumptions of the system.

Scope:

The e-learning platform will provide a comprehensive, user-friendly, and interactive online learning experience for students and teachers. The system will include a course catalogue, user registration and login, course content and materials, assessments and quizzes, progress tracking and reporting, and communication and collaboration tools. The system will also have a mobile-friendly interface.

Overview:

The e-learning platform will be a web-based system that allows students and teachers to access and manage educational content, track progress, and communicate with one another. The system will be developed using a Learning Management System and will include a responsive UI, an API, and integration with a CMS.

FEATURES

Features of the EduMe E-learning platform are :

- **View/Create Courses:** The platform allows the students to view all the courses created by the instructors. They can also enroll in their choice of courses.
- **View/Create Lectures:** Students can watch the respective lectures which are added to the courses by the instructors.
- **Instructor Profile:** The users who are registered as instructors get their separate dashboard to keep a record of their educational background and history..
- **User Management through Admin:** We have made a separate entity named as admin ,which can update and manage each of the activity being done on the platform.
- **Login/Signup:** To segregate the different users, we have implemented separate login and registration pages on the platform. This also maintains security and keeps session history of a user.

TOOLS AND TECHNOLOGY

We have used the following technologies-

Front-End Technologies : We have used React-JS at the frontend or client side of the application.

Backend Technologies : For the backend implementation, we are using Node-JS to serve the purpose.

Database: We have used MongoDB Atlas as our database.

Redux : This is used for effective state management in react.

MODULES AND METHODS

Student :

- Can view all the courses he is enrolled in.
- All the courses are shown to the students and can enroll in them.

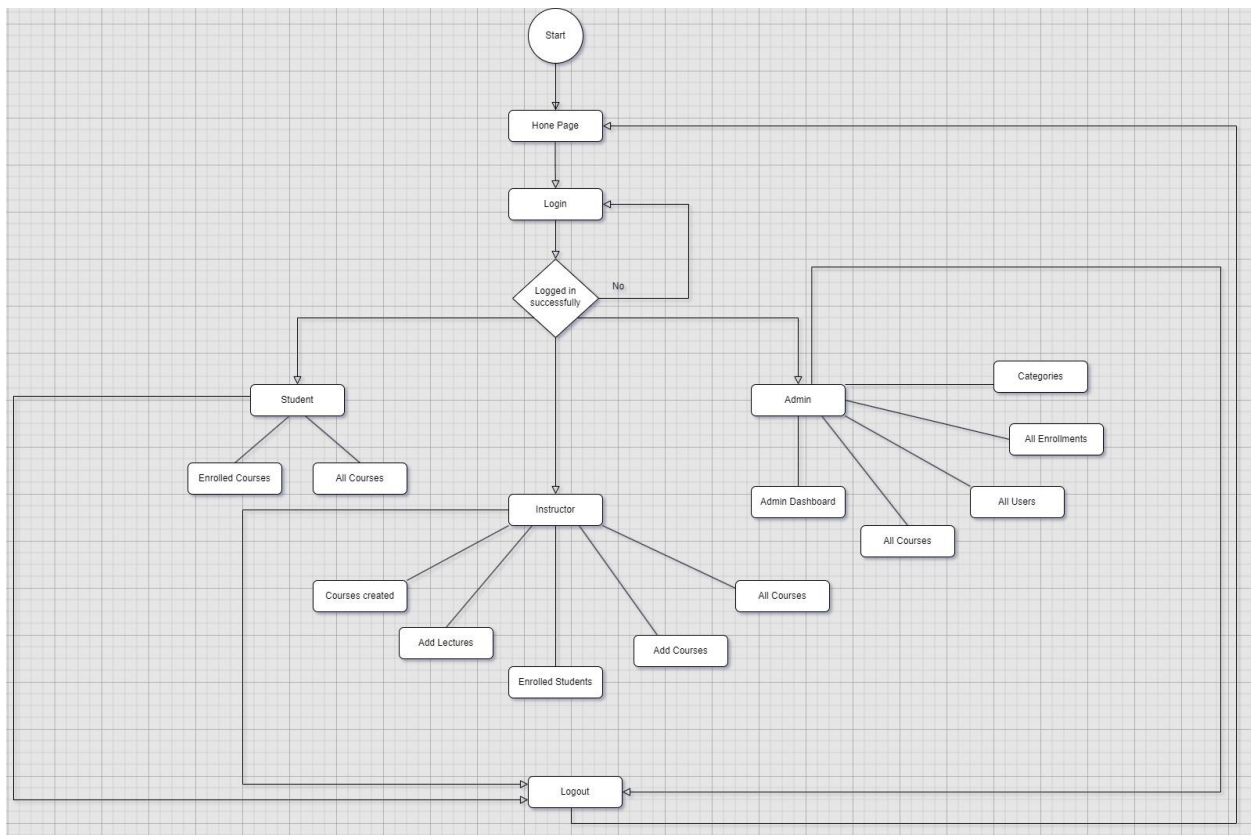
Instructor :

- Add/Delete courses based on category.
- Add/Delete lectures of a course in it's respective category.
- Can view all the enrolled students in their course.
- Can add a student to one of it's respective course.

Admin :

- Can view/edit all the users on the platform(i.e can change roles of a user).
- Has a separate dashboard with useful insights of the platform.
- Can view/Add all the enrolled students on the platform.
- Can view/Edit all the courses.
- Can create new categories on the platform.

USE CASE DIAGRAM



FUNCTIONAL REQUIREMENTS

1. User registration and login :

- Users are able to register and create an account on the platform.
- Users are able to log in to the platform using their email and password.

2. Course and lesson management :

- Admin and Instructors are able to create, edit, and delete courses and lessons.
- Users are able to view a list of available courses and lessons.
- Users are able to enrol in and complete courses and lessons.

3. User's tracking and Insights :

- Admin has the capabilities to see all the users with their respective roles on the platform.
- Admin can see and edit all the courses that have been made by the respective instructor.

NON-FUNCTIONAL REQUIREMENTS

1. **Performance :**

- The platform is able to handle a high number of concurrent users as we have used mongoDB which is a scalable database.
- The platform has a fast loading time for pages and content.

2. **Security :**

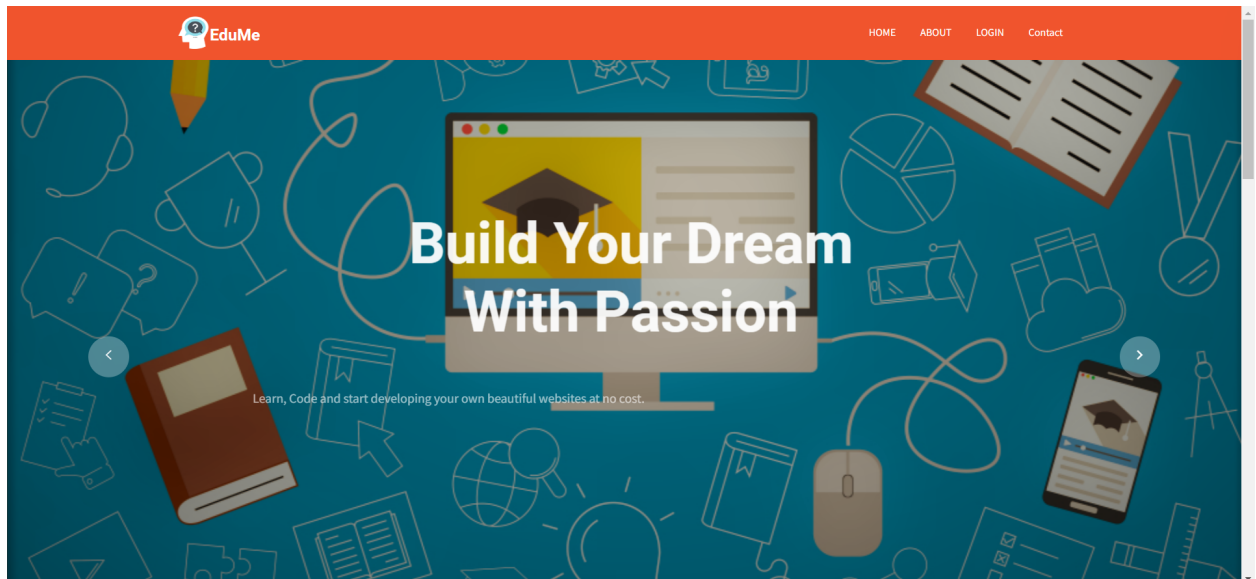
- The platform protects user data and information from unauthorised access and stays encrypted.
- The platform is compliant with data protection and security regulations.

3. **Scalability :**

- The platform protects user data and information from unauthorised access and stays encrypted.
- The platform is compliant with data protection and security regulations.

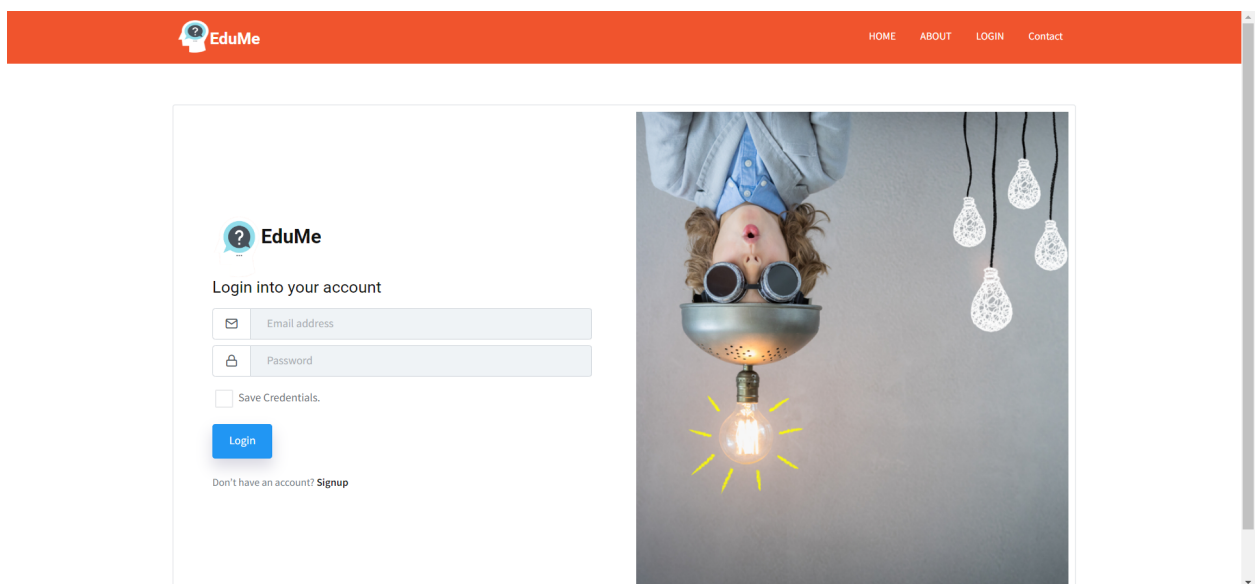
FINAL PRODUCT AND FUNCTIONALITIES

1. Home Page



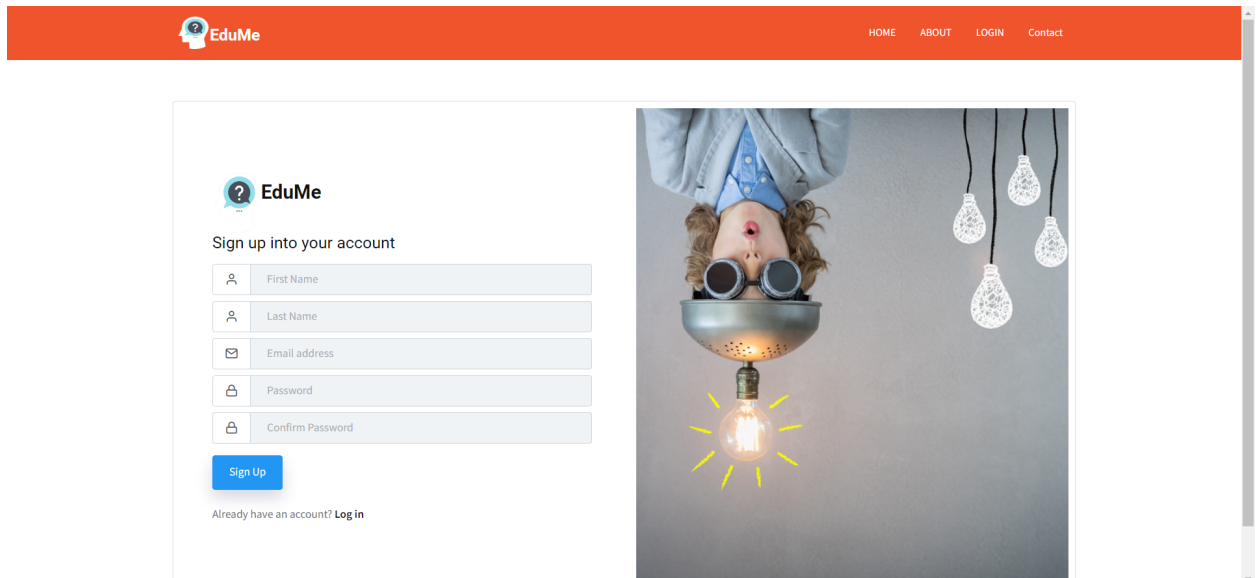
2. Login Page

In the login functionality, a user can login as a student , instructor or admin.



3. Register Page

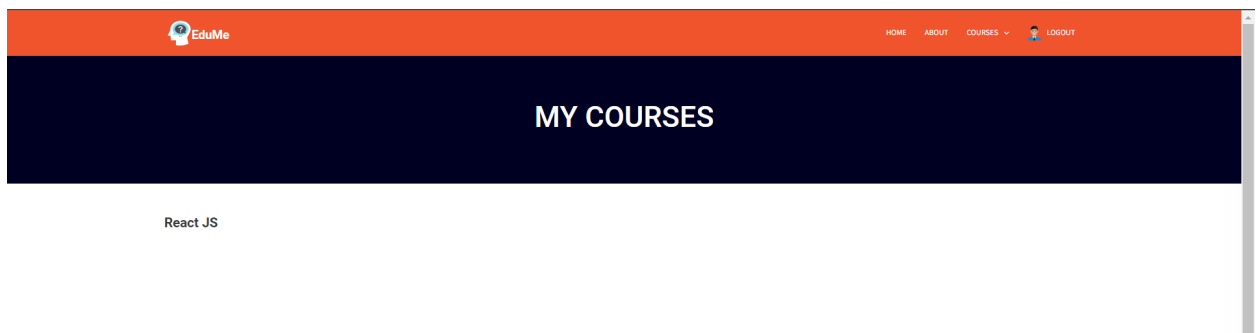
Let's us register as a user, instructor or admin. We have made separate registration pages for these.



4. Student Functionalities

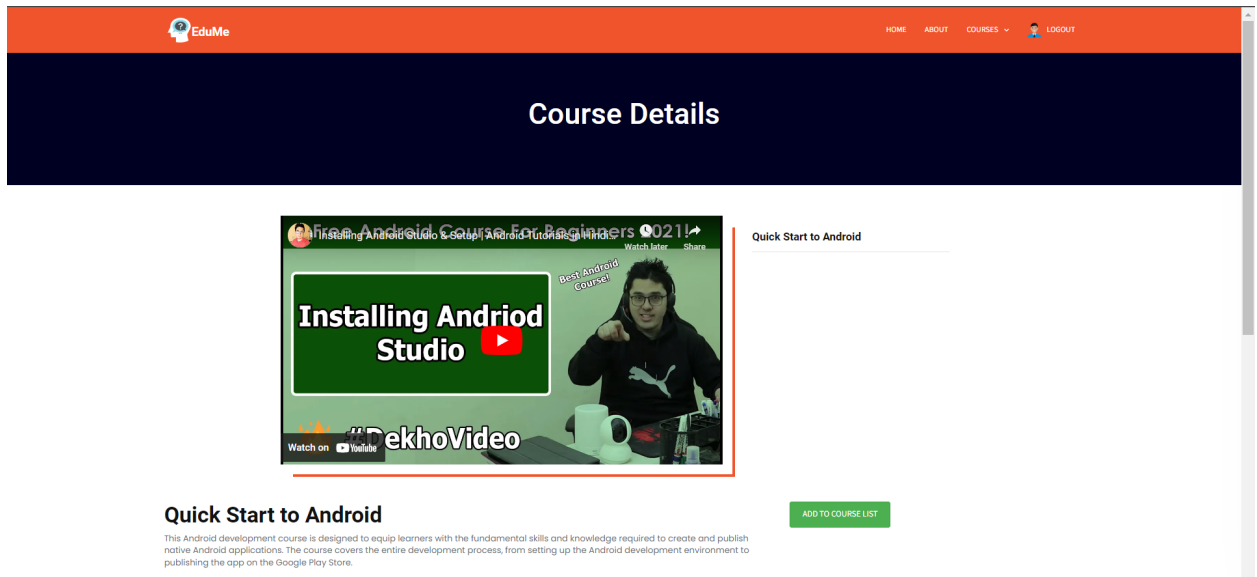
4.1 My Courses

In this section, the student can view all the respective courses that he/she is enrolled in.



4.2 Course Details Page

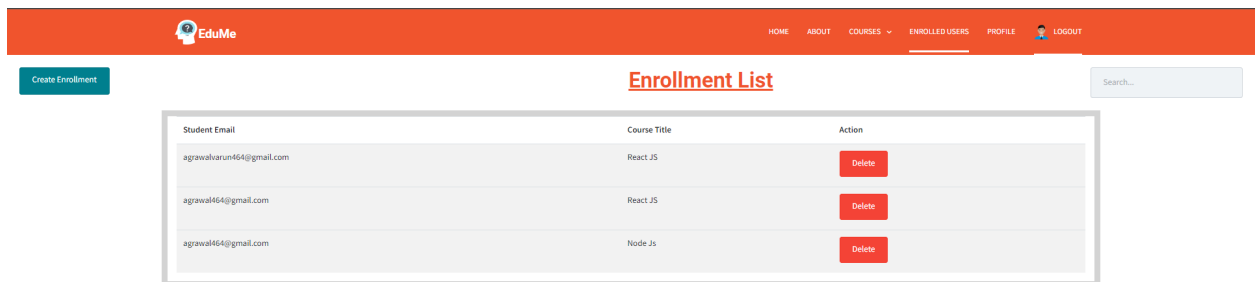
Shows the details of all the courses and lectures on the platform. Student can enroll in the course using Add to course list button.



5. Instructor Functionalities

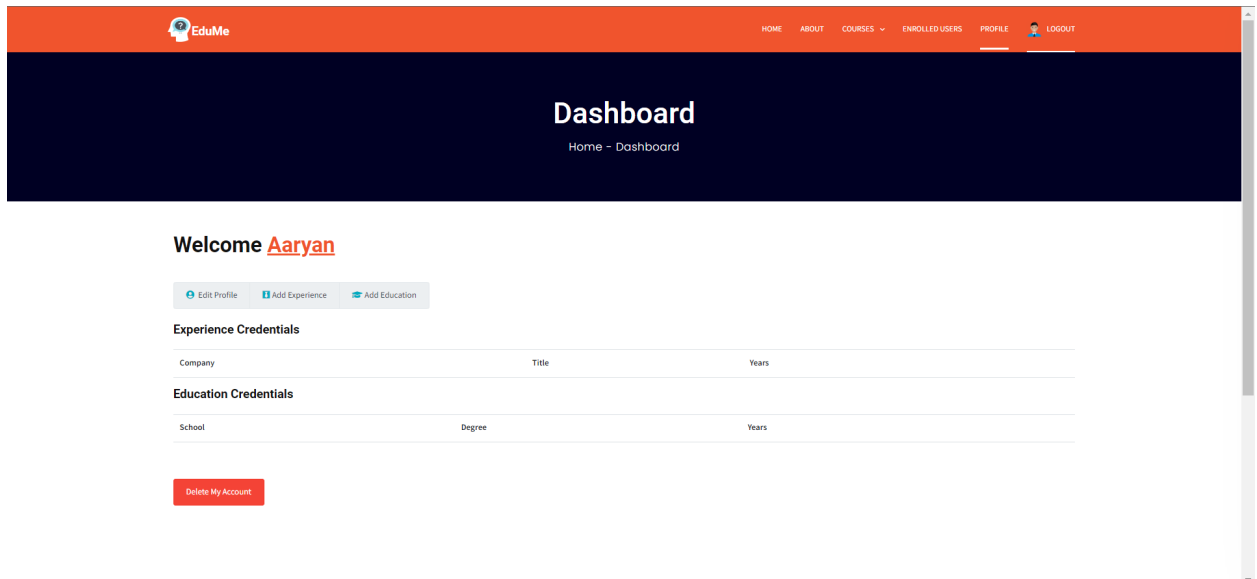
5.1 Enrolled Users

This functionality shows the users enrolled in the courses created by instructor.



5.2 Profile Page

This section helps in creating a profile for the instructor, which helps us in seeing the background of the instructor.



The screenshot shows the EduMe Dashboard for a user named Aaryan. The dashboard includes a navigation bar with links to HOME, ABOUT, COURSES, ENROLLED USERS, PROFILE, and LOGOUT. The main content area displays the user's name, a welcome message, and three buttons: Edit Profile, Add Experience, and Add Education. Below these buttons are two tables for Experience and Education Credentials. The Experience table has columns for Company, Title, and Years. The Education table has columns for School, Degree, and Years. A red button labeled 'Delete My Account' is located at the bottom of the dashboard.

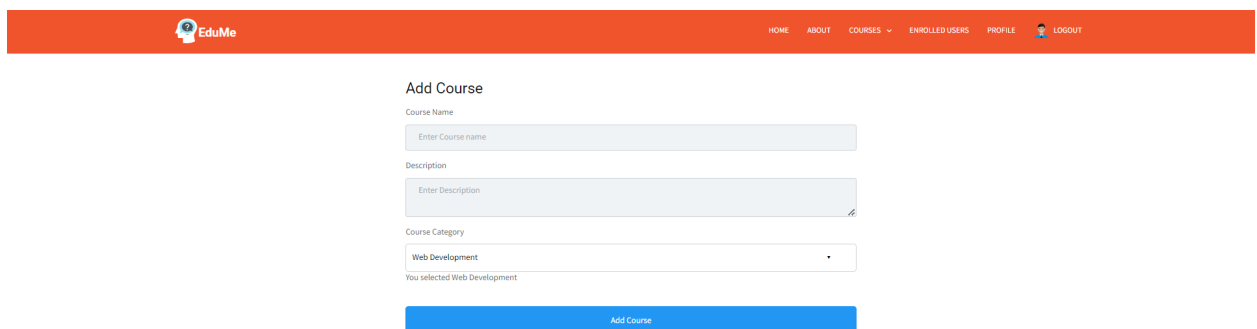
Company	Title	Years
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School	Degree	Years
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[Delete My Account](#)

5.3 Add Courses

In this section, the instructor can create the courses in the respective categories created by the admin.



The screenshot shows the 'Add Course' form in the EduMe application. The form includes fields for Course Name, Description, and Course Category. The Course Name field is labeled 'Enter Course name'. The Description field is labeled 'Enter Description'. The Course Category field is a dropdown menu with 'Web Development' selected. Below the dropdown, it says 'You selected Web Development'. A blue 'Add Course' button is at the bottom of the form.

Add Course

Course Name
Enter Course name

Description
Enter Description

Course Category
Web Development
You selected Web Development

[Add Course](#)

5.4 Add Lecture

The respective lectures of a course can be added in this section by the instructor.

[HOME](#)
[ABOUT](#)
[COURSES](#)
[ENROLLED USERS](#)
[PROFILE](#)
[LOGOUT](#)

Upload Video

Course Name

React JS

you have selected

Video Title

Upload Your File

Choose Files

No file chosen

OR

Add YouTube Video URL

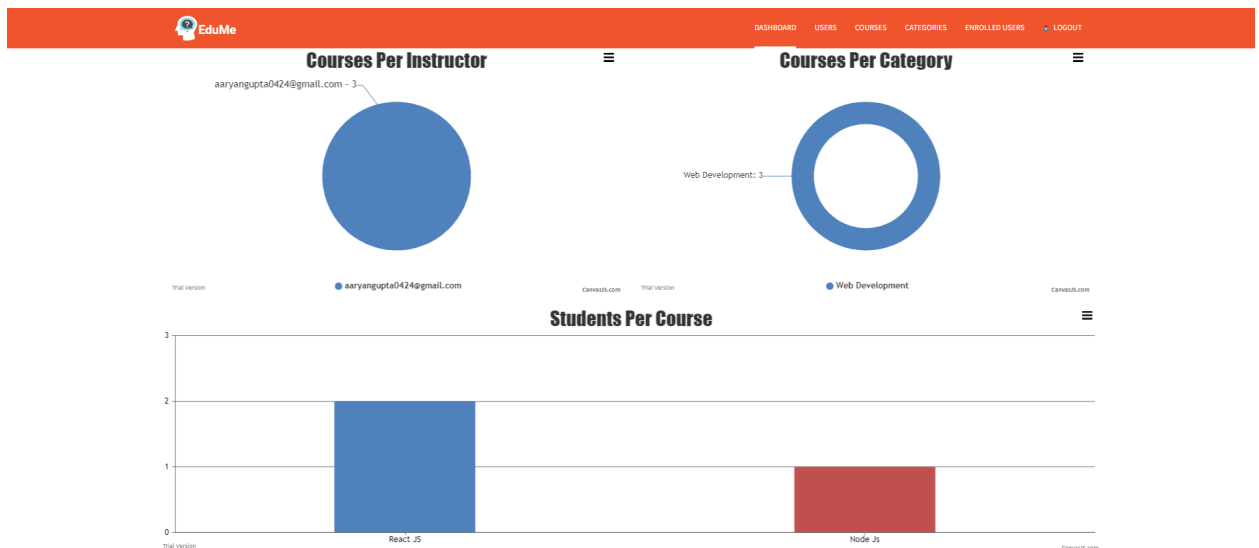
ex: <https://www.youtube.com/embed/y07Q3Y80Y>

Submit


6. Admin Functionalities

6.1 Dashboard

The admin can see all the courses in a diagrammatical representation which info in the instructors and number of enrolled users.



The admin can manage all the users here. He can delete a particular user and change it's role too.

DASHBOARDUSERSCOURSESCATEGORIESENROLLED USERSLOGOUT

Create User


Manage Users

Search...

First Name	Last Name	Email	Role	Action
aaryan	gupta	aaryangupta0424@gmail.com	instructor	Edit
varun	agrawal	agrawalvarun164@gmail.com	student	Edit
harsh	gupta	harsh.gupta@iitg.ac.in	admin	Edit
varun	agrawal	agrawal464@gmail.com	student	Edit
varun	agrawal	agrawal.sanjay@iitg.ac.in	student	Edit

6.3 Courses

All the courses are shown here to the admin.


DASHBOARDUSERSCOURSESCATEGORIESENROLLED USERSLOGOUT

Search...

Course Title	Course Description	Instructor	Category	Action
React JS	React JS is a popular javascript framework for the front end.	aaryangupta0424@gmail.com	Web Development	Edit
Android Development	This Android development course is designed to equip learners with the fundamental skills and knowledge required to create and publish native Android applications. The course covers the entire development process, from setting up the Android development environment to publishing the app on the Google Play Store.	aaryangupta0424@gmail.com	Web Development	Edit
Node Js	Simple Node js development	aaryangupta0424@gmail.com	Web Development	Edit

6.4 Categories

Creation of categories are done in this section to differentiate between courses.

DASHBOARDUSERSCOURSESCATEGORIESENROLLED USERSLOGOUT

Create Category


Category List

Search...

Category	Action
Web Development	<button>Edit</button>

6.5 Enrollment List

The admin can see the list of all student who are enrolled in atleast one course on the platform.

DASHBOARDUSERSCOURSESCATEGORIESENROLLED USERSLOGOUT

Create Enrollment

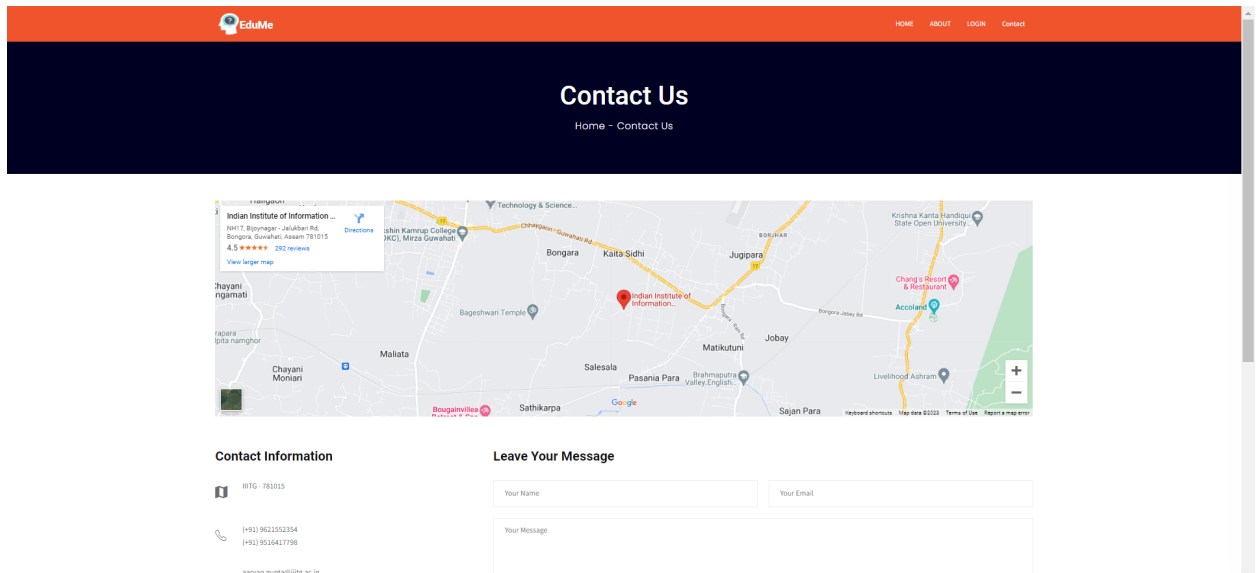
Enrollment List

Search...

Student Email	Course Title	Action
agrawalvarun464@gmail.com	React JS	<button>Delete</button>
agrawal464@gmail.com	React JS	<button>Delete</button>
agrawal464@gmail.com	Node Js	<button>Delete</button>

7. Contact Us

This section keeps the details of the developers and, you can send a message to them on this page.



8. About

Name and other info on the developers.

