PROJECT REPORT
CSOE23
WEBTECHNOLOGY

Submitted by-
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INTRODUCTION

In today's fast-paced world, the need for educational guidance and mentorship has become increasingly important. As a response to this need, we have created a mentor-type educational website that aims to provide students with the necessary guidance and support to achieve their academic and professional goals. Our website is designed to connect students with experienced mentors who can provide them with personalized guidance and advice on their educational journey. The purpose of the project is to create a web application that allows users to create and manage their to-do lists. The project aims to showcase my technical skills and knowledge in web development.

Methodology

The development of this web application involved a comprehensive approach that encompassed several stages, starting with research and ending with deployment. Here is an overview of the methodology we used to complete the project:

Research: To start the project, we conducted market research and studied popular web applications that cater to a similar target audience. Based on our findings, we determined that we would develop a to-do list application that is user-friendly and provides efficient task management features.

Design:

We created a mockup design of the web application using HTML, React.js and CSS. We also designed the interface, user interactions, and user experience. We focused on creating a responsive and intuitive design that is compatible with different devices and browsers.
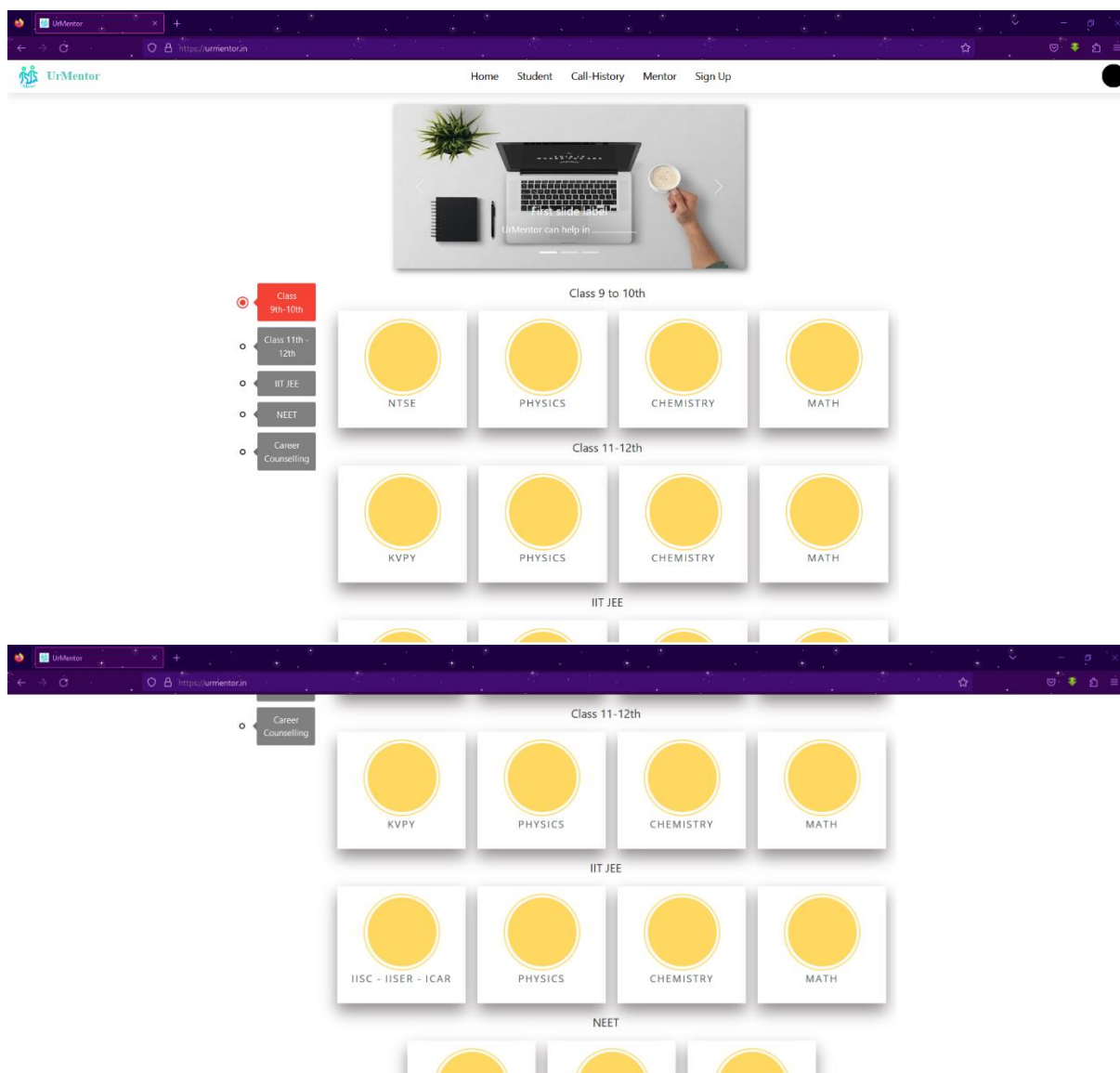
Development:

We utilized Node.js and Express.js to create the backend of the web application, which includes server-side logic, routing, and data management. We used MongoDB as our database system, which provides a flexible and scalable data storage solution. For the front-end development, we used HTML, React.js ,CSS, and JavaScript. We integrated APIs and libraries to add functionalities such as user authentication, form validation, and database interaction.

Limitations:

One of the limitations we faced during the development process was the complexity of integrating different technologies and frameworks. However, by breaking down the development process into smaller tasks and collaborating effectively as a team, we were able to overcome these

challenges and deliver a high-quality web application that meets the requirements of the project."

SYSTEM ARCHITECTURE

Class 9 to 10th

| NTSE | PHYSICS | CHEMISTRY | MATH |

Class 11-12th

| KVPY | PHYSICS | CHEMISTRY | MATH |

IIT JEE

Class 11-12th

| KVPY | PHYSICS | CHEMISTRY | MATH |

IIT JEE

| IISC - IISER - ICAR | PHYSICS | CHEMISTRY | MATH |

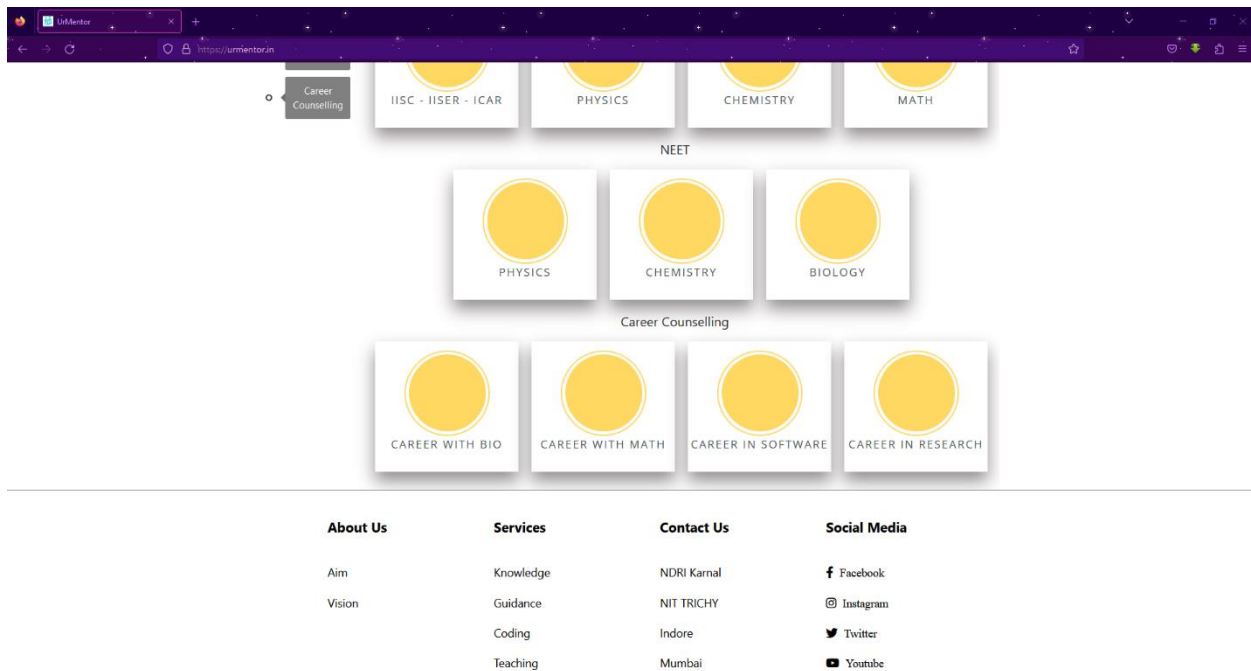NEET

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Front-end Layer:

The website is being developed utilizing various tools and technologies for the front-end, including ReactJS, Redux, Node.js, TypeScript, Styled-Components, and Webpack.

• Additionally, the implementation of real-time live chat functionality is being achieved through the utilization of React-Web-RTC and React-Skype-Web-Client,

Back-end Layer:

the back-end, Node.js, ExpressJS, libraries and frameworks are being employed.

Database Layer:

MongoDB, a NoSQL database, is being utilized to store and persist data.

FEATURES

Our website offers a range of features that are designed to provide an engaging and user-friendly experience for our target audience. Here are the key features of our website:

1. User registration and login: Our website allows users to register and create their profiles. This feature enables users to access personalized content and features, such as saved searches and recommendations.

2. Search functionality: Our website provides a powerful search functionality that allows users to search for courses related to JEE, NEET, NTSE, and Basic foundation courses from 9-10. And Career Counselling feature enables users to find what they are looking for quickly and easily.

3. Product listings: Our website offers detailed product listings that include product descriptions, prices, and images. Users can add mentoring to their cart and proceed to the checkout process.

4. User reviews and ratings: Our website allows users to leave reviews and ratings for mentoring services. This feature helps other users valuable feedback to the website owners.

5. The mentor is allotted a slot for Mentorship and we can book the slot and with the help of this we can get proper counseling which will be 24*7.

By offering these features and benefits, we believe that our website provides a valuable and engaging experience for our users.

Implementation

- CSS/Styled-Component : We used CSS to style our web pages and make them visually appealing. This included defining colors, fonts, layouts, and responsive design for different screen sizes.

- React.js: We used React to create dynamic and interactive user interfaces. This included defining components, handling user events, and rendering data from our server-side application. We also used React Router to manage our website navigation and provide a seamless user experience.

- Node.js: We used Node.js to create server-side logic for our web application. This included handling requests and responses, routing, and middleware functions.

- Express.js: We used Express.js to create a robust and scalable web application. This included defining routes, middleware functions, and error handling.

- MongoDB: We used MongoDB to store and manage our web application's data. This included creating database schemas, querying data, and updating records.

Code –

https://github.com/hubsMIT1/CSOE_PROJECT-urmentor

Conclusion

our team successfully developed a user-friendly and dynamic website using HTML, CSS, JavaScript, Node.js, Express.js, MongoDB, and React. The website features advanced functionalities, and an interactive dashboard. Throughout the project, we faced challenges, but we overcame them with perseverance, dedication, and effective collaboration. We have gained valuable experience in web development, project management, and teamwork. We would like to thank all those who supported us, and we are proud of the end product we have created.

Team Contribution-

Pratik Khandare -110120052

- Project Ideation
- Project proposal framing
- Project Report framing
- Project Frontend
- Database Schema Creation

ShivAnand Yadav- 110120100

- Project leader
- Project frontend
- Project Backend
- Frontend – Backend Integration

Pendrum Saiteja-114120081

- Handling of errors
- Approach forming
- Uploading project to GIT