MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE GWALIOR

(A Govt. Aided UGC Autonomous Institute Affiliated to RGPV, Bhopal)

NAAC Accredited with A++ Grade

Project Report

on

STUDENT COLLEGE PORTAL

(270506)

Submitted By:

Adivya Jain (0901AD201004)

Drishti Jain (0901AD211014)

Faculty Mentor:

Prof. Nitya Thagele

CENTRE FOR ARTIFICIAL INTELLIGENCE

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE

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CERTIFICATE

This is certified that **Adivya Jain(0901AD211004) and Drishti Jain(0901AD211014)** has submitted the project report titled "**Student College Portal**" under the mentorship of **Prof. Nitya Thagele**, in partial fulfilment of the requirement for the award of degree of Bachelor of Technology in **Artificial Intelligence And Data Science** from Madhav Institute of Technology and Science, Gwalior.

Prof. Nitya Thagele
Faculty Mentor
Assistant Professor
Centre for Artificial Intelligence

Dr. R. R. Singh
Coordinator
Centre for Artificial Intelligence

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DECLARATION

I hereby declare that the work being presented in this project report, for the partial fulfilment of requirement for the award of the degree of Bachelor of Technology in **Artificial Intelligence And Data Science** at Madhav Institute of Technology & Science, Gwalior is an authenticated and original record of my work under the mentorship of **Prof. Nitya Thagele**, Assistant Professor, Centre for Artificial Intelligence.

I declare that I have not submitted the matter embodied in this report for the award of any degree or diploma anywhere else.

Adivya Jain (0901AD201004)

Drishti Jain (0901AD211014)

3rd Year

Centre for Artificial Intelligence

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Adivya Jain (0901AD201004)

Drishti Jain (0901AD211014)

3rd Year

Centre for Artificial Intelligence

ABSTRACT

The Student College Portal project aims to revolutionize the student experience by integrating innovative features beyond the traditional scope of academic resource repositories. In addition to providing a centralized platform for academic materials and promoting extracurricular events, the portal incorporates practical functionalities that enhance day-to-day student life.

One key feature is a Calendar Reminder system designed to help students manage their academic responsibilities efficiently. This includes setting reminders for quizzes, assignments, and personal commitments such as classes. The calendar feature ensures that students stay organized and never miss important deadlines, thereby contributing to a more structured and stress-free academic journey.

Furthermore, the project introduces a Note Keeper functionality within the app, allowing students to maintain and organize their crucial notes in one accessible location. This feature not only streamlines the note-taking process but also facilitates easy retrieval of important information. Students can create, edit, and organize their notes based on subjects or topics, promoting a personalized and efficient study experience.

By combining these features, the Student College Portal aspires to be more than just a repository of academic materials. It aims to be a comprehensive digital companion that supports students in both their academic and personal lives. Through this multifaceted approach, the project seeks to create an all-encompassing platform that fosters learning, organization, and collaboration, thereby enriching the overall college experience for students.

सार

छात्र कॉलेज पोर्टल परियोजना का उद्देश्य छात्र अनुभव को क्रांतिकारी बनाना है जिसे शैक्षिक संसाधन संग्रह के पारंपरिक सीमा के पार अनोखी सुविधाओं को एकीकृत करना है। शैक्षिक सामग्रियों के लिए सेंट्रलाइज्ड प्लेटफ़ॉर्म प्रदान करने और बाह्यकृत समय-समय पर घटनाओं को प्रोत्साहित करने के अलावा, पोर्टल उन प्रायोजनिक क्षमताओं को शामिल करता है जो दिन-ब-दिन के छात्र जीवन को बेहतर बनाने में मदद करते हैं।

एक मुख्य सुविधा एक कैलेंडर रिमाइंडर सिस्टम है जो छात्रों को उनके शैक्षिक जिम्मेदारियों को कुशलता से प्रबंधित करने में मदद करने के लिए डिज़ाइन किया गया है। इसमें क्विज, असाइनमेंट्स, और कक्षाएँ जैसी व्यक्तिगत कटौतियों के लिए अनुस्मारक सेट करना शामिल है। कैलेंडर सुविधा सुनिश्चित करती है कि छात्र संगठित रहें और महत्वपूर्ण समय सीमाओं को कभी नहीं छूकें, जिससे उनके शैक्षिक यात्रा को एक संरचित और तनावमुक्त दिशा में सहारा मिलता है।

इसके अलावा, परियोजना एप्लिकेशन में एक नोट कीपर कार्यक्षमता को परिचय कराती है, जिससे छात्रों को अपने महत्वपूर्ण नोट्स को एक सुलभ स्थान पर बनाए रखने की अनुमति होती है। यह सुविधा केवल नोट लेने की प्रक्रिया को साधारित करने के नहीं, बल्कि महत्वपूर्ण जानकारी को आसानी से पुनर्प्राप्त करने में भी मदद करती है। छात्र विषय या विषयों के आधार पर अपने नोट बना सकते हैं, संपादित कर सकते हैं, और उन्हें व्यवस्थित कर सकते हैं, जो एक व्यक्तिगत और कुशल पढाई अनुभव को प्रोत्साहित करता है।

इन सुविधाओं को मिलाकर, छात्र कॉलेज पोर्टल इसके शैक्षिक सामग्रियों के केवल एक संग्रह की अपेक्षा अधिक होने का इरादा रखता है। यह छात्रों के शैक्षिक और व्यक्तिगत जीवन दोनों में समर्थन करने वाला एक व्यापक डिजिटल साथी बनने का उद्देश्य रखता है। इस बहुपक्षीय दृष्टिकोण के माध्यम से, परियोजना छात्रों के लिए एक समृद्ध कॉलेज अनुभव को बढ़ाने का प्रयास करती है।

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Chapter 1: Project Overview

1.1 Introduction

The project envisions a Student College Portal, a user-friendly platform where students can effortlessly access academic resources. In addition to conventional materials like past papers and faculty notes, the portal features a unique aspect—the promotion of college events related to various clubs.

1.2 Project Aim

The overarching goal is to establish a comprehensive website housing a diverse range of academic resources, from past papers to books and notes. Going beyond academics, the portal will serve as a platform for college clubs to showcase their events, facilitate student-authored technical blogs, and implement a system for sharing reference books among students. The website will be managed by multiple sub-administrators tasked with content maintenance. The ultimate objective is to create an interconnected hub that fosters learning, collaboration, and knowledge democratization, resonating with the vibrancy of shared wisdom and intellectual growth.

1.3 Objective

In the rapidly evolving landscape of education, the project aims to provide students with a seamless and enriched experience. This includes easy access to academic materials, staying abreast of technical advancements through blogs, active engagement in extracurricular clubs, and exploration of diverse internship opportunities. Additionally, the project introduces two key functionalities:

- Calendar Reminder Feature: A system to set reminders for quizzes, assignments, and personal commitments, including classes, fostering efficient time management.
- Note Keeper Functionality: An in-app tool allowing students to keep and organize important notes, contributing to a personalized and effective study experience.

Chapter 2: Micro Level Analysis

2.1 Functionality

The envisioned Student College Portal distinguishes itself through its multifaceted functionality. Unlike conventional academic platforms, it not only provides access to past papers and faculty notes but also incorporates a unique feature set. The Calendar Reminder Feature enables students to efficiently manage their schedules by setting reminders for quizzes, assignments, classes, and personal commitments. This functionality goes beyond the static nature of traditional academic resources, fostering a dynamic and personalized user experience.

Moreover, the Note Keeper Functionality adds another layer of customization, allowing students to organize and store important notes within the application. This feature not only streamlines the study process but also enhances the overall usability of the platform. By combining academic resources with practical tools for time management and note organization, the portal addresses the holistic needs of students in a way that traditional platforms fall short.

2.2 Speed and User Feedback

The choice of using React for the development of the Student College Portal brings a significant advantage in terms of speed and user experience. React is known for its ability to create highly responsive and fast user interfaces. Compared to older technologies like PHP, React's component-based architecture

allows for the creation of interactive elements that load quickly and respond seamlessly to user input.

In contrast to PHP, which often requires full-page reloads for even minor updates, React operates efficiently by updating only the necessary components. This results in a smoother and more fluid user experience, especially important in an educational setting where students expect quick access to information. The adoption of React ensures that students can navigate through academic resources, set reminders, and organize notes with minimal latency.

2.3 Open Source and Student Involvement

One of the compelling aspects of the Student College Portal is its open-source nature and the opportunity for student involvement. Being developed by students for students, the portal encourages collaboration and welcomes contributions from the user community. This open model not only fosters a sense of ownership among students but also allows for rapid improvements based on real-time user feedback.

Any student with innovative ideas or improvements can actively participate in the development process, contributing to the continual enhancement of the platform. This inclusivity ensures that the portal remains adaptive to the evolving needs of the student community. By providing a channel for collective input, the Student College Portal becomes a dynamic and student-driven initiative, ensuring that it stays relevant and beneficial in the ever-changing landscape of education.

Chapter 3: Macro Level Analysis

3.1 Technologies Used

- Frontend
- Backend
- Databases

3.2 Frameworks

- REACTJS
- NODEJS
- EXPRESSJS

3.3 Libraries

- CORS
- AXIOS
- GOOGLE AUTH
- MODERN REACT EVENT CALENDAR
- MONGODB

3.4 Database Services

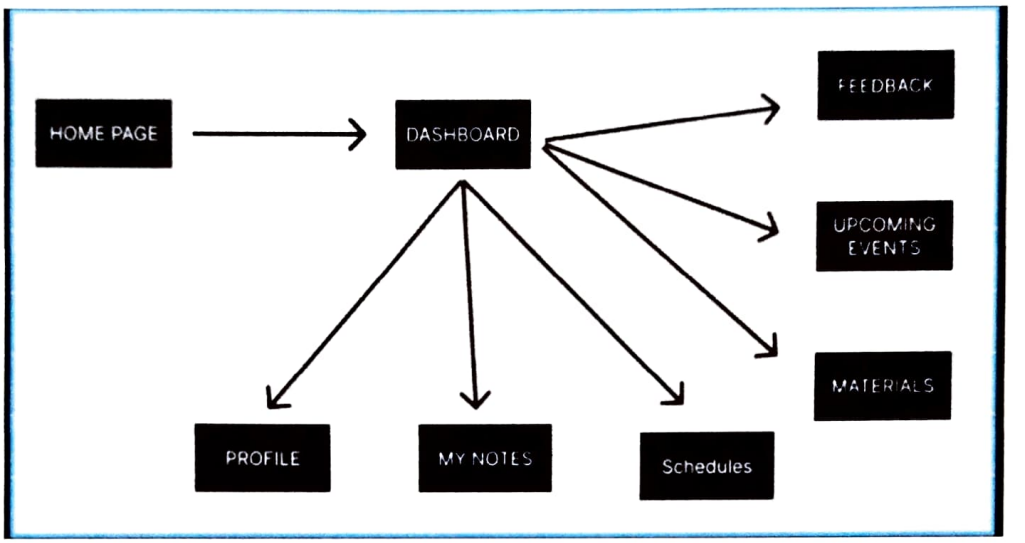
- MONGODB ATLAS

3.5 Additional Services Used

- FIREBASE

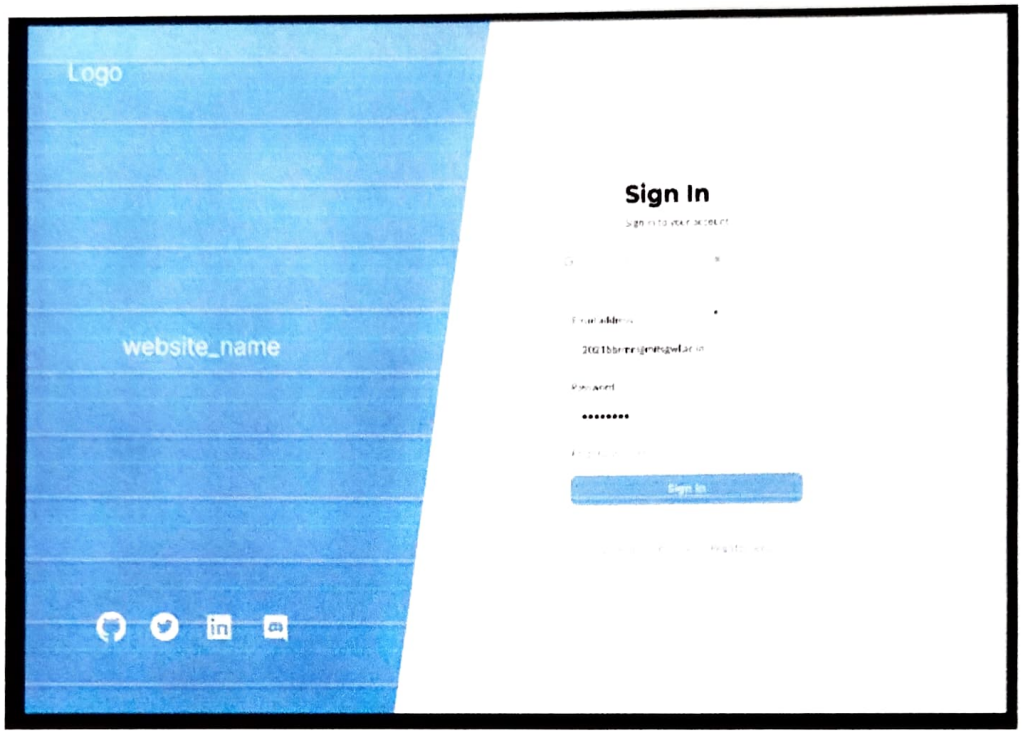
Chapter 4: Mini Level Analysis

USER FLOW



The depicted diagram illustrates the user journey within our portal, commencing at the Home page for user authentication. Authenticated users seamlessly transition to the dashboard, where they access real-time updates. The dashboard serves as a gateway to diverse sections, including the personal profile page, a self-notes application, a schedule reminder feature, and a repository of college materials such as e-books and past papers. Furthermore, users can explore the upcoming events page, featuring hackathons and promotions for college clubs. This structured flow optimizes user experience, ensuring easy navigation and access to a comprehensive range of portal functionalities, enhancing engagement and satisfaction.

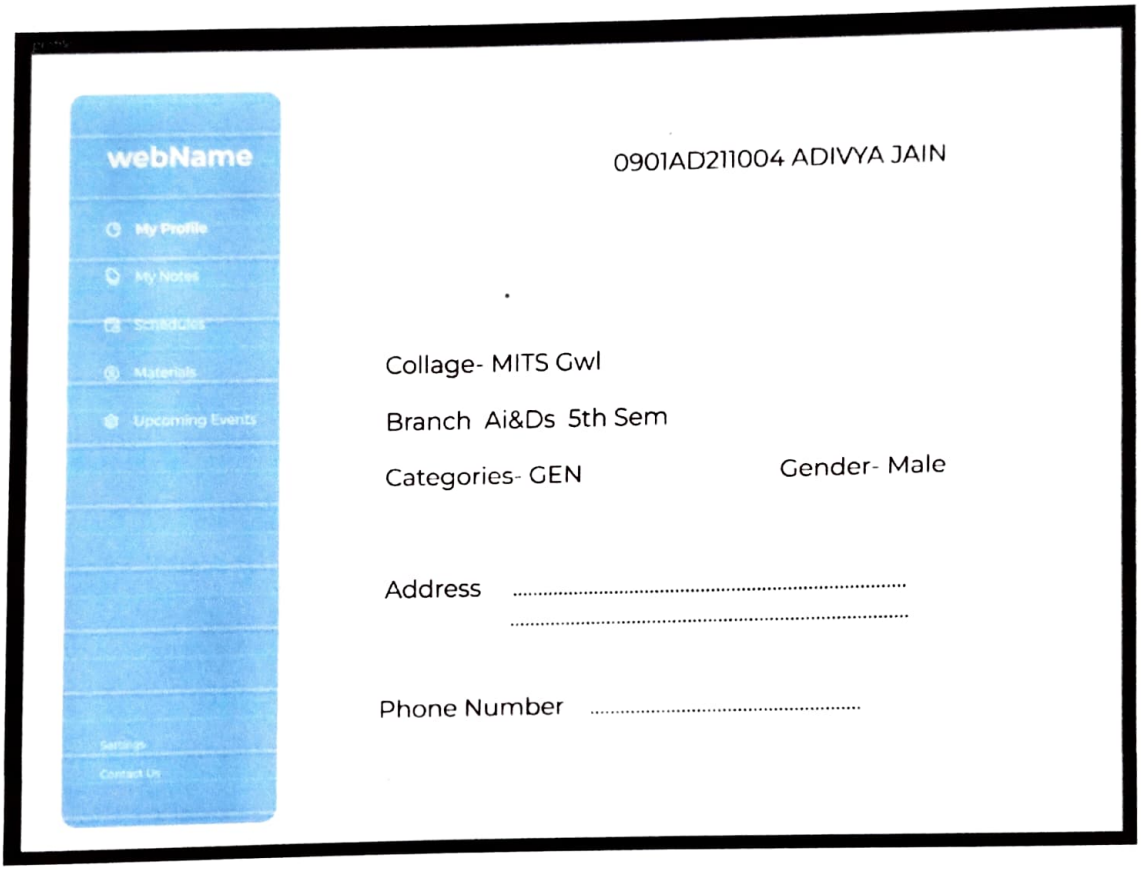
HOME PAGE



Upon entering the website's URL, users are seamlessly directed to the HOME page, a secure gateway to the website's extensive features. This initial authentication step employs the robust Google Auth mechanism to meticulously verify user identities, ensuring only authorized individuals gain access to the comprehensive functionalities that await them.

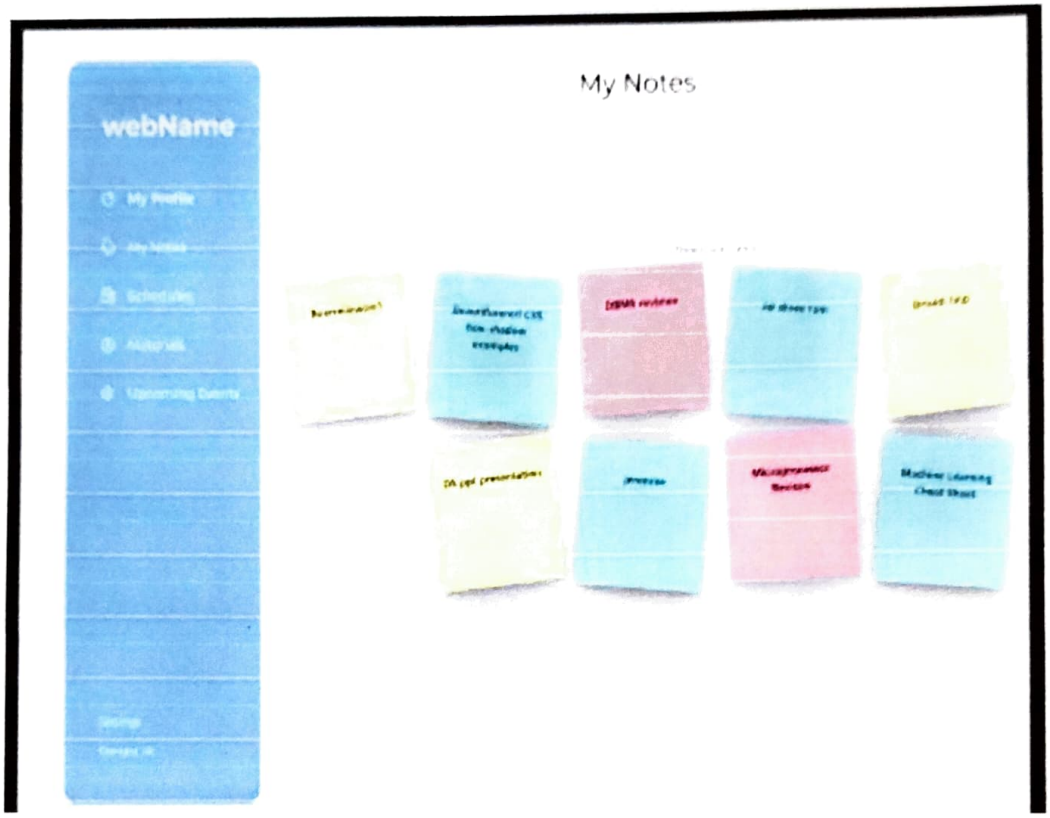
Once authenticated, users are directed into the personalized Dashboard, a streamlined portal that tailors the online experience to their individual needs. This intuitive landing page serves as a hub, providing easy access to essential information and functionalities, including profile management, note organization, appointment scheduling, event tracking, and access to valuable materials. The Dashboard may also deliver real-time updates, keeping users informed about the latest happenings on the website, ensuring they stay connected and engaged with the platform.

SELF PROFILE PAGE



The personal profile page, depicted in the image, serves as a repository for essential student information. Utilizing MongoDB Atlas, our platform securely stores and manages this data, ensuring robust and scalable storage solutions. MongoDB Atlas offers a cloud-based database platform, enabling efficient retrieval and updating of student details while maintaining a high level of security. This integration enhances the reliability and flexibility of our system, ensuring seamless access to personalized information for both the student and the platform administrators.

MY NOTES PAGE

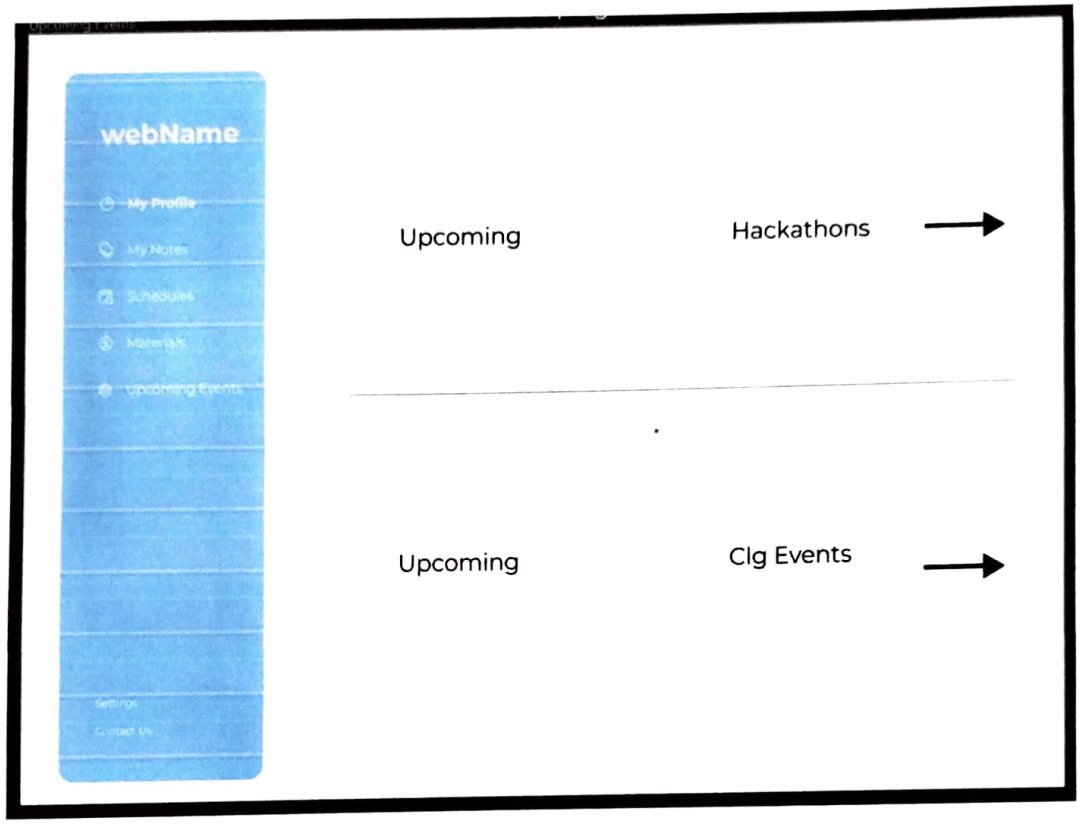


The Notes Keeper app utilizes a robust tech stack, featuring ReactJS for a dynamic user interface, Node.js and Express.js for seamless server-side operations. The app employs local and session storage for efficient data management before securely storing the information in MongoDB Atlas. This architecture ensures a smooth and responsive user experience while guaranteeing data persistence and accessibility. Users can effortlessly save and organize important notes and links directly within the website. By seamlessly integrating client-side and server-side technologies, the app maximizes performance and reliability, offering a valuable tool for users seeking a streamlined and user-friendly solution for note-taking and information management.

SCHEDULES

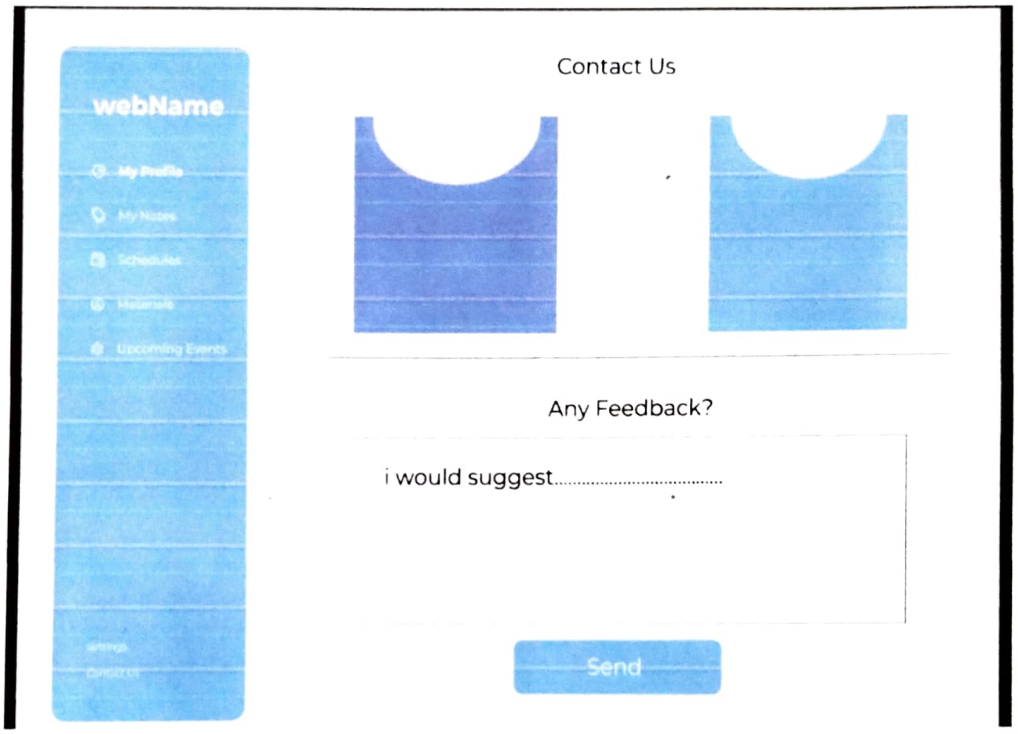
The Modern React Event Calendar depicted in this diagram serves as a comprehensive scheduling tool for students, enhancing their organizational skills and promoting overall well-being. Powered by React, it delivers a contemporary and intuitive user interface for efficiently managing class schedules, personal reminders, and other crucial events. Tailored for student needs, this calendar proves invaluable in maintaining a balanced and healthy lifestyle. By providing a centralized platform for academic and personal commitments, it empowers students to prioritize tasks, fostering effective time management. Ultimately, this tool contributes to the promotion of mental health by reducing stress, aiding in the organization of academic responsibilities, and enabling students to proactively address their daily challenges with a structured and user-friendly calendar system.

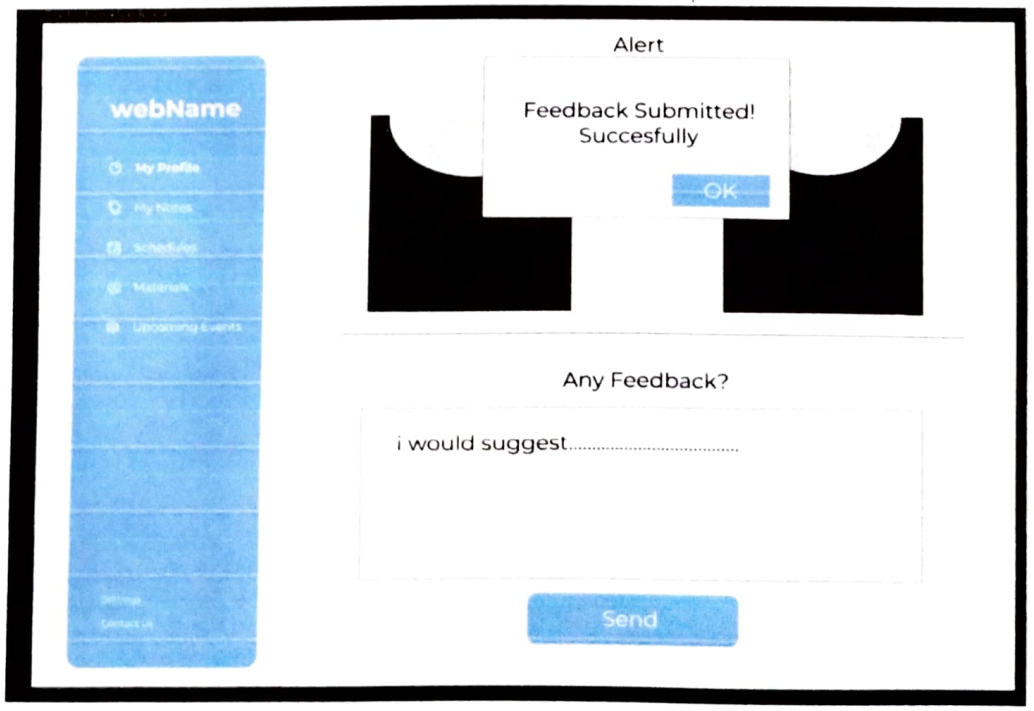
UPCOMING EVENTS PAGE



The depicted Upcoming Events page illustrates a dynamic and evolving platform that currently leverages a database to showcase college events and upcoming hackathons. The integration of a structured database ensures efficient storage and retrieval of event details, offering users a curated and organized view of scheduled activities. The roadmap for the future involves the implementation of web scraping techniques, adding a layer of dynamism to the content. This approach allows the platform to dynamically fetch and display the latest events, ensuring real-time updates without manual intervention. The transition to web scraping reflects a commitment to keeping the platform current and relevant, providing users with a seamless and continuously updated experience as they explore upcoming college events and hackathons.

FEEDBACK AND ABOUT US PAGE





USER DATABASE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lastName: "Test"
mobile: 99999999999999
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lastName: "Jain"
mobile: 4855871545
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Chapter 5: Conclusion

In Conclusion , the Student College Portal project aims to create a friendly and useful platform for students. We want to go beyond just providing academic materials like past papers and notes. Our goal is to also highlight events from various college clubs and allow students to share their technical blogs. We believe in making learning fun and practical.

The project focuses on giving students easy access to study materials, keeping them informed about tech trends through blogs, and encouraging involvement in clubs. We've added two important features: a Calendar Reminder to help manage time for quizzes, assignments, and classes, and a Note Keeper for organizing important notes.

In a nutshell, our project aims to be a hub where students can find everything they need for a great college experience, promoting a culture of shared knowledge and growth.

Chapter 6: Future scope

- Future implementation of web scraping for real-time data on hackathons and tech competitions.
- Robust web scraping system for up-to-date event details, registration deadlines, and participating teams.
- Integration with notification systems for proactive communication on upcoming competitions.
- Fostering an engaged tech community through timely event updates and communication.
- Additional features like competition reviews, post-event analyses, and success stories for a richer user experience.
- Transformation of the college website into a dynamic hub for tech enthusiasts.
- Comprehensive insights into the vibrant world of hackathons and technology competitions. Emphasis on user engagement and a proactive approach to keep students informed and involved.

22/11/23

Chapter 7: References

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