



NITTE
(Deemed to be University)

**NMAM INSTITUTE
OF TECHNOLOGY**

**REPORT
ON
INTERNSHIP I (ACTIVITY BASED)**

Carried out on

MENTOR – MENTEES WEBPAGE

Submitted to

NMAM INSTITUTE OF TECHNOLOGY, NITTE

(Off-Campus Centre, Nitte Deemed to be University, Nitte - 574 110,
Karnataka, India)

Bachelor of Technology

In

Information Science & Engineering

By

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CERTIFICATE

*This is to certify that the “**Internship I report**” submitted by **Mr. PRANAV R**, bearing **USN NNM24IS159**, of 1 year B.Tech., a Bonafide student of NMAM Institute of Technology, Nitte, has undergone internship on the topic, “**MENTOR-MENTEES WEBPAGE**” during the academic year 2024- 25 fulfilling the partial requirements for the award of degree of Bachelor of Technology in Information Science & Engineering at NMAM Institute of Technology, Nitte.*

Name and Signature of Mentor

*Signature of Dean
(Academics)*

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PRANAV R, NNM24IS159

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ABSTRACT

The Mentor-Mentees Webpage Project, developed by a team of seven Information Science and Engineering students at NMAM Institute of Technology, Nitte, establishes a dynamic and responsive web platform to foster effective mentor-mentee collaboration. Leveraging a robust technology stack—HTML, CSS, JavaScript, PHP, and Bootstrap—the platform delivers secure role-based authentication, intuitive dashboards, and centralized management of academic and personal profiles. Key features include a notification system for mentor announcements, responsive desktop-optimized design, and a clean UI for seamless navigation. The team overcame significant challenges, such as implementing role-based redirection logic, ensuring data consistency across profiles, and maintaining secure user sessions. Each member contributed uniquely, from backend development and UI/UX design to testing and documentation, ensuring a cohesive and functional platform. The project enhances academic support and career guidance by streamlining communication and profile access. Future enhancements include real-time messaging, academic performance analytics, mobile responsiveness, and advanced security measures. This initiative lays a scalable foundation for digital mentorship, with potential to significantly impact student-mentor engagement at the institute.

The development process emphasized collaborative problem-solving and adherence to software engineering principles, aligning with the academic objectives of the Information Science curriculum. The team utilized tools like VS Code and GitHub Pages for efficient coding and deployment, ensuring accessibility and scalability. By integrating modern web technologies and addressing real-world challenges, the project not only strengthens mentor-mentee interactions but also equips students with practical skills in web development and project management. Its potential to evolve into a comprehensive mentorship ecosystem underscores its value as a tool for fostering academic excellence and professional development at NMAM Institute of Technology.

CHAPTER 1

INTRODUCTION

In the modern academic landscape, effective mentorship plays a pivotal role in bridging the gap between theoretical knowledge and practical application, fostering both personal and professional growth. The Mentor-Mentees Webpage Project, undertaken by a team of seven Information Science and Engineering students at NMAM Institute of Technology, Nitte, addresses the need for a streamlined digital platform to enhance mentor-mentee interactions. This initiative aims to create a user-friendly, web-based solution that facilitates seamless communication, profile management, and academic support between mentors and their mentees. By leveraging technologies such as HTML, CSS, JavaScript, PHP and Bootstrap, the platform offers secure role-based access, intuitive dashboards, and centralized data management. The project's primary objective is to strengthen mentorship bonds, promote collaboration, and support career development by providing easy access to academic and personal information. Developed as part of the academic curriculum for the 2024-2025 session, this project not only addresses real-world challenges in digital mentorship but also equips the team with hands-on experience in web development, teamwork, and problem-solving.

The motivation behind this project stems from the growing need to modernize mentorship processes in educational institutions, where traditional methods often lack efficiency and accessibility. By digitizing mentor-mentee interactions, the platform ensures that mentors can effectively guide multiple students, while mentees gain timely access to academic resources and personalized feedback. Hosted on GitHub Pages and developed using tools like VS Code, XAMMP, the project reflects a collaborative effort, with team members specializing in frontend design, backend development, testing, and documentation. This initiative aligns with the institute's commitment to fostering innovation and technical excellence, offering a scalable solution that can be adapted to other academic contexts. The anticipated benefits include improved student engagement, enhanced academic performance, and a stronger sense of community, making the Mentor-Mentees Webpage a valuable tool for both current and future stakeholders at NMAM Institute of Technology.

CHAPTER 2

METHODOLOGY

The development of the Mentor-Mentees Webpage Project followed a systematic and iterative software engineering approach to create a robust, user-friendly platform for mentor-mentee interactions at NMAM Institute of Technology, Nitte. Undertaken by a team of seven Information Science and Engineering students— Pramukh A Nayak, Pranav R, Pranav Shenoy, Prarthana Acharya, Prarthana Nayak, Pratham R, and Pratham—the project adhered to a structured methodology encompassing requirement analysis, system design, implementation, testing, deployment, and documentation. This comprehensive process ensured the platform met its objectives of facilitating secure communication, profile management, and academic support. The methodology was executed in distinct phases, with each phase leveraging specific tools, techniques, and team collaboration to address challenges and deliver a functional solution.

2.1 Requirement Analysis

The initial phase focused on gathering and analyzing requirements to define the project's scope and functionalities. The team conducted multiple brainstorming sessions and consultations with faculty mentors, including Ms. Ashwitha C Thomas, to understand the needs of both mentors and mentees. Key requirements included secure role-based authentication, personalized dashboards, a notification system for announcements, and centralized profile management for academic and personal data. User stories were developed to capture specific needs, such as “As a mentor, I want to view my mentees’ academic records to provide targeted guidance” and “As a mentee, I want to access my profile easily to update my details.” These stories guided the prioritization of features.

To ensure clarity, the team employed use case diagrams to model interactions between users and the system. For example, use cases for “Login Authentication” and “View Profile” were mapped to identify required inputs and outputs. Stakeholder feedback was incorporated to refine requirements, ensuring the platform aligned with

the academic goals of NMAM Institute of Technology. This phase also involved researching existing mentorship platforms to identify best practices and gaps, which informed the decision to prioritize a clean UI and desktop-optimized responsiveness.

2.2 System Design

The system design phase translated requirements into a technical blueprint for development. The team adopted a modular architecture to enhance maintainability and scalability, separating the frontend and backend components. The frontend was designed using HTML, CSS, JavaScript, and Bootstrap to create a responsive and visually appealing interface.

On the backend, PHP were selected for their robustness in handling data processing and user session management. Entity-relationship (ER) diagrams were developed to model the database structure, defining tables for user profiles, academic records, and notifications. For instance, the “User” table included fields like USN, role, and personal details, while the “Mentee” table linked to mentors via foreign keys. The team also designed RESTful APIs to facilitate communication between the frontend and backend, ensuring efficient data retrieval and updates.

2.3 Implementation

The implementation phase involved coding the platform based on the design specifications. The team divided tasks according to roles to optimize efficiency. Pramukh A Nayak focused on backend development and deployment, configuring PHP servers to handle API requests and database operations. Pranav R and Pranav Shenoy collaborated on frontend development, using HTML, CSS, and JavaScript to build interactive dashboards and profile pages. Bootstrap’s grid system was utilized to ensure a responsive layout, with custom CSS for styling elements like buttons and carousels.

Pratham (NNM24IS164) led UI/UX design, ensuring the interface was intuitive and visually cohesive, while Pratham (NNM24IS163) handled frontend debugging to resolve rendering issues. Prarthana Acharya contributed to content writing, creating clear and concise text for profile sections and notifications. Prarthana Nayak conducted code reviews and testing to maintain code quality. The team used Visual Studio Code (VS Code) as the primary IDE, with extensions like Prettier for code formatting and Live Server for real-time previews.

Version control was managed via GitHub, with each member working on separate branches to avoid conflicts. Regular commits and pull requests facilitated collaboration, while GitHub Actions were explored for automated testing. The implementation phase addressed challenges like role-based redirection, where conditional logic was implemented to route users to appropriate dashboards based on their roles. Database queries were optimized to ensure fast retrieval of academic records, enhancing the platform's performance.

2.4 Testing and Debugging

Testing was a critical phase to ensure the platform's reliability and functionality. The team employed a multi-tiered testing strategy, including unit testing, integration testing, and user acceptance testing. Unit tests, written using JavaScript's Jest framework, verified individual components, such as the login authentication module and notification system. Integration tests validated end-to-end workflows, ensuring seamless interaction between frontend and backend components. For example, the team tested whether a mentor's announcement correctly appeared on all mentees' dashboards.

Prarthana Nayak led the testing efforts, using tools like Chrome DevTools to identify and resolve UI bugs, such as misaligned elements on smaller screens. Security tests were conducted to validate session management, ensuring. The team also tested database integrity, checking for issues like duplicate records or inconsistent profile data. User acceptance testing involved simulating mentor and mentee interactions to confirm usability, with feedback used to refine the UI.

Debugging was an ongoing process, with Pratham (NNM24IS163) focusing on resolving frontend issues, such as JavaScript errors in the carousel feature. Backend debugging addressed API response delays, optimizing server-side code for better performance. This phase ensured the platform met functional requirements and provided a smooth user experience.

2.5 Deployment

The deployment phase involved hosting the platform on GitHub Pages, chosen for its simplicity and accessibility. Pramukh A Nayak configured the deployment pipeline, ensuring the codebase was optimized for web hosting. The team performed final checks to verify responsiveness, cross-browser compatibility (e.g., Chrome, Firefox), and data consistency. Static assets like CSS files and images were minified to improve load times, while JavaScript files were bundled using tools like Webpack to reduce HTTP requests.

Post-deployment, the team conducted a final review to confirm that all features—login authentication, role-based dashboards, notifications, and profile sections—functioned as intended. Documentation was prepared by Pranav R, detailing setup instructions and user guides for mentors and mentees. This phase also involved planning for maintenance, with strategies to monitor performance and incorporate future enhancements like mobile responsiveness.

2.6 Documentation and Knowledge Transfer

To ensure the platform's long-term sustainability and scalability, the team prioritized comprehensive documentation and effective knowledge transfer, with Pranav R leading these efforts. Recognizing the importance of clear and accessible documentation, Pranav Shenoy developed an extensive set of resources, including user manuals, technical specifications, a developer guide, and a detailed project report. The user manuals provided step-by-step instructions for mentors and mentees, covering functionalities like logging in, updating profiles, and accessing notifications. These manuals were written in clear, non-technical language to ensure accessibility

for all users, with screenshots and examples to enhance understanding. The documentation also included troubleshooting guides for common issues, such as session timeouts or UI rendering errors, enabling future developers to maintain and extend the platform efficiently.

In addition to written documentation, Pranav R created a comprehensive PowerPoint presentation (PPT) to showcase the project's objectives, features, and outcomes. The PPT was designed using Microsoft PowerPoint, with visually appealing slides that included diagrams of the system architecture, screenshots of the webpage, and charts highlighting key metrics like development milestones and testing coverage. This presentation was used during knowledge transfer sessions with faculty and peers, effectively communicating the project's technical and academic value. Pranav R incorporated feedback from team members to ensure the PPT was concise yet informative, balancing technical details with user-focused insights.

The project report, another significant contribution by Pranav R, served as a formal record of the entire development process. This report included sections on methodology, challenges, team roles, and future enhancements, providing a holistic overview for academic evaluation. Pranav Shenoy coordinated with all team members to compile their inputs, ensuring each section was cohesive and aligned with the project's objectives. Tools like Google Docs were used for collaborative editing, allowing real-time contributions and revisions. The report was formatted to meet academic standards, with proper citations for referenced tools and technologies, and it served as a key deliverable for the 2024-2025 academic session.

Knowledge transfer sessions were conducted to familiarize faculty, including Ms. Ashwitha C Thomas, and potential users with the platform's functionality. Pranav R led these sessions, using the PPT to guide discussions and demonstrate features like role-based dashboards and notification systems. Interactive demos allowed participants to explore the webpage, providing hands-on experience and opportunities for feedback. These sessions ensured smooth adoption and equipped stakeholders with the knowledge to use and maintain the platform.

The documentation and knowledge transfer efforts also addressed the project's scalability. These deliverables not only supported academic evaluation but also established a foundation for ongoing development and institutional adoption.

CHAPTER 3

CHALLENGES FACED AND LEARNINGS GAINED

The development of the Mentor-Mentees Webpage Project presented a variety of technical, collaborative, and logistical challenges that tested the team's problem-solving skills and resilience. By addressing these obstacles, the team of seven Information Science and Engineering students—Pramukh A Nayak, Pranav R, Pranav Shenoy, Prarthana Acharya, Prarthana Nayak, Pratham, and Pratham—gained valuable technical expertise, teamwork experience, and professional insights. This subsection outlines the key challenges encountered during the project and the corresponding learnings that enhanced the team's capabilities and contributed to the successful completion of the platform.

The Mentor-Mentees Webpage Project posed several challenges for the seven-member Information Science and Engineering team at NMAM Institute of Technology, Nitte. These obstacles, addressed through collaboration, led to significant technical and professional learnings.

3.1 Role-Based Redirection:

Implementing secure redirection for mentor and mentee dashboards was tricky due to session management issues. Pramukh A Nayak and Pranav Shenoy used JWT and session variables to resolve this, learning token-based authentication and secure session handling.

3.2 User-Friendly UI:

Designing an intuitive, responsive UI was challenging, with initial layouts lacking clarity. Pratham (NNM24IS164) and Pranav R refined the design using Bootstrap and user feedback, mastering UI/UX principles and CSS optimization.

3.3 Data Consistency:

Ensuring consistent profile data across views was tough due to unoptimized queries. Pramukh A Nayak and Prarthana Nayak optimized the database, teaching the team database normalization and query efficiency.

3.4 Documentation and Presentation:

Pranav R faced challenges consolidating documentation, PPT, and the project report for diverse audiences. Using Markdown, Google Docs, and PowerPoint, Pranav R created user manuals, technical guides, and a polished PPT, learning effective communication and collaborative editing.

3.5 Team Coordination:

Aligning seven members' tasks under tight deadlines was tough. Agile meetings and GitHub Projects, led by Prarthana Acharya and Prarthana Nayak, improved teamwork, teaching agile practices and time management.

These challenges enhanced the team's skills in web development (HTML, CSS, JavaScript, PHP), security, and collaboration, preparing them for future projects while delivering a functional platform.

3.6 Key Learnings Gained:

The challenges faced during the project provided invaluable learning opportunities that extended beyond technical skills:

- **Technical Proficiency:** The team deepened their expertise in web technologies (HTML, CSS, JavaScript, PHP, Bootstrap), database management, and security practices, preparing them for real-world software development.
- **Problem-Solving:** Addressing issues like redirection logic and data consistency honed the team's analytical and debugging skills, teaching them to approach problems systematically.
- **Collaboration:** Working in a diverse team improved interpersonal skills, with members learning to respect different perspectives and integrate varied

contributions effectively.

- **Professional Communication:** Leadership in documentation and presentations highlighted the importance of clear, audience-tailored communication, a critical skill for academic and industry settings.
- **Project Management:** Adopting agile practices and managing deadlines instilled discipline and organizational skills, equipping the team for future collaborative project.

CHAPTER 4

RESULTS

The Mentor-Mentees Webpage Project, developed by the seven-member Information Science and Engineering team at NMAM Institute of Technology, Nitte, successfully delivered a functional and user-friendly web platform to enhance mentor-mentee interactions. Leveraging HTML, CSS, JavaScript, PHP and Bootstrap, the platform offers secure role-based authentication, intuitive dashboards, and centralized profile management, meeting its core objectives. Key features include a notification system for mentor announcements, responsive desktop-optimized design, and clean UI for seamless navigation, all hosted on GitHub Pages for accessibility.

The platform enables mentors to access mentee lists and academic records efficiently, while mentees can update personal details and view guidance resources. Rigorous testing by Prarthana Nayak ensured data consistency and security, with Pramukh A Nayak's backend optimizations enhancing performance. Pranav R's comprehensive documentation, PowerPoint presentation, and project report, crafted using Markdown, Google Docs, and PowerPoint, provided clear user guides and technical insights, facilitating adoption and future maintenance.

The project strengthened mentor-mentee collaboration, improving academic support and communication at NMAM Institute of Technology. It also equipped the team with practical skills in web development, teamwork, and project management. Despite challenges like role-based redirection and UI design, the team's agile approach and iterative testing delivered a scalable solution. The platform's success lays a foundation for future enhancements, such as real-time messaging and mobile responsiveness, promising long-term impact for the institute's mentorship ecosystem.



Fig. 4.1 Student Login

The Fig. 4.1 Shows the Login Portal for Student Website.



Fig. 4.2 Mentor Login

The Fig. 4.2 Shows the Login Portal for Mentor Website.

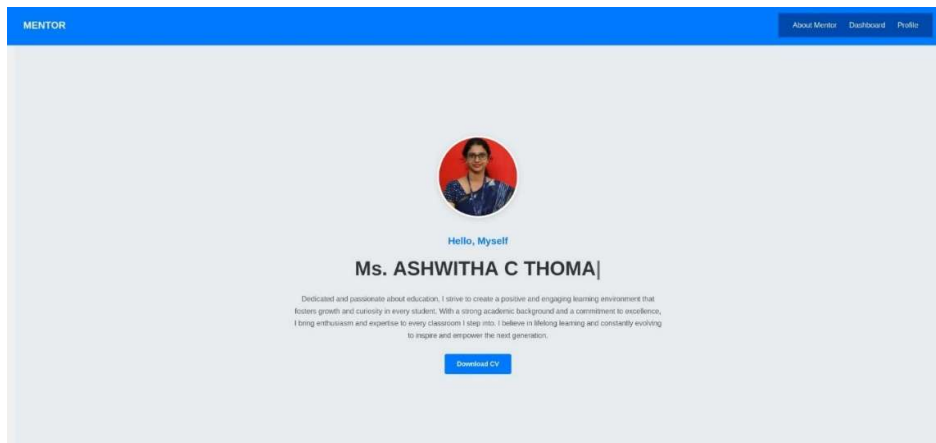


Fig. 4.3 Homepage

The Fig. 4.3 Shows the Home Page for Mentor.

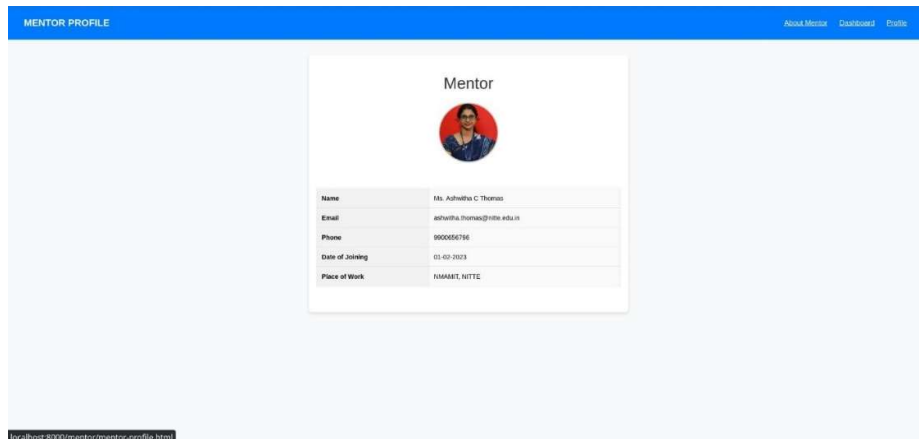


Fig. 4.4 Mentor Profile
The Fig. 4.4 Shows the Mentor Profile.

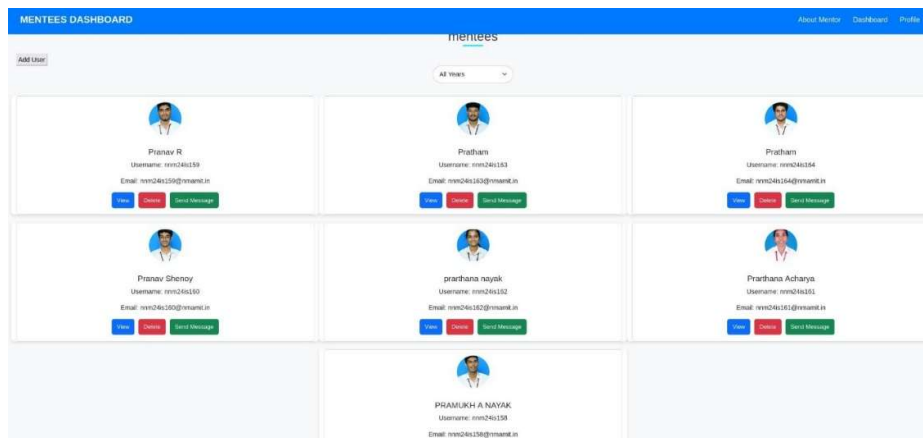


Fig. 4.5 Dashboard
The Fig. 4.5 Shows Mentor Dashboard.



Fig. 4.6 Register Page
The Fig. 4.6 Shows the Registration Page for Mentees.

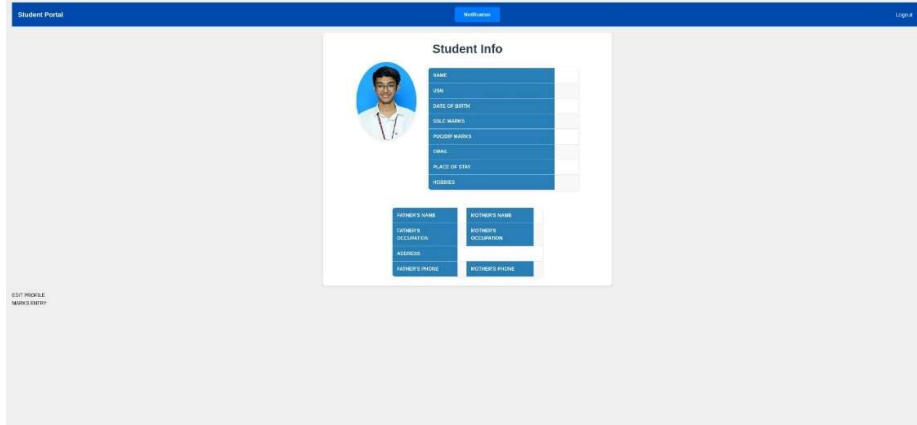


Fig. 4.7 Student Profile

The Fig. 4.7 Shows about Student Personal Details.

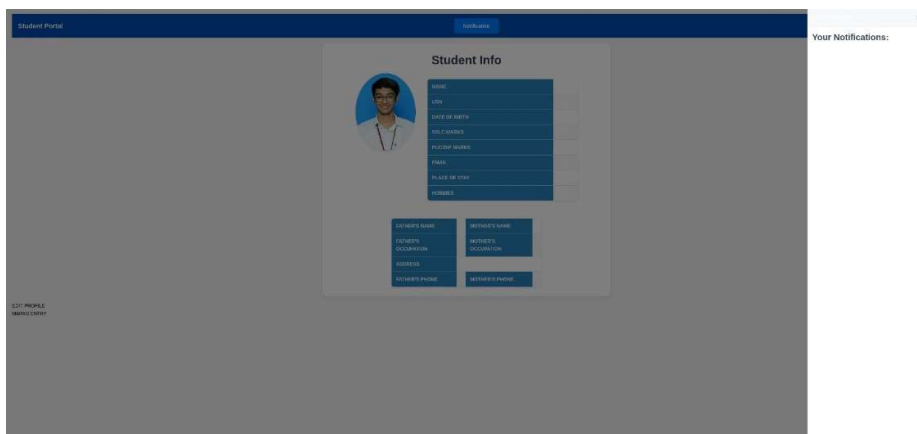


Fig. 4.8 Notification Column

The Fig. 4.8 Shows the Notification Bar

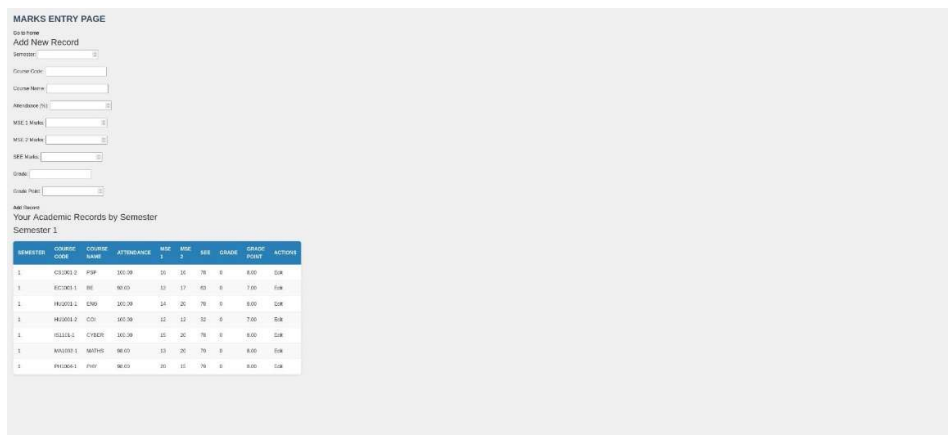


Fig. 4.9 Academic Details

The Fig. 4.9 Shows Academic Details of Students

CHAPTER 5

Conclusion

The Mentor-Mentees Webpage Project, developed by a dedicated team of seven Information Science and Engineering students at NMAM Institute of Technology, Nitte, successfully delivered a robust web platform that enhances mentor-mentee interactions. Utilizing HTML, CSS, JavaScript, PHP and Bootstrap, the platform provides secure role-based access, intuitive dashboards, and efficient profile management, fulfilling its goal of streamlining academic support and communication. Features like notifications and a responsive UI, rigorously tested by Prarthana Nayak and optimized by Pramukh A Nayak, ensure a seamless user experience. Pranav R's detailed documentation, PowerPoint presentation, and project report, crafted with tools like Markdown and Google Docs, support user adoption and future scalability.

This project not only strengthens mentorship at NMAM Institute of Technology but also equipped the team with valuable skills in web development, collaboration, and project management. Overcoming challenges like redirection logic and data consistency fostered resilience and technical expertise. The platform's success establishes a scalable foundation for future enhancements, such as real-time messaging and mobile responsiveness, promising sustained impact on academic and career development. This endeavor reflects the team's commitment to innovation and sets a benchmark for digital mentorship solutions.

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