SAHYADRI
COLLEGE OF ENGINEERING & MANAGEMENT
An Autonomous Institution

SUMMER INTERNSHIP-II

(Academic Batch 2021-25)

Submitted by

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Computer Science and Engineering

Under the Mentorship of

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CERTIFICATE

This is to certify that the **SUMMER INTERNSHIP-II** has been carried out by Mr. Shreedhar S Kolur bearing the USN 4SF22CS412, bonafide student of Department of CSE(Computer Science and Engineering), Sahyadri College of Engineering & Management, Adyar, Mangalore, during the Academic Year 2022-23. The internship report is verified as per the requirements of the Academic Statute andis recommended for the award of the Academic Credit for the said course.

Ms. Suketha	**Dr. Mustafa Basthikodi**
Mentor	**Head of the Department**

Name of the Examiner	Signature with Date
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Shreedhar S Kolur

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Chapter 1
Week I

Day 1: Introduction to Web Development:

The first day of the web development internship provided an overview of web development, covering the basics of front-end and back-end technologies. Participants were introduced to HTML, CSS, and JavaScript, and discussions focused on the importance of a well-rounded skill set in web development.

Day 2: Front-End Basics (HTML, CSS, JavaScript):

On the second day, attention turned to front-end development. Participants delved deeper into HTML for content structure, CSS for styling, and JavaScript for dynamic interactivity. Practical exercises included building simple web pages to reinforce the concepts covered.

Day 3: Introduction to Responsive Design and CSS Frameworks:

Day three introduced the concept of responsive design and popular CSS frameworks like Bootstrap. Interns learned to create mobile-friendly layouts and explored the benefits of using frameworks to streamline development. Practical sessions involved adapting existing web pages for various screen sizes.

Conclusion:

In the span of just one week, the web development internship successfully covered the fundamentals of both front-end and back-end development. Participants gained practical experience in building responsive web pages, creating RESTful APIs, and integrating databases. The hands-on approach and the culmination in a full-stack project provided a condensed yet immersive learning experience.

Chapter 2
Week II

Day 1: Introduction to MERN Stack:

The first day of the MERN internship was dedicated to introducing participants to the MongoDB, Express.js, React, and Node.js stack. The focus was on understanding the role of each technology in full-stack web development. Practical discussions included the advantages of using MERN and its prevalence in the industry.

Day 2: MongoDB Basics and Setup:

Day two focused on MongoDB, the NoSQL database in the MERN stack. Interns were guided through the installation process and introduced to the fundamentals of document-oriented data storage. Practical exercises involved setting up a MongoDB database and performing basic CRUD operations.

Day 3: Introduction to React.js:

The fifth day marked the beginning of front-end development with React.js. Participants were introduced to React components, JSX syntax, and the concept of a virtual DOM. Practical exercises included setting up a React application and creating basic components.

- Introduction to the MERN stack.
- Setting up the development environment.
- Learning the basics of MongoDB and creating a sample database.
- Building a simple REST API using Node.js and Express.js.
- Understanding the fundamentals of React and creating a basic UI.

Challenges:

- Adapting to the fast-paced learning environment.
- Balancing coursework and the internship.
- Initial difficulties in connecting the frontend and backend.

Conclusion:

This week was primarily focused on getting familiar with the MERN stack components. I successfully set up my development environment and made significant progress in creating a basic application. Although the learning curve was steep, I managed to overcome the initial challenges. This week laid the foundation for the subsequent tasks.

In just one week, the MERN internship provided participants with a condensed yet comprehensive overview of the MongoDB, Express.js, React, and Node.js stack. The day-wise structure allowed for a focused exploration of each technology, combining theoretical understanding with practical application.

Chapter 3
Week III

Day 1: Back-End Basics (Node.js and Express.js):

The focus shifted to back-end development on the fourth day, with an introduction to Node.js and Express.js. Participants learned the fundamentals of server-side scripting, routing, and handling HTTP requests. Practical exercises included setting up a basic server and creating RESTful APIs.

Day 2: Database Integration (MongoDB):

Day five centered on database integration using MongoDB, a NoSQL database. Interns learned about data modeling, CRUD operations, and the basics of setting up a MongoDB database. Practical sessions involved integrating the back-end with the database to create dynamic and data-driven web applications.

Day 3: Full-Stack Development Project:

The penultimate day was dedicated to a full-stack development project. Interns applied their knowledge of front-end and back-end technologies to build a complete web application. The goal was to provide a hands-on experience in developing a real-world project and to showcase the integration of different components**.**

- Deepening my understanding of MongoDB and working with more complex data structures.
- Enhancing the REST API with advanced features and routes.
- Building interactive components and state management in React.
- Collaborating with team members on a group project.
- Learning to use Git for version control and contributing to the project repository.

Challenges:

- Managing group dynamics and collaboration.
- Grappling with more complex React concepts.
- Ensuring code consistency and avoiding conflicts in the Git repository.

Conclusion:

In week two, I dived deeper into the MERN stack, focusing on creating more complex applications. The collaborative project allowed me to apply my knowledge in a real-world scenario, teaching me valuable lessons in teamwork and communication. I continued to learn about version control and gained confidence in my coding skills.

Interns emerged with a foundational understanding of web development, ready to explore further and apply their skills in real-world scenarios. This week structure allowed for a focused and efficient learning journey, providing a solid introduction to the diverse aspects of web development.

Chapter 4
Final Submission

Day 1: Integration with Node.js and Full-Stack Development:

of the one-week MERN internship centered on integrating the knowledge gained from both server-side and client-side development. Interns were ta

The final day sked with creating a full-stack MERN application, connecting the Express.js server with the React front-end. This hands-on project served as the culmination of the week's learning.

Day 2: Deployment and Final Presentations:

The final day focused on deployment and presentations. Interns learned about deploying web applications to hosting platforms, and each participant presented their final project. This served as an opportunity for reflection, feedback, and peer-to-peer learning.

- Finalizing and polishing the group project.
- Conducting thorough testing and bug fixing.
- Preparing documentation for the project.
- Submitting the project to the supervisor for evaluation.
- Participating in a review session with mentors and colleagues to discuss the project's strengths and areas for improvement.

Challenges:

- Ensuring project quality and addressing last-minute issues.
- Preparing comprehensive documentation.
- Managing time effectively to meet the submission deadline.

Conclusion:

The fourth and final week of the MERN internship was dedicated to the completion and submission of the group project. We worked tirelessly to polish the project, ensuring it met the required quality standards. Thorough testing and bug fixing were crucial in delivering a functional and user-friendly application. Additionally, I put significant effort into creating comprehensive project documentation to facilitate future maintenance and understanding of the codebase.

The submission marked the culmination of the internship, and it was satisfying to see the result of our hard work. The review session provided valuable feedback and insights, helping me identify areas of improvement in my development skills and project management abilities.

CONCLUSION

The development of a web-based food ordering platform is a multifaceted endeavor with the potential to revolutionize the way consumers access local and diverse cuisines. This project offers a solution to the challenges faced by both restaurant owners and customers in the traditional dining landscape.

By focusing on user-centric design, intuitive interfaces, robust features, and scalability, the platform aims to create an efficient, secure, and enjoyable experience for all stakeholders. It addresses issues such as limited access to local cuisine, inefficient ordering processes, food safety concerns, and the need for comprehensive food management.

The successful implementation of this web-based food ordering platform has the potential to not only improve the way people access and enjoy a diverse range of culinary delights but also to support local businesses and offer opportunities for growth and expansion.

As this project progresses, it is important to keep the project scope, scalability, and data security in focus to ensure that it meets its objectives and is well-prepared for future growth and evolving user needs. By doing so, we can anticipate a projectthat delivers a positive impact on both consumers and restaurant owners in the foodservice industry.

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