

KIET Group of Institutions, Ghaziabad

CSE Department



Internship Report

on

Summer Internship at MLSA KIET

Internship name: Full-Stack Web Development

(2024-25)

Submitted By:

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Branch: CSE(Sec-5A)

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ACKNOWLEDGEMENT

I've got this golden opportunity to express my kind gratitude and sincere thanks to my Head of Institution, KIET Group of Institutions of Engineering and Technology, and the Head of the Department of “**Computer Science and Engineering**” for their kind support and necessary counselling in the preparation of this project report. I'm also indebted to every person responsible for the making up of this project directly or indirectly.

I must also acknowledge our deep debt of gratitude to each one of my colleagues who led this project to come out the way it is. It's my hard work and untiring sincere efforts and cooperation to bring out the project work. Last but not least, I would like to thank my parents for their sound counselling and cheerful support. They have always inspired us and kept our spirits up.

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Introduction

The Full Stack Web Development Internship organized by the Microsoft Learn Student Ambassadors (MLSA) and the Computer Science and Engineering Department at KIET Group of Institutions provided me with hands-on experience in building full-stack web applications. Throughout the internship, I gained practical skills in both front-end and back-end technologies, fostering my ability to develop user-centered, responsive web applications. This internship emphasized learning industry-relevant tools and methodologies, enabling a robust understanding of full-stack web development.

Objectives

The primary objectives of the internship included:

- Building technical expertise in web development.
- Enhancing problem-solving skills applicable to real-world scenarios.
- Preparing for competitive opportunities in the tech field.
- Developing collaboration skills through Git and GitHub for version control.
- Gaining a deep understanding of modern web development technologies.

Phases of the Internship

The internship was structured into two major phases, each with specific learning goals:

Phase 1: Learning Modules and Microsoft Badges

This phase consisted of **40 hours of structured learning** through Microsoft Learn. The topics covered included:

- **Core Concepts of Full Stack Web Development:** HTML, CSS, JavaScript, and React framework for front-end design and interactivity.
- **Server-Side Development:** Node.js for implementing server-side logic.
- **Database Management:** MongoDB for data storage and retrieval.
- **Version Control:** Git and GitHub for repository management and collaboration.

Upon completion of these modules, I earned **Microsoft Badges** which showcase my achievements and proficiency in these areas.

Phase 2: Project Work and Repository Management

The second phase consisted of **60 hours of hands-on project work** where I applied the concepts learned in Phase 1. I chose to complete the project with Difficulty level: Difficult (Develop a blog platform)

Key areas of focus in this phase were:

- **Project Planning and Execution:** Working on projects with defined objectives, categorized as Easy, Intermediate, and Difficult.
- **Repository Management:** Utilizing Git for version control and making pull requests (PRs) to manage changes effectively.
- **Code Reviews and Collaboration:** Collaborating with peers and resolving queries to refine and optimize project work.

Project Summary

During the internship, I completed the following project:

Project Title: Narrify - Blogging Platform (Difficulty Level: Difficult)

- **Technologies Used:** Node.js, Express, React, MongoDB, Mongoose, Axios, Custom CSS
- **Description:** Narrify is a full-featured blogging platform designed to allow users to create, read, update, and delete (CRUD) blog posts. The platform includes user authentication for secure login and registration. Users can explore different blog categories, view posts, and interact with other users' content. The custom CSS and component-based architecture ensure a clean and user-friendly interface, enhancing the reading and writing experience.
- **Key Learning Outcomes:**
 - **Database Management:** Using MongoDB and Mongoose to create efficient schemas for user data, blog posts, and comments, ensuring data consistency and reliability.
 - **API Integration:** Leveraging Axios for seamless data fetching and server communication, optimizing the platform's performance.
 - **Responsive UI Design:** Creating a visually appealing, responsive interface using custom CSS, ensuring accessibility and usability across various devices.

Tools and Technologies Utilized

- **Front-End Development:** HTML, CSS, JavaScript, React
- **Back-End Development:** Node.js, Express
- **Database:** MongoDB, Mongoose for schema management
- **Version Control:** Git and GitHub for repository and collaboration

Skills Acquired

Through this internship, I developed the following skills:

- **Technical Skills:** Full-stack web development, responsive design, and server-side programming.
- **Version Control and Collaboration:** Proficiency in Git and GitHub, working with pull requests.
- **Problem Solving:** Improved logical thinking and debugging skills through practical projects.

Conclusion

The Full Stack Web Development Internship at KIET was an enriching experience that equipped me with essential skills for a career in technology. The exposure to industry-relevant tools and methodologies allowed me to build strong technical and collaboration skills that will be valuable in future projects and professional settings.