

# Weekly Progress Report

Name: Kaushal Mohan Kumbhar

Domain: Full Stack Web Development

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**Week Ending: 04**

## I. Overview

In the final week of the internship, the focus shifted to understanding the foundations of full-stack development. Topics included a comprehensive overview of front-end and back-end development, popular frameworks, and the MERN stack. Additionally, we explored the essential structure and components of HTML, setting the stage for building web pages.

## II. Achievements

### 1. Introduction to Full Stack Development:

- Gained insight into the responsibilities of a full-stack developer, bridging front-end and back-end technologies.
- Discussed real-world scenarios for applying full-stack skills.

### 2. Front-End Development:

- Explored the purpose and importance of front-end design in user interaction.
- Discussed popular tools and frameworks like React and Angular.

### 3. Back-End Development:

- Understood the role of back-end technologies in managing databases and server-side operations.
- Introduced backend frameworks like Express.js.

### 4. The MERN Stack:

- Learned the components of the MERN stack: MongoDB, Express.js, Angular, and Node.js.
- Understood how these components integrate to create dynamic, full-stack web applications.

### 5. Software Installation:

- Installed and configured essential tools for development:
  - **Node.js** for back-end programming.
  - **NPM** for managing packages.
  - **Code Editor** (VS Code) for efficient development.
  - **MongoDB** for database management.

#### 6. **HTML Basics:**

- Reviewed the structure and role of HTML in web development.
- Learned common terms, tags, and the syntax of an HTML document.
- Explored HTML document structure, including <head> and <body> sections.

### III. Challenges

#### 1. **Configuring Development Environment:**

- Initial issues with installing and setting up Node.js and MongoDB were resolved with guidance from mentors.

#### 2. **HTML Document Structure:**

- Clarifying the roles of <head> and <body> in structuring a webpage required revisiting tutorials.

#### 3. **Integrating MERN Stack Components:**

- Understanding the interactions between MongoDB, Express, Angular, and Node.js required extra reading and hands-on practice.

### IV. Learning Resources

- **Tutorials on basics** : Node.js, MongoDB, NPM.
- **PPT Tutorials:** Online resources on front-end and back-end, MERN stack and HTML basics.
- **PPT Tutorials:** Online resources on MERN stack provided by Upskill Campus

## **V. Next Steps and Takeaways**

1. Begin creating a portfolio project to demonstrate full-stack skills using the MEAN stack.
2. Explore more advanced HTML5 features, CSS, and JavaScript for a complete understanding of front-end development.
3. Continue practicing integrating front-end and back-end technologies for dynamic web application development.

## **VI. Additional Comments**

The final week provided a well-rounded understanding of what it takes to be a full-stack developer. The hands-on activities and discussions on frameworks and HTML fundamentals offered a solid foundation to further explore web development.