REPORT

ON

FOUR WEEKS OF INTERNSHIP-II

WEB DEVELOPMENT

Submitted to

NMAM INSTITUTE OF TECHNOLOGY, NITTE

(An Autonomous Institution under VTU, Belagavi)

In partial fulfillment of the requirements for the award of the

Degree of Bachelor of Engineering

In Computer Science & Engineering

by

AVANEESH N SHARMA(4NM21CS038)

Under the guidance of
DR. SARIKA HEGDE
(PROFESSOR)

NITTE EDUCATION TRUST | **N.M.A.M. INSTITUTE OF TECHNOLOGY**
(An Autonomous Institution affiliated to Visvesvaraya Technological University, Belagavi)
Nitte – 574 110, Karnataka, India

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CERTIFICATE

This is to certify that the "Internship-II report" submitted by Mr.

AVANEESH N SHARMA *bearing USN* **4NM21CS038** *of 4*[th] *semester B.E., a*

bonafide student of NMAM Institute of Technology, Nitte, has undergone

at least four weeks of internship at **Mindstack Technologies P LTD**

during 2022-2023 fulfilling the partial requirements for the award of degree

of Bachelor of Engineering in **Computer Science & Engineering** *at*

NMAM Institute of Technology, Nitte.

30/06/23

Name and Signature of Mentor

Dr - Saisha Hyde

30/06/23

Signature of HOD

m i n d s t a (k

13/03/2023

Dear Avaneesh N Sharma,

We are writing to confirm that you have successfully completed your internship with Mindstack Technologies P LTD from 12-02-2023 to 13-03-2023. We would like to take this opportunity to thank you for your hard work and dedication during your time with us.

During your internship, you demonstrated a strong work ethic and a willingness to learn, which were greatly appreciated. We hope that you have gained valuable knowledge and experience during your time here.

We wish you all the best in your future endeavors, and we hope that you will keep in touch with us. If you need any assistance or support in your future career, please do not hesitate to contact us.

Once again, congratulations on your successful completion of the internship. We wish you the very best for your future.

Sincerely,

shazad MINDSTACK TECHNOLOGIES PRIVATE LIMITED
DOOR NO: 4-95/75, 2ND FLOOR ANANTH ARCADE
. AIRPORT ROAD, KAVOOR MANGALURU,
KARNATAKA INDIA-575015

ShazadMaved
Mindstack Technologies P Ltd.

Acknowledgements

Abstract

Website Design and learning HTML were the main objective of this internship. To develop a web site there are several programming languages that are in use. Some of them are only used for the frontend and backend design of the software. For example, HTML3, HTML4, HTML5, CSS, Bootstrap, JavaScript etc. There are also some other programming languages that are used to develop the dynamic functions of the software or application. For example- PHP, Java etc. Nowadays there are also some frameworks that use vastly. Frameworks are basically structured programming by using Model, View and Controller. It is also called as MVC. If we develop web based application that is very useful for us because we can access it from anywhere in the world. It is very helpful for our daily life. That is why I choose subject of my report as "WEB DESIGN". Training in Universal Informatics added huge experiences in my upcoming career. Solving real life problems was another key issue. This report takes us through all the details of WEBSITE DESIGN knowledge and experience gathered during this internship period.

Contents

Chapter 1

Introduction

1.1   Overview

As a full-time student at Nitte Mahalinga Adyanthaya Memorial Institute of Technology Nitte, I was provided an opportunity to undertake an internship at Mindstack Technologies Pvt Ltd. The degree towards I am currently studying is a Bachelor of Engineering in Computer Science and Technology. The course at UI / WED DEVELOPMENT was quite challenging for me for a few reasons: Firstly, the programming languages and development tools I was using were new for me, hence I had to quickly integrate not only with my new living environment but also academically. This was very beneficial for me as at the end I could compare what I've learnt with what I already knew and find a connection between the two. This report is a description of my 4 weeks internship carried out as a compulsory component of the course at UI / WEB DEVELOPMENT. In the following chapter details of tools and technology used and an overview is given. Afterwards, I explain my role and tasks as a trainee and give specific technical details about my main tasks. Finally, a conclusion is drawn from the experience.

1.2 Problem Statement

Currently, the company's advise of developing website takes an excessively long time to load, resulting in a high bounce rate and frustrated users. The objective of this web development project is to optimize the website's performance to achieve faster loading times, reduce the bounce rate by 20 percentage, and enhance user satisfaction. The solution should prioritize efficient resource loading, minimize server response time, Responsive to all the devices and implement caching techniques to improve overall website performance. The project aims to achieve these goals within a one-month timeframe while adhering to a predetermined time and ensuring compatibility across major web browsers and devices."

1.2.1 Objective

The objective of the web design is to handle the entire design of a website. The software keeps track of all the information about the entire website. The system contains database where all the information will be stored safely.

1.2.2 To Gain Skill and Knowledge

This internship provided us essential skills and knowledge one requires in the field of web designing. The crucial tools used during the tenure helped us in gaining knowledge about programming languages.

1.3   Need of the Study

Acquiring in-demand skills- Web development skills are highly sought after in today's digital age. By studying web development, you can gain valuable skills that are in high demand in the job market. Web developers are needed in various industries and organizations, ranging from tech companies and startups to e-commerce platforms and media organizations. Building websites and web applications With web development skills, you can create and build websites and web applications from scratch. This enables you to bring your ideas to life and create online platforms that provide value to users. Whether it's building an e-commerce website, a blog, a portfolio site, or a complex web application, studying web development equips you with the knowledge and tools to develop functional and visually appealing digital products.

1.4   Practical Implications

Online Presence- Web development enables individuals, businesses, organizations, and institutions to establish an online presence. Websites and web applications serve as digital representations, allowing them to showcase their products, services, information, and engage with a global audience. E-commerce, Web development has revolutionized the way people buy and sell products and services. E-commerce platforms enable businesses to set up online stores, reach customers worldwide, and conduct secure transactions. Web development facilitates functionalities like product catalogs, shopping carts, payment gateways, and order management systems.

1.5 Study Objectives

- Mastering web programming languages: Web development involves working with programming languages like HTML, CSS, JavaScript, and frameworks like React,

Angular, or Django. One objective is to become proficient in these languages and frameworks, understanding their syntax, features, and best practices.

- Understanding front-end development Front-end development focuses on the visual and interactive elements of a website or application. Studying web development aims to learn front-end technologies, such as HTML, CSS, and JavaScript, to create attractive and user-friendly interfaces.

1.6 Scope of the Study

Front-end Development: This involves creating the user interface and experience of a website. It includes HTML, CSS, JavaScript, and frameworks like React, Angular, or Vue.js. Back-end Development: Back-end development focuses on the server-side of web applications. It includes languages like Python, PHP, Ruby, or JavaScript (Node.js) and frameworks like Django, Laravel, Ruby on Rails, or Express.js. Fullstack Development: Fullstack developers work on both the front-end and back-end aspects of web development, handling both client-side and server-side programming. Responsive and Mobile Development: With the increasing use of mobile devices, it's crucial to create websites that are responsive and optimized for mobile browsing. This involves techniques like responsive design, mobile-friendly layouts, and mobile app development.

Chapter 2

Traning Work Undertaken

2.1   Introduction to HTML5, CSS, JavaScript

HTML5: HTML stands for Hyper Text Mark-up Language. It is used to design web pages using mark-up language. HTML is the combination of Hypertext and Mark-up language. Hypertext defines the link between the web pages. Mark-up language is used to define the text document within tag which defines the structure of web pages. HTML5 is the fifth and current version of HTML. It has improved the mark-up available for documents and has introduced application programming interfaces (API) and Document Object Model (DOM).

CSS: Cascading Style Sheets, fondly referred to as CSS, is a simply designed language intended to simplify the process of making web pages presentable. CSS allows you to apply styles to web pages. More importantly, CSS enables you to do this independent of the HTML that makes up each web page. There are three types of CSS which are given below: Inline CSS Internal or Embedded CSS External CSS5

JavaScript: JavaScript is a lightweight, cross-platform and interpreted scripting language. It is well-known for the development of web pages, many non-browser environments also use it. JavaScript can be used for Client-side developments as well as Server-side developments. Features of JavaScript: According to a recent survey conducted by Stack Overflow, JavaScript is the most popular language on earth. With advances in browser technology and JavaScript having moved into the server with Node.js and other frameworks, JavaScript is capable of so much more. Functions in JS are objects. They may have properties and methods just like another object. They can be passed as arguments in

other functions. Can handle date and time. Performs Form Validation although the forms are created using HTML. No compiler needed.

2.2 Factors Influencing ......

Web Standards and W3C: The World Wide Web Consortium (W3C) is an in- ternational standards organization that develops and maintains web standards. The standards set by W3C influence the evolution and implementation of HTML, CSS, and JavaScript, ensuring interoperability and compatibility across different platforms and browsers **Browser Support**: Web technologies are implemented and supported by various web browsers, such as Google Chrome, Mozilla Firefox, Safari, and Microsoft Edge. Browser vendors play a significant role in adopting and implementing new features and standards, which can impact the availability and usage of specific HTML, CSS, and JavaScript features

2.3   Traning Attended

According to Mentor's advice and guidlines, the III Semester of B.Tech CS must involve an internship program. The students require at least 2 weeks of internship program for attaining a successful career in the related fields. There are more attendant and requirement is need to build a project. We know that, we can mix all languages like C++, C, HTML, PHP, JavaScript and more. The web server combines the results of the interpreted and executed HTML code, which maybe any type of data, including images, with the generated web page. The training that I attended In Online platform to learn Languages , included

- HTML5
- CSS
- JavaScript
- Bootstrap

2.4   Roles and Responsibility

As an intern my responsibilities at MindStack Technologies Pvt Ltd. was to cover all aspects of creating web A Report On Web Designing 1 application to become a web developer. For this required core knowledge about designing tools like HTML, CSS, Bootstrap, JavaScript, etc.. The main responsibility was to ensure that the web application designed must appeal to the desired target audience and, as a result, catches their attention and also include a working knowledge of different web browsers. While learning about web development I also gained knowledge about front end designing. During my internship period I mostly worked with designing "The Responsive" web pages.

- Web Developer: Writing clean, maintable and efficient code for the websites or web apllications.

- Front-End Developer: Translating design mockups into responsive and interactive web pages. Implementing user interfaces using HTML5, CSS and JavaScript.

- Back-End Developer: Managing databases and data storage systems. Managing databases and data storage systems.

Chapter 3

Case Study

3.0.1   Brief Outline of the Company

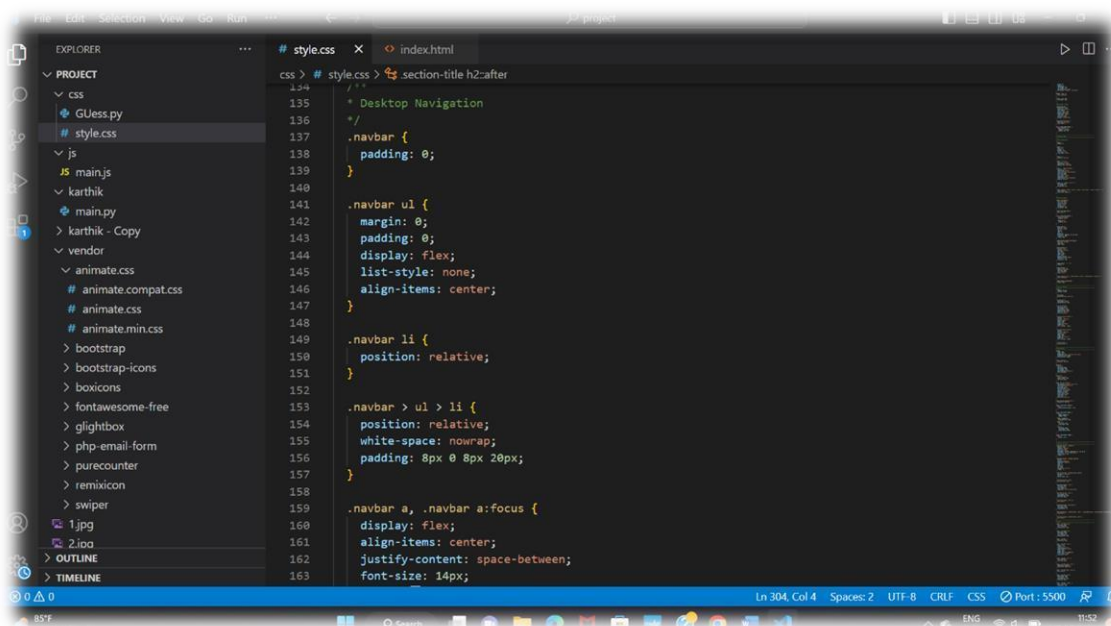The Leadership Team The Co-Founder and Director **Arun Bhat** and **Shazad Maved**.

MindStack Technologies Pvt Ltd. Anantha Arcade, Bajpe Main Rd, Marakada, Kavoor, Mangalore, Karnataka 575015 Mindstack was created out of love for coding and a deep understanding of vital a company's online presence is. With the world today becoming increasingly digital, a solid, well designed and well optimized web presence is an absolute must for any type of business. Whether you are an Entrepreneur, a mid sized Company, a Government Organization or a Multinational Company, we got you covered with the most elegant and cutting edge solutions in the market. In our line of work, we recognize the need for efficiency and in order to stay ahead of our competition, we utilize the best tools and resources available on the market. Our M.O. is to maintain a standard and effective workflow that gets reliable results fast while also allowing us to easily maintain and enhance the end-product.

3.1 Problem Statement

Currently, the company's advise of developing website takes an excessively long time to load, resulting in a high bounce rate and frustrated users. The objective of this web

development project is to optimize the website's performance to achieve faster loading times, reduce the bounce rate by 20 percentage, and enhance user satisfaction. The solution should prioritize efficient resource loading, minimize server response time, Responsive to all the devices and implement caching techniques to improve overall website performance. The project aims to achieve these goals within a one-month timeframe while adhering to a predetermined time and ensuring compatibility across major web browsers and devices."

3.2   Implementation

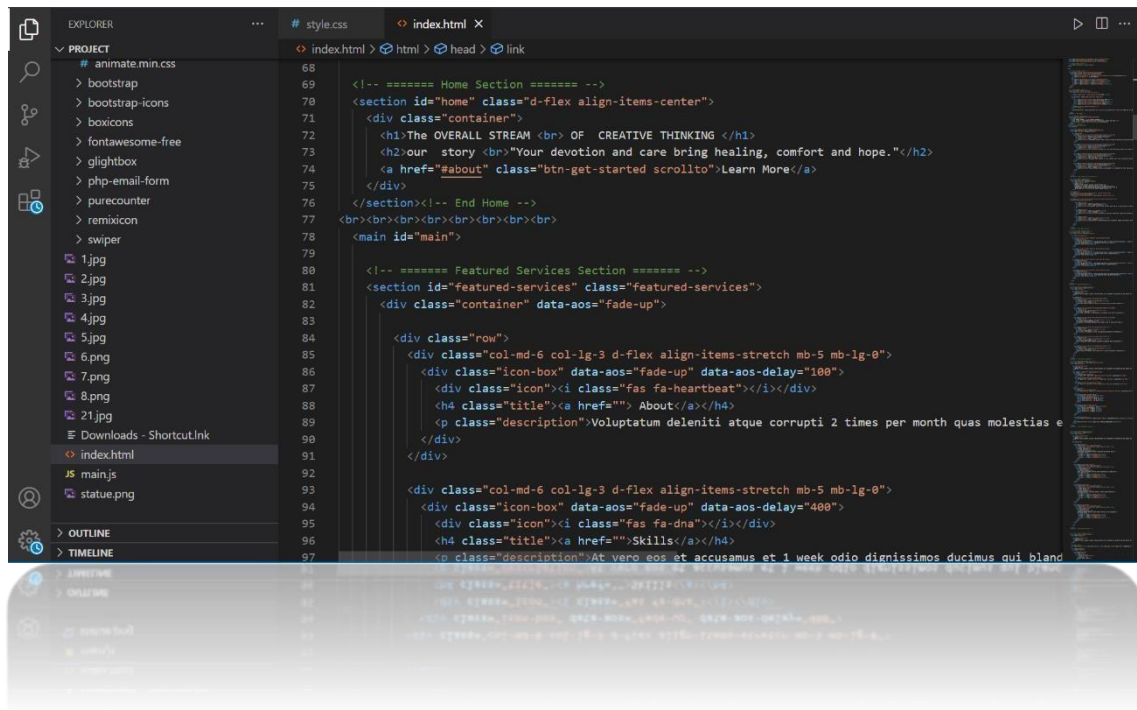

Fig 3.1 Implementing the project using CSS5 Language.
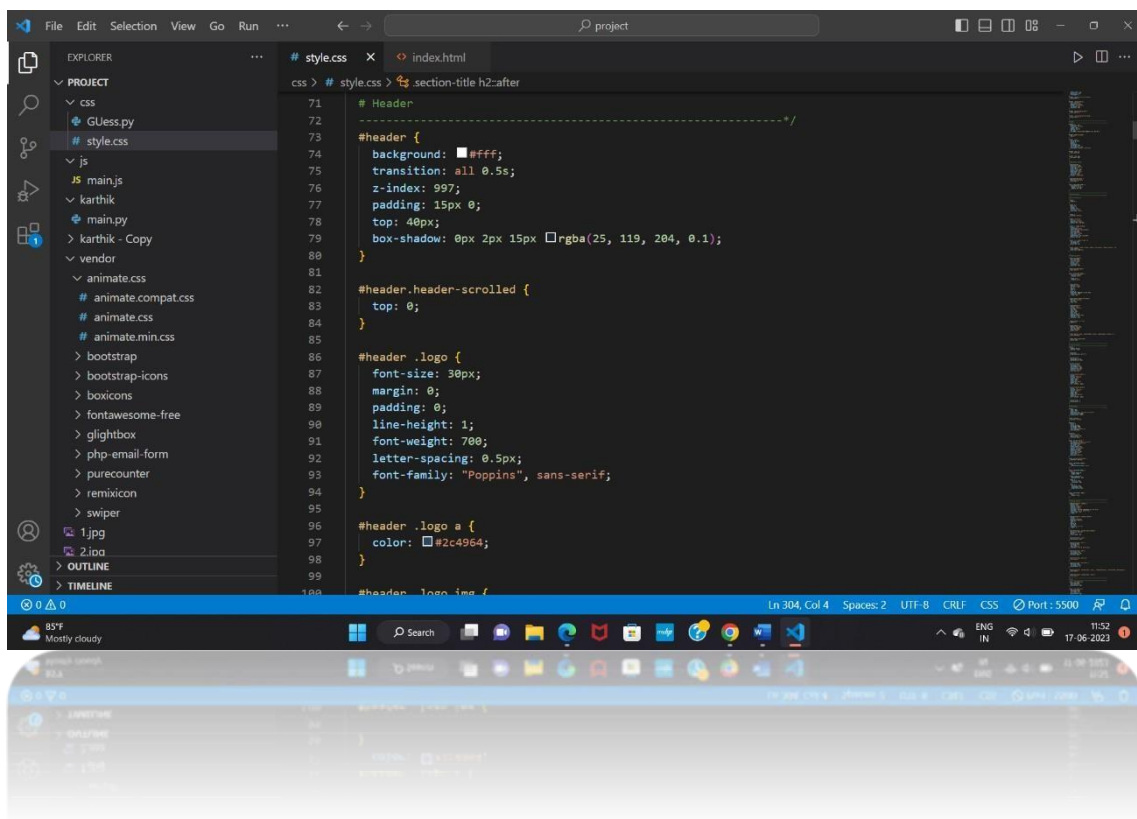
Fig 3.2 Implementing the project using HTML5 Langauge

Fig 3.3 Design of Header Using CSS5

3.3   Methodology

The methodology for this web development project involved several steps to optimize the website's performance. The project began with a preliminary study of web development languages such as HTML, CSS, Bootstrap and JavaScript with a specific focus on the study of the syntax, structure, and functionality of each language to grasp their core concepts and principles. This provided a foundation for acquiring a comprehensive understanding of the technical aspects of the project and informed the subsequent steps.

The next step in the methodology was to collect data on the website's current performance to analyze its resource loading process and identify potential bottlenecks and areas for improvement. This included measuring and recording the current website performance metrics, such as page load times, file sizes, server response times, and overall user experience. Based on this data, we developed a performance optimization strategy incorporating means to minify and optimize the website's code, images, and the largest resources on the website. This was mainly done by implementing compression techniques and using a CDN.

The initial phase of the project involved cloning the sample website using HTML and CSS. This ensured that the website's structure and styling were recreated, ensuring visual fidelity to the original design. Next, the Bootstrap framework was employed to make the website responsive across different devices and screen sizes. Additionally, JavaScript was incorporated to enhance the website's interactivity and functionality. Through this handson approach, we acquired valuable insights into the transformation of a static, unresponsive website into a dynamic and user-friendly one.

The subsequent step involved the testing of the optimized website through various testing tools and user feedback. We made sure to make the necessary adjustments and refinements based on testing results and feedback. The optimized website was then

deployed to a live environment, in addition to providing recommendations for future enhancements.

3.3.1 Study Location Selection

The Study Selection Location for Implementaton of Web Development was from our home, gathering the Knowledge from the Web, and weekly meeting from our Mentors

Chapter 4

Conclusions

4.1 Conclusions

In conclusion, I can say that this internship was a great experience. Thanks to this project, I acquired deeper knowledge concerning my technical skills, but I also personally benefited. Currently HTML is a common part of web applications, and it is one of the most popular language for web designing used by professionals worldwide. If we surf internet, we can see millions of websites designed with HTML and CSS. I learned to live in a different environment from the one I am used to. Indeed, I grew more independent in work and also in everyday life. I realized that I could do more things than I thought, like learning new things by myself. There are huge opportunities available for the students who want to work in this field. Many private and public organizations hire web designer for their online work and website development. With the rapid advent of online industry, the demand of web development professionals is increasing, and this has created a huge job opportunity for the aspirants in the upcoming days. Also, an experienced person in this field can also

work as a freelancer; there are many online companies which provide online projects to the individuals.

4.2   Scope for Future Work

If someone has no experience in this field, finding work can be a real challenge. A successful internship can help an individual turn an experience into a career opportunity. So as a successful internship some future scopes are

- To work in IT company

- Can work as a Software Engineer

- Can work as a Web Designer

- Can work as a Web Developer

- Can work as a QA Tester.

References
1. **W3schools   https://www.w3schools.com/**
2. **Bootstrap   https://getbootstrap.com/**
3. **http://bigstream.bestlooker.pro/index.html**

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III/IV semester BE-Computer Science and Engineering
Summer Internship-II (21INT102)
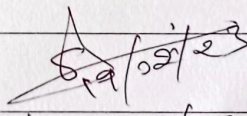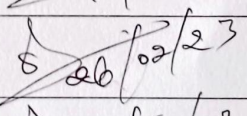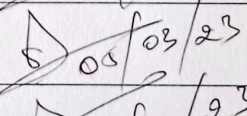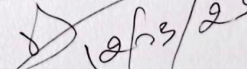## Progress report

Internship Title: Web Development

Internship Category(Innovation/ Societal /Entrepreneurship): Internship at company

Team Number: 9

Team members with USN:

Name	USN
Avaneesh N Sharma	4NM21CS038
Avinash Monteiro	4NM21CS040

Weekly progress:

Date	Tasks Achieved	Guide signature with date
12-02-2023 to 19-02-2023	Learnt HTML	
19-02-2023 to 26-02-2023	Learnt CSS	
26-02-2023 to 05-03-2023	Learnt JavaScript	
05-03-2023 to 12-03-2023	Learnt Bootstrap	