WEB DEVELOPMENT

A summer internship report submitted in partial fulfilment of the requirements

for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING

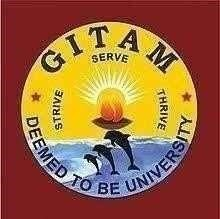
# Submitted by

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Under the guidance of

DR.PRAVEEN MUNDHE



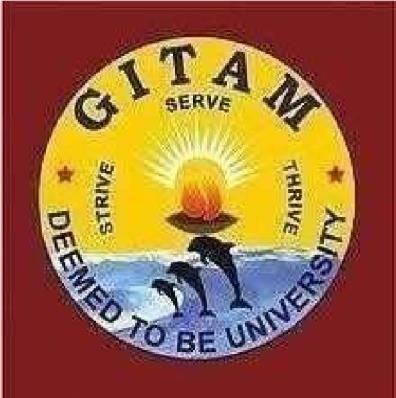
Department of Computer Science and Engineering

GITAM School of Technology

GANDHI INSTITUTE OF TECHNOLOGY AND MANAGEMENT

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# DECLARATION

I hereby declare that the summer internship report entitled “WEB DEVELOPMENT” is an original work done in the Department of Computer Science and Engineering, GITAM School of Technology, GITAM (Deemed to be University) submitted in partial fulfilment of the requirements for the award of the degree of “Bachelor of Technology” in Computer Science and Engineering. The work had not been submitted to any other college or university for the award of any degree or diploma.

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| Place-HYDERABAD |  |  |
| Date-08-09-2023 |  | K.Ravi Seshu    (222010313010) |

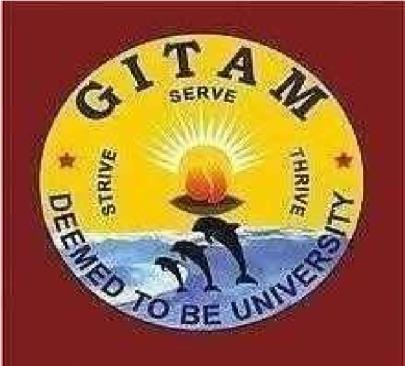
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

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CERTIFICATE

This is to certify that the Internship report entitled “WEB DEVELOPMENT ” is a bonafide record of work carried out by K.Ravi Seshu (222010313010) submitted in partial fulfillment of the requirement for the award of the degree of Bachelors of Technology in Computer Science and Engineering.

|  |  |
| --- | --- |
|  |  |
| DR.PRAVEEN MUNDHE | DR.K.S.Sudeep |
| Associate Professor | Professor & HOD  Dept. of CSE |

CERTIFICATE OF COMPLETION



ACKNOWLEDGEMENT

My project would not have been successful without the help of several people. we would like to thank the personalities who were part of our project in numerous ways, those who gave us outstanding support from the birth of the project.

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Sincerely,

K.Ravi Seshu

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## ABSTRACT

The purpose of building doctor appointment system is to –

* Overcome problems caused by manual appointment booking system, such as waiting in queues for long hours for getting an appointment. In this way, it improves patient satisfaction.
* Avoid errors while entering data.
* It provides doctors and administrators with a centralized platform to schedule, track, and manage appointments, ensuring a seamless experience for both healthcare providers and patients.

All that is needed is the awareness of using the application by the user. Doctor Appointment

System can lead to error-free, secure, reliable and faster management system. It will also help

the organization in better utilization of resources.

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CHAPTER 1 1. INFORMATION ABOUT WEB DEVELOPMENT

1.1 Introduction

Web development refers to developing a website for the Internet (World Wide Web) or an intranet (a private network). It can range from developing a single static page of plain text to complex web applications, electronic businesses, and social network services.

Web development refers to creating and maintaining of websites. It includes aspects such as web design, web publishing, web programming, and database management. It is the creation of an application that works over the internet i.e., websites.

1.2 Importance of Web Development

As human beings, we pride ourselves on our superb adaptation skills and ability to change with the times. Stemming from this, when the social world shifted from a place of interpersonal connections to internet connections, so did the world of business. There's no getting around it; our digitally-driven lifestyle has given us little choice but to adapt to technology, and if you haven't already, it's time to get a move on. It's a no- brainer; website development is now essential to you as a business person. For your business to generate more business, your voice needs to be heard, your brand needs to be seen, and your goals need to be reached. Website development is the key to making those things happen. The same way an eye is the window to the soul, a website is the window to the business, giving customers a taste of what you have to offer and enticing them to delve deeper for more.

We are simple creatures in that we like convenience, and there's nothing more convenient than accessing a whole host of information by simply clicking a button, which is what millions of people do when they go online every day.

1.3 Uses of web development

As mentioned earlier, web development involves developing a website for the Internet (World Wide Web) or an intranet (a private network), it can range from developing a single static page of plain text to complex web applications, electronic businesses, and social network services.

1.4 Types of web development

The few types of web developments are:

a. Frontend web development

1. Backend web development
2. Full stack web development

1.4.1 Frontend web development

Front-end web development is also known as client-side web development. It is a process of designing the user interface of the website with front-end technologies like HTML, CSS, and JavaScript.

The aim of developing the front end of the website is to allow website visitors to read the web content effortlessly. Additionally, to build an interactive interface, the front-end developers/web designers need to write efficient and clean code.

1.4.1.1 HTML

Web designers use HTML to design the structure and layout of the website, also to design highly interactive pages. Most of the static pages are designed using HTML.

1.4.1.2 CSS

The web designer uses cascading style sheet that will enhance website layout and presentation. CSS helps to design a webpage using HTML code. CSS is widely used by designers and developers to style a website.

1.4.1.3 Java Script

To make a website interactive, for example, when searching a query on Google or clicking on a button to change the page, there is a JavaScript working behind. To enhance user engagement, implementing JavaScript on your website is crucial. For example, when you open Gmail and click on inbox, rather than loading the entire page, a smooth transition will happen and the page will load.

1.4.2 Backend web development

Back-end development is also known as server-side web development. The responsibilities of back-end developers are writing code and building the logical parts of the entire website. It mainly focuses on back-end logic, databases, servers, and APIs. In the web project, the logical part relies on the backend, you may not see the technology used behind developing a website. However, back-end web development is a crucial part of a website.

1.4.2.1 PHP

Widely known language to manage dynamic content, session tracking, databases, eCommerce websites. Integrated with popular databases like MySQL, PostgreSQL, and Oracle.

1.4.2.2 Java

Java is used to build websites, games, apps, and software. According to Oracle, Java is used by 6 million developers, and it is powering 5.5 billion devices.

1.4.2.3 SQL

SQL database query language helps to compute large amounts of data. Helps to collect data from across databases and utilizes it accordingly to your target audience.

1.4.2.4 Python

SQL database query language helps to compute large amounts of data. Helps to collect data from across databases and utilizes it accordingly to your target audience.

1.4.2.5 .Net

It is a framework, which is used for building software applications using various languages like C#, VB.Net, C++, and F#.

1.4.2.6 Angular

It is a type script-based, open-source website development framework. Using Angular, you can easily develop web applications.

1.4.3 Full stack web development

Full-stack web development means the development of the front end and back end. The full-stack web developer should have knowledge of web design, web development, database, and website debugging.

A full-stack developer should also have the expertise to develop client and server-side web applications, database management skills. Full-stack web developers are expected to be well versed in redesigning, building, and speeding up an entire website design and development phase.

Additionally, the responsibilities of full-stack web developers are to search for the web development trends like blockchain, deep learning, and multi-cloud depending upon the projects.

1.4.3.1 HTML, CSS and JavaScript

Developers should have an understanding of HTML (Hypertext Markup Language) and CSS (Cascading Style Sheets). These programming languages are used to develop the front end of the web interface.

1.4.3.2 Git and GitHub

If one gets a job as a full stack web developer, they might need to work with version controls like Git and GitHub.

1.4.3.3 Browser DevTools

To edit HTML elements, CSS properties, and track the JavaScript error, one needs to be comfortable using ChromeDevTools, FirefoxDevTools, or any other browser dev tools.

1.4.3.4 API

API, which stands for Application Programming Interface, allows developers to integrate different functionalities without sharing the code.

1.4.3.5 Programming Languages

It is essential to have the basic knowledge of programming languages like PHP, Python depending upon the project.

1.5 Skills required to become web developer

Learning full-stack development does not limit understanding only front-end and back- end technologies.

The below-listed points will help to understand all the stages to learn about full-stack development.

1. Basic Programming Skills to Design a website

* HTML (Markup Language)
* CSS (Styling Language)
* JavaScript (Programming Language)

1. Backend Technologies

Choosing the right backend technologies makes your project scalable, helps you to instantly answer searcher’s queries, and enhances the speed of your website.

To develop a backend interface, here are some of the languages to choose from.

* PHP
* Python
* Ruby
* Java

1. Repository

* Git
* GitHub

1. Database Storage

Database storage is an essential element of web development. It stores data that can be accessed whenever logged in or a new account is created from the website. Experience in handling databases is one of the essential skills of full-stack developers.

A full-stack developer should know about relational databases and how database storage works out. From database designing to management, the developer should know how to access database queries effectively. Understanding JSON and XML is a plus for full-stack developers.

1. Web Architecture

Full-stack developers should have knowledge of web architecture. The perfectly designed web architecture loads and adapts to changing business requirements. This enhances the website’s performance.

Additionally, web architecture allows you to integrate the latest functionalities without making any changes to the entire structure.

* 1. Client-side component: It is known as the front end, where the code is written in HTML, CSS, and JavaScript. All the code will be stored in the server and whenever a user will try to access the website, the design will fetch from the server directly.

* 1. Server-side component: It is known as the back-end side of the structure, where programming languages like Ruby, Python, PHP are used. Apart from that, the server-side includes different layers like the presentation layer, application layer, and persistent storage layer.

Each layer works independently from the others. Therefore, changes made in one component will not affect another component.

1. Soft Skills

It is essential to learn soft skills for becoming a front-end, back-end, or full-stack web developer. Possessing a perfect balance of technical and soft skills will help to get ahead in career path. One should have the following soft skills.

* Strong analytical mind
* Time management skills
* Attention to detail
* Creative vision

To learn these soft skills, the platforms like YouTube, Udemy, and Coursera can be accessed. You will find experienced and highly knowledgeable faculty there to help you learn soft skills.

Above, you have learned about web development types and programming languages. Below, you will learn about 4 factors to consider while choosing the best web development language.

Chapter-2

1. Information about HTML
   1. Introduction

HTML (HyperText Markup Language) is the code that is used to structure a web page and its content. For example, content could be structured within a set of paragraphs, a list of bulleted points, or using images and data tables. As the title suggests, this article will give you a basic understanding of HTML and its functions.

* 1. History of HTML

The first version of HTML was written by Tim Berners-Lee in 1993. Since then, there have been many different versions of HTML. The most widely used version throughout the 2000's was HTML 4.01, which became an official standard in December 1999. Another version, XHTML, was a rewrite of HTML as an XML language.

* 1. Features of HTML

HTML can only create static web pages. For dynamic web pages, other languages have to be used.

* + - * It is easy to learn and easy to use.
      * It is platform-independent.
      * Images, videos, and audio can be added to a web page.
      * Hypertext can be added to the text.
      * It is a markup language.
  1. Anatomy of HTML

The main parts of our element are as follows:

* + 1. he opening tag

This consists of the name of the element wrapped in opening and closing angle brackets. This states where the element begins or starts to take effect. Ex: <p>

* + 1. The closing tag

This is the same as the opening tag, except that it includes a forward slash before the element name. This states where the element ends. Failing to add a closing tag is one of the standard beginner errors and can lead to strange results. Ex: </p>

* + 1. The content

This is the content of the element, which in this case, is just text.

* + 1. The element

The opening tag, the closing tag, and the content together comprise the element.

* 1. Nesting Elements

Putting elements inside other elements is known as nesting. If we wanted to state that our cat is very grumpy, we could wrap the word "very" in a <strong> element, which means that the word is to be strongly emphasized:

<p>My cat is <strong>very</strong> grumpy.</p>

You do however need to make sure that your elements are properly nested. In the example above, we opened the <p> element first, then the <strong> element; therefore, we have to close the <strong> element first, then the <p> element. The following is incorrect:

<p>My cat is <strong>very grumpy.</p></strong>

The elements have to open and close correctly so that they are clearly inside or outside one another. If they overlap as shown above, then it can lead to unexpected results.

2.6 Empty elements

Some elements have no closing tags and are called empty elements. Take the <img> element that we already have in our HTML page:

<img src="images/firefox-icon.png" alt="My test image">

This contains two attributes, but there is no closing </img> tag and no inner content. This is because an image element doesn't wrap content to affect it. Its purpose is to embed an image in the HTML page in the place it appears.

2.7 Anatomy of HTML document

That wraps up the basics of individual HTML elements, but they aren't handy on their own. Now we'll look at how individual elements are combined to form an entire HTML page. Let's revisit the code we put into our index.html example (which we first met in the Dealing with files article):

2.7.1 <!DOCTYPE html>

It is a required preamble. They don't do much and are basically just needed to make sure your document behaves correctly. That's all you need to know for now.

2.7.2 <html></html>

This element wraps all the content on the entire page and is sometimes known as the root element. It also includes the lang attribute, setting the primary language of the document

2.7.3 <head></head>

This element acts as a container for all the stuff you want to include

on the HTML page that isn't the content you are showing to your page's viewers. This includes things like keywords and a page description that you want to appear in search results, CSS to style our content, character set declarations, and more

2.7.4 <meta charset=” utf-8”>

This element sets the character set your document should use to UTF-8 which includes most characters from the vast majority of written languages. Essentially, it can now handle any textual content you might put on it. There is no reason not to set this and it can help avoid some problems later on

2.7.5 <meta name=” viewpoint” content=” width=device-width”>

This viewpoint element ensures the page renders at the width of viewport, preventing mobile browsers from rendering pages wider than the viewport and then shrinking them down

2.7.6 <title></title>

the <title> element. This sets the title of your page, which is the title that appears in the browser tab the page is loaded in. It is also used to describe the page when you bookmark/favourite it

2.7.7 <body></body>

the <body> element. This contains all the content that you want to show to web users when they visit your page, whether that's text, images, videos, games, playable audio tracks, etc.

2.8 Images

<img src="images/firefox-icon.png" alt="My test image">

As we said before, it embeds an image into our page in the position it appears. It does this via the src (source) attribute, which contains the path to our image file.

We have also included an alt (alternative) attribute. In the alt attribute, you specify descriptive text for users who cannot see the image, possibly because of the following reasons:

1. They are visually impaired. Users with significant visual impairments often use tools called screen readers to read out the alt text to them.
2. Something has gone wrong causing the image not to display. For example, try deliberately changing the path inside your src attribute to make it incorrect. If you save and reload the page, you should see something like this in place of the image:



The keywords for alt text are "descriptive text". The alt text you write should provide the reader with enough information to have a good idea of what the image conveys. In this example, our current text of "My test image" is no good at all. A much better alternative for our Firefox logo would be "The Firefox logo: a flaming fox surrounding the Earth."

* 1. Marking up text

* + 1. Headings

Heading elements allow you to specify that certain parts of your content are headings — or subheadings. In the same way that a book has the main title, chapter titles, and subtitles, an HTML document can too. HTML contains 6 heading levels, <h1> - <h6>, although you'll commonly only use 3 to 4 at most:

<!-- 4 heading levels: -->

<h1>My title</h1>

<h2>My heading</h2>

<h3>My subheading</h3>

<h4>My text</h4>

* + 1. Paragraphs

As explained above, <p> elements are used for writing paragraphs of text.

<p>This is a single paragraph</p>

Add sample text (you should have it from What will your website look like?) into one or a few paragraphs, placed directly below your <img> element.

* + 1. Lists

The most common list types are ordered and unordered lists.

2.9.3.1 Unordered lists

These are the lists which are not ordered and all the list items are marked with bullets. Therefore, unordered HTML lists are also known as bulleted lists. These are wrapped in a <ul> element.

2.9.3.2 Ordered lists

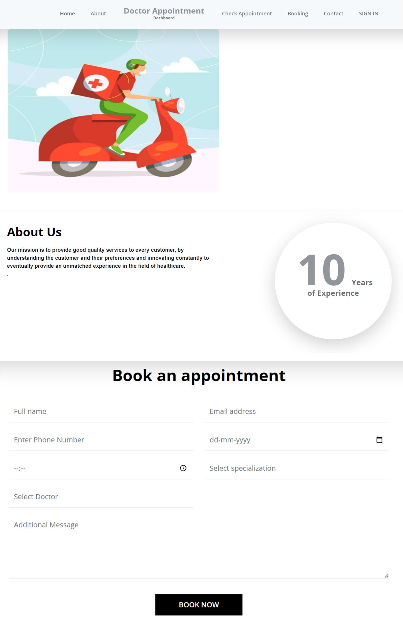
These are the lists which are ordered. The list items are marked with numbers. These are wrapped in an <ol> element.

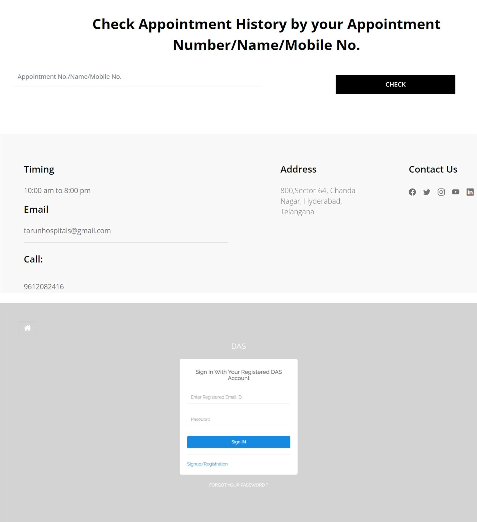
2.10 Links

Links are very important — they make the web truly a web! To add a link, a simple element needs to be used — <a> — "a" being the short form for "anchor". To make text within your paragraph into a link, follow these steps:

1. Choose some text. We chose the text "Google".
2. Wrap the text in an <a> element. Ex: <a>Google</a>
3. Give the <a> element an href attribute. Ex: <a href=""> Google</a>
4. Fill in the value of this attribute with the web address that you want the link to:
5. <a href=" https://en.wikipedia.org/wiki/Google "> Google </a>

We might get unexpected results if the https:// or http:// part is omitted, known as the protocol, at the beginning of the web address. After making a link, click it to make sure it is sending you where you wanted it to.





Conclusion:

The Doctor Appointment Dashboard System offers a comprehensive solution to optimize and streamline the appointment scheduling process in healthcare facilities. By automating the process, the system improves efficiency, reduces waiting time, and enhances patient satisfaction. The implementation of this system provides doctors and administrators with real- me visibility into appointments, enabling be er resource utilization and minimizing scheduling conflicts. Additionally, the system promotes effective communication between doctors, patients, and staff members, leading to a more patient-centric approach to healthcare. Overall, the Doctor Appointment Dashboard System significantly enhances the appointment scheduling experience and contributes to improving the overall efficiency of healthcare facilities.