

Body & Organs of the Web Development

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Abstract— Web development is all about building websites and maintaining them, it's the work that happen behind the screen to make a website look elegant quick work performance and gives well experience to the client. It is the worldwide famous field and gives immense opportunities to the people to get their hands in this beautiful field of developing innovative sites. The field of web development is divided in two parts front-end (client side) and back-end (server side). This report will present the information about how to make the website, what best tools do we need to have to make it beautiful and impressive to attract the clients. So, let's get deep into this paper and enhance the knowledge about web development.

Keywords: Body, Organs, Web Development

I. INTRODUCTION

Web development is the era of the world. Without the web development, the world has nothing to do with. Tim Berners Lee devised this protocol for the internet to allow the world to exchange documents which describe their work. This new proposed system allows a user to access the material anywhere and retrieve the content from the site. The system used hypertext with embedded links which connects to the other text document file.

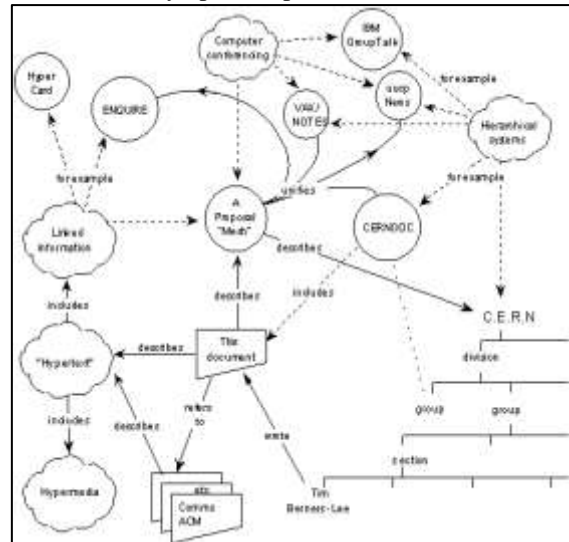
In 1989, Tim Berners-Lee a British scientist invented the World Wide Web (WWW) when he was working at CERN, it is not the laboratory rather it's a community that includes more than 17,000 plus scientists from different countries. In spite of the fact that they normally invest some energy on the CERN site, the researchers ordinarily work at colleges and public labs in their nations of origin. The fundamental idea behind WWW was to evolve technologies of computers, networks and hypertext into a convenient and powerful global information hub.

Then in 1990, Tim Berners Lee wrote this second proposal in the month of May, together with Belgian systems engineer named Robert Cailliau who formalized a management proposal in November 1990. The document a "hypertext project" called "WorldWideWeb" in the term "web" of the hypertext documents could be viewed by "browsers"

By the end of 1990, Tim Berners Lee had his first Web Server and browser running at CERN exhibiting his thoughts. He wrote the code for his web server on a NeXT computer which incidentally turned off, the computer had a hand written label in red colored ink: "This machine is a server. DO NOT POWER IT DOWN!!" info.cern.ch was the address of the world's first website and web server which was running on the NeXT computer at CERN.

The first web page address was as given <http://info.cern.ch/hypertext/WWW/TheProject.html>. This page contained connections to data about the WWW project itself, including a depiction of hypertext, specialized

subtleties for making a Web server, and connections to other Web servers as they opened up.



This is the first proposal for the World Wide Web written by Tim Berners Lee in the march 1989 at CERN.

This was the introduction about the father of web development how he gave us this era of the web development and the web servers. Next, we will focus on some important aspects about this interesting topic which will amaze us with its journey.

- How from one web server to reach many globally installed web servers?
- What is the process to get to see the website on the screen?
- Which is the body of the web development?
- What are the organs in the body?
- What are the benefits of the web development?

Let's dig to each topic now.

II. HOW FROM ONE WEB SERVER TO REACH MANY GLOBALLY INSTALLED WEB SERVERS?

We have to thanks the efforts of Paul Kunz and Louise Addis, who came out with the first web server online in the US in December 1991 at the Stanford Linear Accelerator Center (SLAC) in California. At this level, there were only two kinds of browser were available. One was the originally developed version, which was difficult to use and only available on NeXT machines. The other one was the 'line-mode' browser, which was way more- easy to install and run on any platform but it was limited and user-friendly.

In early 1993, the National Center for Supercomputing Applications (NCSA) at the University of Illinois released the first version of browser named Mosaic. It was first run on the Window X system environment. Afterwards NCSA released versions for Macintosh environments. Later, on April 30, 1993 CERN made WWW as royalty-free basis, making it as free software and which

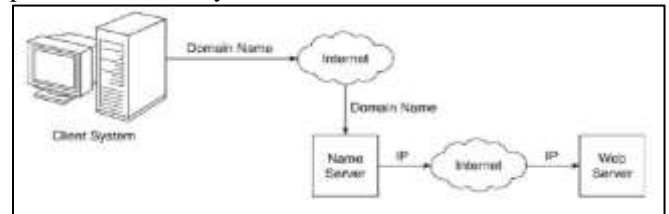
results in the internet traffic which was 1% which seemed to be a lot at that point of time. Then The First International World Wide Web Conference was held at CERN in may which was initiated by Robert Cailliau, and it was attended by 380 users and developers and that was hailed as the “Woodstock of the Web”.

In 1994, the media popped out with the news about the Web and spread it in the entire world. Then the second conference was held by NCSA at US in the month of October known as International WWW conference committee (IW3C2). By the end of 1994, 10000 servers were ready, 2000 for the commercial use and 10 million started working on these web servers. That’s how it started reaching to every corner of the world. Security and tools were started adding as the progress in the web servers were growing. The webserver is the gift to this era which made our work as quickly as possible. Web server plays an essential role in hosting the website and displaying it to the site visitors. Without the web server hosting a site is way to impossible task. There are numerous types of web servers available on all kinds of operating systems. Some examples of web server are Apache web servers, Microsoft Internet Information Services (IIS) and Nginx says as engine X, Novell’s NetWare server, Google Web Server (GWS) and IBM’s family of Domino servers. Hosting a site does not depend on the web server, there are ways to optimize the speed.

III. WHAT IS THE PROCESS TO GET TO SEE THE WEBSITE ON THE SCREEN?

There is a client suppose it is you and you are using web browser. Web browser is nothing but it allows us to browse the resources which are available on the server. Examples of web browser are Internet Explorer, Mozilla Firefox, Netscape Navigator, Google Chrome, Opera etc. Suppose you are in Windows Operating System and working on Google Chrome and you send the request to show the facebook hostname www.facebook.com. now this site is stored in the web server with the IP address. IP acronym for Internet Protocol which is unique 32-bit number. It is written as four 8-bit numbers, separated by periods. These four parts of the IP address used by internet routing which will handle where the message has to go next, where to get for the next destination. The IP address of the www.facebook.com is 69.63. 181.15. Likewise, all the sites are stored in the web server with the unique IP address which stores the files in the backend which can be in PHP, Python or Node.js etc. Now, the web server response to the client request address in the HTML, CSS or JavaScript. This way we can see the requested site on the screen of our monitor. To perform the process we mainly required the internet. Internet is a network of networks and all the devices connected to the internet has unique identification. The Internet Protocols address is connected to the internet in unique 32-bits. That’s why we can access any site via Internet only. To access any site with it’s IP address is not possible. For this, text-based system was introduced, technically known as domain name system (DNS). These domains are followed by the hostname. For-example Facebook has purchased all the domain extensions so that no other person can make the website same as Facebook using the other domain extensions. So they have used all the 5

domains .com, .net, .org, .co, .us. This domain name system is converted to IP with the help of name server. As the client entered the hostname.domainName it will be send to the internet to contact name servers and then the name server has the responsibility to convert the domain name into the IP address. After getting the IP address server returns the response of the client. To understand it better I will attach the picture how client will send domain name and the process taken to convert it into IP address and the vice-versa. It will provide more clarity.



IV. WHICH IS THE BODY OF THE WEB DEVELOPMENT?

The answer for this is HTML acronym Hyper Text Markup Language. To design any website, HTML is the body. Without it, no website can run. All other styling technologies run over this HTML. Web browsers receive HTML documents from web server which describes the structure of a web page and the appearance of the document. The hypertext in HTML is utilize to reference other bits of text and markup language is used to tell web servers about the style and structure of a document.

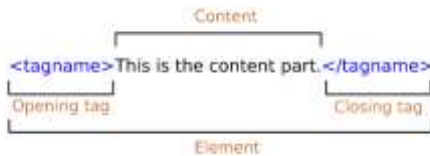
HTML is not a programming language as it cannot create dynamic functionality. HTML is only used to create structure sections, paragraph, links using elements, tags and attributes.

Some common uses of HTML:

- Web development: HTML is used by developers to design the web page elements and show it in the browser.
- Internet navigation: Users without much efforts can easily navigate and insert links in pages and websites using HTML as it is heavily used to embed hyperlinks.
- Web documentation: HTML made it possible same as Microsoft Word to organize and format documents.

V. HOW DOES HTML WORKS?

HTML document files are stored with .html or .htm extension. In HTML pages, there are series of elements, consisting a set of tags and attributes. HTML elements are the building blocks, tag tells where an element starts and ends and the attribute describes the features of an element. There are three major parts of an element. Opening tag, Content and Closing tag where opening tag used to tell where the element starts. The tag is enclosed with opening and closing angle brackets. For example: to create paragraph we will use start tag <p>. Content is the words that client see on his/her monitor. Closing tag is similar to opening tag but it has a forward slash which symbolizes the end of the tag. In opening tag we have used paragraph tag <p> which is starting one, now the closing tag with forward slash </p> it shows the tag has ended.



In every HTML page there are basically three tags. <html>, <head> and <body>.

<html> tag is the root tag which shows it is HTML document. <head> contains the meta information such as charset and the title of the document. <body> is the tag where the content of the body is stored.

HTML is the friendly language with immense support and build static webpages.

VI. WHAT ARE THE ORGANS IN THE BODY?

We got to know which the body of web development is, now let's explore the organs of the body. With the HTML page, the organs which work together the best are CSS, JavaScript and PHP. To make the website we need these basic tools to build a beautiful and functional website. Let's see each of these tools in details. We have already discussed about the HTML, now it's turn for CSS. CSS is the acronym of "Cascading Styling Sheets". It is used to enhance the grace of the website with its styling property. It basically gives the feel to the website. It gives a different look to the website. Next comes the JavaScript, JavaScript is a dynamic programming language used in webpages. It is lightweight and interpreted programming language. It provides functionality to the HTML page. In HTML the tag <script> is used to define a JavaScript which is client-side script. The tag contains script statements or used to point to external script file using 'src' attribute. With using JavaScript in HTML we can do image manipulation, form validation and dynamic changes in the content. For selecting HTML element in JavaScript we often use the 'document.getElementById()' method. HTML, CSS and just discussed JavaScript these all are used in frontend. Now for the backend (server side) we use PHP, let's know it in brief. PHP is Hypertext Preprocessor used in server-side scripting language which is embedded in HTML. It is used to build dynamic content, maintain databases, session tracking and even participates in entire e-commerce sites. PHP is in collaboration with number of popular databases such as MySQL, PostgreSQL, Oracle, Sybase, Informix and Microsoft SQL Server. With PHP you can create, open, read, write and close performing system functions. It can gather data from files which can save data and send data with also return data to the user through email. With this you can perform the database functions also through PHP. PHP is simple, efficient, flexible as well as secure language. So, this is about PHP which we can use for backend.

Likewise, there are many more programming languages which we can use for frontend as well as backend. But with HTML the combination of CSS, JavaScript and PHP are just feeling of love for web development.

I have constructed my college project of web development with the help of HTML, CSS, JavaScript and PHP with database xampp. I have made Coronavirus Vaccination project in which one can get to know the all the information related to the virus and can register oneself for the vaccination which is time saving and secure way.

I will like to share my project homepage in my research page. Here goes the pictures of my Homepage.



This is my project using body and the organs of the web development.

VII. WHAT ARE THE BENEFITS OF THE WEB DEVELOPMENT?

We have seen so far the body and organs of the web development, now let's see what the benefits of the web development are.

With the development in the web, it is easy to navigate and access the information provided on the website easily. It also helpful in the business where one can provide the visual content on the website where one can show their abstract products and services. This will attract the clients toward the companies and also helpful in the increase of sales. For lifetime one can have loyal customers if the company provides good quality of products and services, Entrepreneurs are also getting the full advantages by making their own

blogs. Marketing and advertising the products through online platform and giving discounts to the people is the way to get success in the business and developed the connections with people over the world. Overseas connection can be easily build via web development saving a lot of money. It has made people aware of the services and products offered by the companies are relevant and one can easily check the costs of the similar products on the other website which provides same credentials.

To sum up, it's clear that web development plays an important role in the world with full of competition. Without it, it would be difficult to reach on the global level. Life is easier with the navigation on the website. One click will provide you with the tremendous knowledge related the topic one has searched for.

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