An Industrial Training Report

Submitted by

Name- (Arjun Kumar) Roll No- (202203014)

IN

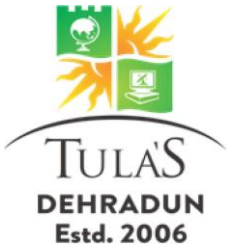
(Udemy Inc.)

Java Script

In Partial Fulfillment Of The Requirement

For The Degree Of

Bachelor Of Technology



DEPARTMENT OF ELECTRONICS & COMM.

ENGINEERING

TULA'S INSTITUTE, DEHRADUN

(Affiliated to VMSB Uttarakhand Technical University, Dehradun)

(Duration of Training: December – February)

udemy

Certificate no: UC-3f1d207c-42de-4052-b639-5d52951a8699
Certificate url: ude.my/UC-3f1d207c-42de-4052-b639-5d52951a8699
Reference Number: 0004

CERTIFICATE OF COMPLETION

The Complete JavaScript Course 2024: From Zero to Expert!

Instructors **Jonas Schmedtmann**

Arjun Kumar

Date **April 22, 2024**

Length **68.5 total hours**

ACKNOWLEDGEMENT

I would like to express my sincere gratitude and appreciation to all those who have contributed to the successful completion of my web development training and the preparation of this report.

First and foremost, i would really like to appreciate the invaluable guidance, expertise, and support throughout the training program. The terms of knowledge, patience, and dedication have been instrumental in helping me develop a strong foundation in web development principles and techniques.

I am also grateful to my fellow friends for their camaraderie, and the way they shared learning experiences, their insights and feedback have enriched my understanding of web development and inspired me to continually strive for improvement.

I also wish to express my sincere thanks to the Tula's Institute for accepting me into the graduate program. A special thanks for our internship coordinator HIMANI RAWAT Department of Electronics & Comm. Engineering.

Thanks for all your encouragement

Mohammad Farhan Tahir.

ABSTRACT

The aim of this Bachelor's thesis was to develop a WordPress mobile-first style website for the customer, Pohjois-Suomen Pesis. The main purpose of the development was to learn website designing principles and create a responsive website for the mobile and desktop platforms. The development process began defining the requirements of the website and creating the requirements document. Then next step was learning how to design a website layout and to choose the colour scheme for the site. The website was constructed by WordPress and Bootstrap. The result of the website was as desired. The website scaled all the different platforms, and all the required requirements were fulfilled.

CONTENTS

List of Figures

CHAPTER 1

Introduction

1.1 WEB DEVELOPMENT

Web development is the work involved in developing a website for the Internet Oran intranet. Web development can range from developing a simple single static page of plain text to complex web – based internet applications, electronic businesses, and social network services

CHAPTER 2

WEB

2.1 HTTP

HTTP stands for Hyper Text Transfer Protocol WWW is about communication between web clients and servers Communication between client computers and web servers is done by sending HTTP Requests and receiving HTTP Responses

2.1.1 HTTP Request / Response

Communication between clients and servers is done by requests and responses:

a. A client (a browser) sends an HTTP request t the web

b. An web server receives the request

c. the server runs an application to process the request

d. The server returns an HTTP response (output) to the browser

e. The client (the browser) receives the response

2.1.2 The HTTP Request Circle

A typical HTTP request / response cirlcle:

a. The browser requests an HTML page. The server returns an HTML file.

b. The browser requests a style sheet. The server returns a CSS file.

c. The browser requests an JPG image . The server returns a JPG file.

d. The browser requests JavaScript code. The server returns a JS file

e. The browser requests data. The server returns data (in XML or JSON).

2.2 HTML

HTML stands for Hyper Text Markup Language HTML is the standard markup language for web pages HTML elements are the building blocks of HTML pages

HTML elements are represented by tags BASIC TERMS:

*Project structure:

<!Doctype>

<html>

<body>

.....

.....

.....

.....

</body>

</html>

2.2.1 HTML Elements

An HTML element is a start tag with content in between:

```
<h1>This is a Heading</h1>
```

Start tag	Element content	End tag
<h1>	This is a Heading	</h1>
	This is paragraph.	

Figure 2.1 : Heading tag

2.2.2 HTML Documents

The HTML document itself begins with html tag and ends with html tag followed by '/' forward slash . Th visible part of the HTML document is between body tag.

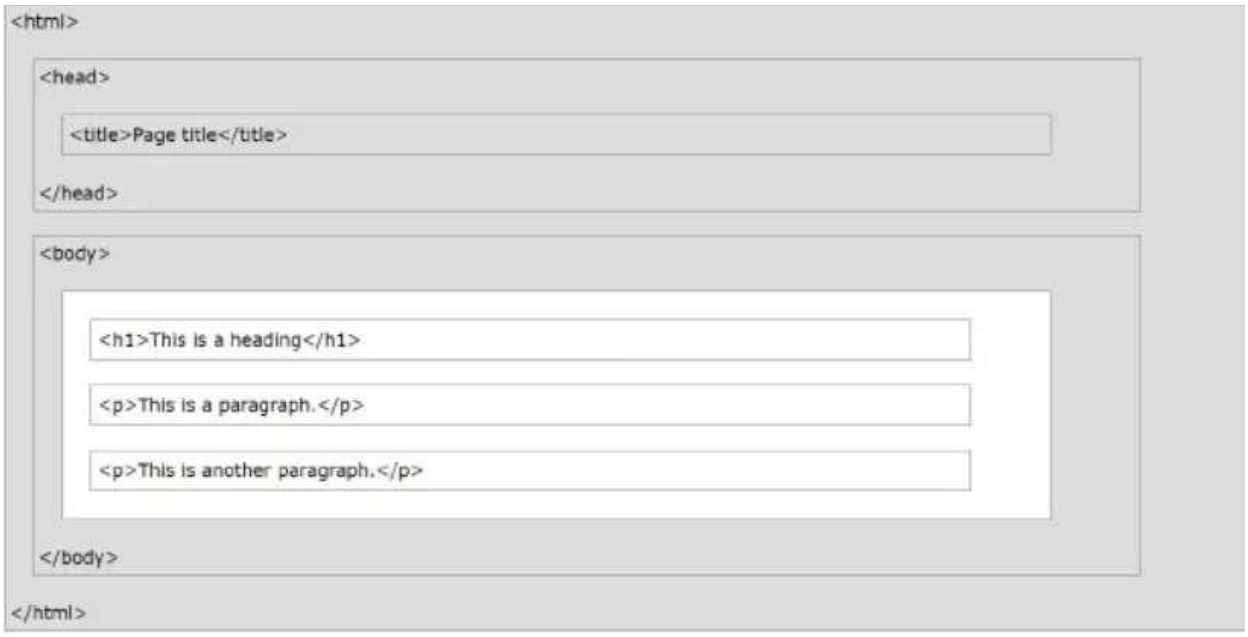


Figure 2.2 : Document Structure

- **<HTML> tag:**

The HTML <title> tag is used for declaring the title, or name, of the HTML document. The title is usually displayed in the browser's title bar (at the top). It is also displayed in browser bookmarks and search results. The title tag is placed between the opening and closing <head> tags. The <link> element is used to define a relationship between an HTML document and an external resource . This element is most commonly used to define the relationship between a document and one or more external CSS stylesheets.

- **HTML Headings**

HTML headings are defined with h1 to h6 tags.

<h1> This is heading 1</h1>

<h2> This is heading 2</h2>

<h3> This is heading 3</h3>

- **HTML Paragraphs**

HTML paragraphs are defined with p tags:

 This is a paragraph.

 This is another paragraph.

- **HTML Links**

HTML links are defined with a tags:

This is a link

- **HTML Images**

HTML images are defined with img tags.

The source file (src) , alternative text (alt), width, and height are provided as attributes:

<img src= "img_w3schools.jpg" alt="W3Schools" style="width:120px;height : 150px"

- **HTML Buttons**

HTML buttons are defined with button tags:

<button> Click me</button>

- **HTML Lists**

HTML lists are defined with ul tah (uordered/bullet list) or ol tag (ordered/num-bered list) tags, followed by li tags (list items):

Cofee

Tea

Milk

```
</ul>
```

- **HTML Tables**

An HTML table is defined with a table tag. Table rows are defined with tr tags. Table headers are defined with th tags. (bold and centered by default). Table cells (data) are defined with td tags.

```
<table>
  <tr>
    <th>Firstname</th>
    <th>Lastname</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>Jill</td>
    <td>smith</td>
    <td>50</td>
  </tr>
  <tr>
    <td>Eve</td>
    <td>Jackson</td>
  </tr>
</table>
```

- **<Body> tag:**

Description. The HTML ! Body ! Tag defines the main content of the HTML document or the section of the HTML document that will be directly visible on your web page. This is also commonly referred to as the <body> element.

- **<header>:**

He <header> element is intended to usually contain the section's heading (an <h1>- <h6> element or an <hgroup> element), but this is not required. The <header> element can also be used to wrap a section's table of contents, a search form , or any relevant logos.

- ** tag:**

The tag defines a division or a section in an HTML document. The element is often used as a container for other HTML elements to style them with CSS or to perform certain tasks with JavaScript. The div tag is known as division tag. The Div tag is used in HTML to make divisions of content in the web page like (text, images, header, footer, navigation bar etc.). Div tag has both open (<) and closing (>) tag and it is mandatory to close the tag. Div is the most usable tag in web development because it helps us to separate out data in the web page and we can create a particular section for particular data or function in the web pages.

Div tag is Block ;evel tag

It is a generic container tag

It is used to the group of various tags of HTML so that sections can b created and style can be Applied on them.

Left center right.

- **
 tag:**

The HTML anchor tag defines a hyperlink that links one page to another page. The "href" attribute is the most important attribute of the HTML a tag. An unvisited link is displayed

underlined and blue. A visited link displayed underlined and purple. An active link is underlined and red.

- **<footer> tages;**

HTML5 <footer> Element . The <footer> element specifies a footer for a document or section. A <footer> element should contain information about its containing information, links to terms of use, contact information, etc.

- **<form> tag:**

The <form> tag is used in conjunction with form- associated elements. To create a form, you can nest form- associated elements inside the opening/closing <form> tags. You can also use the form attribute within those elements to reference the ID of the form to use.

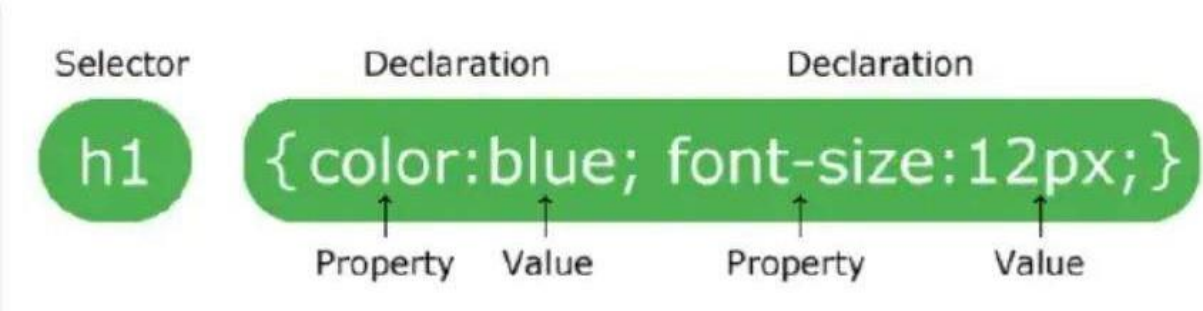
2.3 CSS

CSS stands for Cascading Style Sheets.

Cascading Style Sheets language used for describing the presentation of a document written in amarkup language like HTML CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

2.3.1 CSS Syntax

A CSS rule consists of a selector and a declaration block:



The selector points to the HTML element to style (h1). The declaration block (in curly braces) contains one or more declarations separated by semicolons. Each declaration includes a CSS property name and a value, separated by a colon. In the following example all n tad elements will he 32nx wide center-alioned and with red.

Example:

```
<style>
p {
    font-size: 32px;
    color: red;
    text-align: center;
 }
</style>
```

2.3.2 External Style Sheet

The external style sheet is generally used when you want to make changes on mul- tiple pages. It is ideal for this condition because it facilitates you to change the look of the entire web site by changing just one file. It uses the link tag on every pages and the link tag should be put inside the head section.

Example:

```
body {background-color: orange; font-family:verdana}
h1 {color: white;}
p {font-size: 20px;}
```

Figure 2.3: .css file

The external style sheet may be written in any text editor but must be saved with a .css extension. This file should not contain HTML elements.

```
<!DOCTYPE html>
<html>
<link rel="stylesheet" href="mystyle.css">
<body>
<h1>My First CSS Example</h1>
<p>This is a paragraph.</p>
</body>
</html>
```

Figure 2.4: .css file linked with.html file

2.3.3 Inline Style

We can apply CSS in a single element by inline CSS technique. The inline CSS is also a method to insert style sheets in HTML document. This method mitigates some advantages of style sheets so it is advised to use this method sparingly.

If you want to use inline CSS, you should use the style attribute to the relevant tag.

```
<htmltag style="cssproperty1:value; cssproperty2:value;"> </htmltag>
```

Figure 2.5: Inline Syntax.css file

Example:

```
<!DOCTYPE html>
 <html>
 <link rel="stylesheet" href="mystyle.css">
<body>
<h1>My First CSS Example</h1>
<p>This  is a paragraph.</p>
<p style="font-size: 25px">This is a paragraph.</p>
<p style="font-size:30px">This  is a paragraph.</p>
</body>
</html>
```

Figure 2.6: Inline Style Sheet

2.4 Google fonts

Google Fonts is a Google API.

We can use Googgle API

We can use Google Fonts in our Website design.

```
<!DOCTYPE html>
<html>
<head>
<link href='https://fonts.googleapis.com/css?family=Sofia' rel='stylesheet'>
<style>
body {
    font-family: 'Sofia';font-size: 22px;
}
</style>
</head>
<body>

<h1>Sofia</h1>
<p>Imagination is more important than knowledge.</p>
<p>123456790</p>
<p>ABCDEFGHIJKLMNOPQRSTUVWXYZ</p>
<p>abcdefghijklmnopqrstuvwxyz</p>

</body>
</html>
```

Figure 2.7: Google font using in.html file

When we use google fonts in designing webpage it will be viewed as:

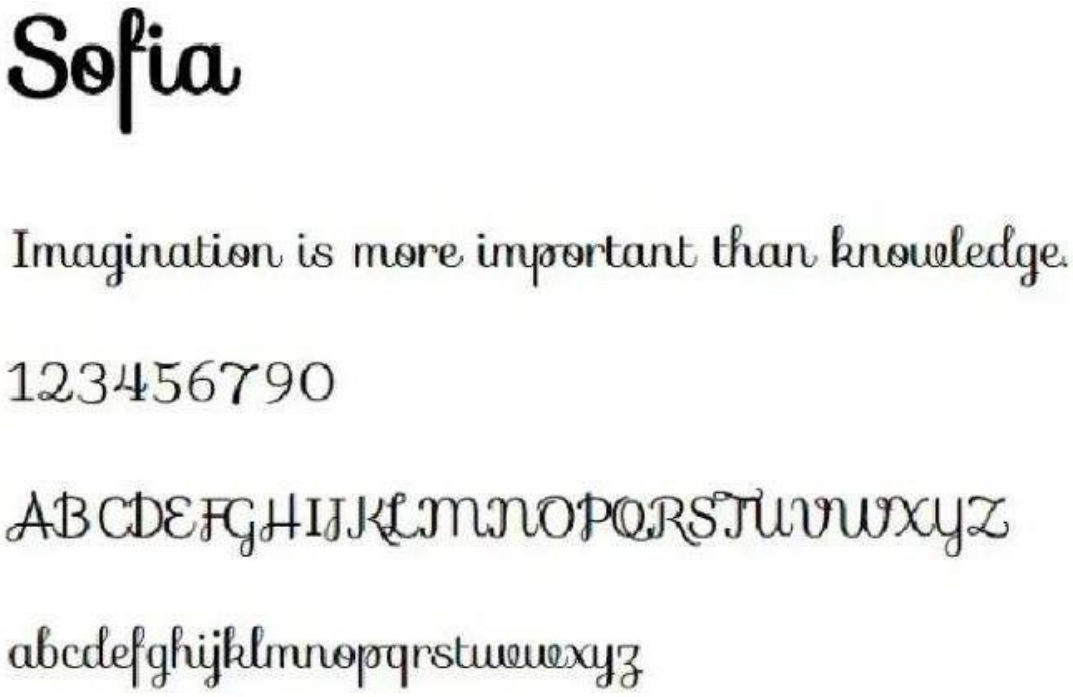


Figure 2.8: Google font viewpage

Chapter 3

Software Requirements Specification

3.1 Software

3.1.1 Browser

Firefox has always been known for its flexibility and support for extensions, but in recent years it had started to lag behind the competition in terms of speed. Firefox Quantum, first released last year, represented a total overhaul of the browser's code base, with speeds now comparable with Google Chrome. That's not just on top-end computers, either - the new Firefox makes frugal use of RAM, even with masses of

tabs open.

- **Mozilla Firefox**

Mozilla Firefox is a free and open-source web browser developed by The Mozilla Foundation and its subsidiary, Mozilla Corporation. Firefox is avail- able for Windows, macOS, Linux, BSD, illumos and Solaris operating systems. Its sibling, Firefox for Android, is also available.

- **Google Chrome**

Google Chrome is a cross-platform web browser developed by Google. It was first released in 2008 for Microsoft Windows, and was later ported to Linux, macOS, iOS, and Android. The browser is also the main component of Chrome OS, where it serves as the platform for web apps.

- **Microsoft Edge**

Microsoft Edge is a web browser developed by Microsoft. It was first re- leased for Windows 10 and Xbox One in 2015, then for Android and iOS in 2017. Edge includes integration with Cortana and has extensions hosted on the Microsoft Store.

- **Opera**

Opera is a web browser for Microsoft Windows, Android, macOS, and Linux operating systems. Opera Ltd. is publicly listed on the NASDAQ stock ex- change, with majority ownership and control belonging to Chinese Business- man Yahui Zhou, creator of Beijing Kunlun Tech which specialises in mobile games and cybersecurity specialist Qihoo 360. Opera is a Chromium-based browser using the Blink layout engine. It differentiates itself because of a dis- tinct user interface and other features.

- **Vivaldi**

Vivaldi is a freeware, cross-platform web browser developed by Vivaldi Tech- nologies, a company founded by Opera Software co-founder and former CEO Jon Stephenson von Tetzchner and Tatsuki Tomita. It was officially launched on April 6, 2016.

3.1.2 Text Editor

We admit there's a whiff of nostalgia about this entry, given that Notepad++ was one of the earliest text editors we used on Windows. But the app deserves its place on this list, because it can still compete with the best of them. For no money what- soever, you get a capable (if sometimes

workmanlike) editor with plenty of features, and you can also mess about with the interface to make it better suit your require- ments.

- **Notepad ++**

Image result for notepad++ informationnotepad-plus-plus.org Notepad++ is a text editor and source code editor for use with Microsoft Windows. It sup- ports tabbed editing, which allows working with multiple open files in a single window. The project's name comes from the C increment operator.

- **Atom**

Atom is a free and open-source text and source code editor for macOS, Linux, and Microsoft Windows with support for plug-ins written in Node.js, and embedded Git Control, developed by GitHub. Atom is a desktop applica- tion built using web technologies.

- **Brackets**

Brackets is a source code editor with a primary focus on web development. Created by Adobe Systems, it is free and open-source software licensed under the MIT License, and is currently maintained on GitHub by Adobe and other open-sourced developers. It is written in JavaScript, HTML and CSS.

- **Sublime Text**

Sublime Text is a proprietary cross-platform source code editor with a Python application programming interface. It natively supports many programming languages and markup languages, and functions can be added by users with plu- gins, typically community-built and maintained under free-software licenses.

Chapter 4

Project Planning

4.1 Flow of Project

4.1.1 HOME

This is a Environment friendly Organization which helps to save greenery on Earth. We are always happy to help and we provide help as most as we can. we save the trees and inspire others to tree plantation by different methods like social awareness by giving advertisement or personally and of course by our Website.

4.1.2 ABOUT

Our main mission is prevent our Eco System. An ecosystem is a community of living organisms in conjunction with the nonliving components of their environ- ment, interacting as a system. These biotic and abiotic components are linked to- gether through nutrient cycles and energy flows. Recycle the plastic or toxic waste from which trees and humans and animals can be hurts. Recycling is the process of converting waste materials into new materials and objects. It is an alternative to "conventional" waste disposal that can save material and help lower greenhouse gas emissions.

4.1.3 PROJECT

Our mission is Prevent water pollution refine it as much as we can and try to control global warming. Water treatment is any process that improves the quality of water to make it more acceptable for use. This method was refined in the following two decades, and it culminated in the first treated public water supply in the world, installed by the us.

4.1.4 EVENTS

- Starts Campaigning About GO GREEN
- Saving Trees

• Tree Planting and Enrichment

• Less Use of Private Vehicles and More Use of Public Transport Vehicles

• Recycle Everything You Can

• Look Into Your Community Choice Energy Options

4.1.5 BLOG

Even a samll change in the way you execute your program can make a posi- tive impact on the environment Ways To host a sustainable your program

(1) ASK UP FRONT.

Put your green goals in your RFP so vendors understand that it's an important part of the conversation. Advise them to provide specifics about their green initiatives and to come up with a program within your budget

(2) BOOK GREEN.

Select a venue that's already green-certified. This way you know that the site has green programs in place and can easily execute your sustainability plan.

(3) BOOK NEARBY.

Reduce travel by picking a location that's close to the majority of your guests. You can still be off-site without having to fly everyone in.

(4) WALK THE TOWN.

Pick a venue that's in a central location near hotels and restaurants. This will reduce the need for transportation and encourage guests to explore on foot.

(5) SOURCE LOCALLY.

The farm-fresh movement makes sustainable selections an easy choice. But it's not just about local food: Consider buying all of your meeting and event supplies on location.

(6) GO PAPER-LITE OR PAPERLESS.

Reduce or eliminate printed programs, packets and agendas, and anything else that can be communicated electronically. Smartphones and tablets make it easy to stay connected, and planners can enrich content with mobile apps, videos and interactive elements.

(7) RETHINK THE WATER.

Bottled water is often a staple at meetings and events. Cut down on the recy- clable kind and opt for a reusable bottle instead. Brand it with your color theme or logo to make it a desirable keepsake.

(8) REQUEST REUSABLE.

When possible, use reusable items for your event-linens, tableware and silver- ware. Or, at the very least, explore compostable options.

(9) COMMUNICATE CLEARLY.

Don't assume everyone understands the differences between recycle, compost and trash. When it comes to explaining your recycling plan, you can never be too clear.

(10) GIVE BACK.

If appropriate, add a community service event to your agenda. Organizations like Clean the World, which collects and recycles soap and shampoo products dis- carded by the hospitality industry and donates them to impoverished global com- munities, can accommodate large groups of volunteers for short-term projects.

Chapter 5

Implementation

The system is to make teachers and students carry out projects wherever and whenever they may work. It helps teachers and students begin developing an overall plan for managing their project. For Project-Based Learning to be ensured as stu- dent centered learning, the system must give students experience in planning for the project and in working in team or class, and have students create their assignments as form of HTML documents or reports. Normally the environmental education of elementary schools has to be authentic in that it is concerned with a real-world situ- ation or problem because of cognitive development process of students. Our model will be an alternative of environmental education in classroom. As a result, we ex- pect that students will recognize the importance of environmental protection and have motivation to practice environmental conservation. In this paper, the system is implemented on a Windows NT 4.0 Server and subsequent IIS 4.0. We use database management based on SQL Server 7.0 and the HTML and ASP language for man- aging information. My Project is a website for a Environment friendly organization.

My website: Hotel Taj

Chapter 6

Conclusion and Future Scope

6.1 Conclusion

This chapter summarizes the main success of this research work and discusses an about future research work to achieve the ultimate goal in the field of performance of web accessibility, web security, load balancing and collective intelligence. An in depth literature survey was carried out and the critical analysis of the same raised the following major shortcomings and challenges in the web-centric query optimization techniques.

1. Network is congested due to heterogeneous data (i.e., text, images, videos etc), heavy weight of web applications and repetition of queries. Due to these prob- lems the access time of web applications is very high, which reduces the overall performance of the web.

2. Web-centric queries are neither efficient nor secure.

3. Huge information is available on the servers but the load on servers is not still balanced. In industry the developers distribute the huge information of servers by introducing more servers which produce requirement of the collective intelligence. Further, to search the efficient and relevant server is also a big challenge. The diagnostic thought to above challenges guides towards the design of following efficient approach, model and frameworks:

• Portable Extended Cache Memory to Reduce Web Traffic (PECA)

In this approach, it is desired to conserve the heavy data at the client side. The experiments were performed on few dummy web sites of different sizes while saving 96 heavy data at client side. Difference in the access times of different web sites via traditional method and with the proposed approach was compared. A major improvement in the access time was observed in contrast to that by using traditional methods. Also, an attempt was made to reduce server load and network traffic congestion and it actually resulted into reduction of response time and hence an improved web performance could be observed.

• Secure Web Access Model for sensitive data (SWAM)

SWAM in the context of biometric recognition is being proposed. The proposed security model SWAM provide an interface to the authorized user's and reduce the threats regarding their sensitive areas. Online web services will be more secure using the online SWAM.

• Collective Intelligence based Framework for Load Balancing of Web Servers

Collective Intelligence based Framework for Load Balancing of Web Servers is being proposed. The aim of this work is to find the overall best server with shortest path and hence online balancing of web servers could be achieved with the help of collective intelligence based framework for online load balancing. The proposed concept is an extension of, rather than a replacement for, tradi- tional exploration process.

6.2 Future Scope

The work covered in the thesis tries to solve various issues, which emerged as a result of literature survey. Still there are many unopened questions left and are of interest were identified and are mentioned below: 97

• Web Security At Client Side

In this research work we proposed PECA, but it still has shortcomings. For example, when web document is required to be save in the portable extended memory it reduces the security due to decentralization of data. During updates at client side malicious codes may transfer to the client machine. So, a web security framework is required at the client side to make PECA more secure and better performer. So in near future, PECA and SWAM may be merged.

• Server Side Load Balancing

Load balancing is a concept which is still under research. Everyday new frame- works, algorithms and models are being developed and existing models are up- dated. There is a vast scope for future enhancement. For example, the users are sending arbitrary data as a query on the web, and hence web-centric queries can be optimized at server level to reduce server load to improve the server

performance. Further, implementation of our work is pending and hence an improvement may be recommended in the same.

• Ant Based Technology for Collective Intelligence At Server Side

The developers are distributing server's data to reduce the server's load. This mechanism is increasing the requirement of collective intelligence. In this research work, ant technology for collective intelligence is used, but this is framework is based on client's query. There are still many unopened questions. For example, what and how much data is available in near servers? Are these servers are reliable? What is the credibility of these servers? In particular the server must have all the relevant information of their relative servers

References

[1] World Wide Web Design with HTML; By: C. Xavier

[2] https://www.overleaf.com/project

[3] https://www.w3schools.com

[4] https://www.geeksforgeeks.org

[5] s://www.wikipedia.org/ http

[6] https://in.000webhost.com/