GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR

Department of Industrial and Production Engineering

Session (2020-2021)

A SEMINAR REPORT
ON
WEB DEVELOPMENT

Submitted To: -   Submitted by: -

Kailash Borkar Sir   Nikhil Diwan

ABSTRACT

The main purpose of the study is to understand the very basics of web designing and knowing the components of a web page. It deals with the basic study of HTML (Hyper Text markup Language), CSS (Cascade Style Sheets), SQL and PHP. In the latest trends Web Designing is the very rapidly developing field in present market and has attracted many new developers. The report covers DOM (Document Object Model) to use HTML and embedding CSS style sheets to it. It also covers the usage of SQL and PHP for event handling and making the website pages look more attractive. In the future, Web Designing will be playing a more vital role as Internet is being used for marketing, banking, examining, almost everything.

CONTENTS

    4. PHP
       a. Intro.
       b. History of PHP.
       c. Features.

Chapter 1

History and Development

1. What is World Wide Web?

1.1 WHAT IS WORLD WIDE WEB?

o The World Wide Web (also called WWW, or W3, or simply the Web) is an Internet-based global information system that makes available multimedia information form over millions of computers around the world.

o The Web is the second most popular Internet service next to e-mail, but it accesses a larger quantity and greater variety of data than any other service in the Internet.

o The WWW is a network of interactive documents and the software to access them.

o It provides more information than you could ever digest in a lifetime, linked together in various ways, available for you to browse whenever you want.

1.2 EVOLUTION OF WWW

o The concept of World Wide Web (WWW) was developed by Tim Berners and Lee in Switzerland at the European Particle Research Centre (CERN) in the year 1989.

o They gave three standards to make a web page possible.

o HTTP (Hypertext Transfer Protocol): It is the way for computers

to talk to one another over the Internet.

o HTML (Hypertext Markup Language): This describes how to format documents so they can be transferred over the Web. It gives the proper look to the document.

o URL (Uniform Resource Locater): By this we can give a unique address to the document on the Web.

o The main idea of web was to work with documents only. But now a days, WWW-World Wide Web is a group of computers containing documents, figures, pictures, videos, sounds in very large collection.

o Because of the ability of web to work with multimedia and modern programming languages, it is very fast developing part of Internet.

o In the month of December, 1991, a public demonstration was given in San Antonio, Texas (USA).

o In the year 1993, the first graphical interface software package called Mosaic was released.

o The Mosaic was discovered by Marc Andersen, working with National Centre of Supercomputer Applications (NCSA).

o In the year 1994, CERN and MIT (Massachusetts Institute of Technology) was collaborated and created an organization for developing web, standardizing protocols, and interoperability between sites called World Wide Web Consortium (W3C).

1.3 ABOUT W3C

o W3C stands for World Wide Web Consortium. It was created in December 1994.

o W3C is working to make the Web accessible to all users (despite differences in culture, education, ability, resources, and physical limitations).

o Since this organizations created, hundreds of universities

and companies have joined the consortium. Some of them are Microsoft, IBM, America Online, Apple, Adobe, Macromedia, Sun Microsystems.

o The WWW is maintained by W3C.

o This organization is a group of people related to Internet development and Web page designing. This also includes specialists form the leading companies.

o W3C is the closest anyone gets to settings the standards for and enforcing rules about World Wide Web.

o Web is only few years old, but it is growing at an astounding rate. Its popularity has increased dramatically.

o It is becoming more and more popular because it is so easy to use, colorful, and right in content.

o Basically it is the series of interconnected documents stored on the computer sites or the Web sites.

o You can visit stores to buy things, transfer movies, pictures, games and other software to your computer, much of it free. As you move through the Web you can read the data on almost every imaginable topic.

o On the whole, World Wide Web is becoming a pipeline telephone, communication, entertainment, and news-the challenging existing technologies.

Chapter 2

INTRODUCTION

2.1 What is Web Designing

Web design is a broad term covering many different skills and disciplines that are used in the production and maintenance of websites. The different areas of web design include; web graphic design, interface design, authoring; including standardised code and proprietary software, user experience design and search engine optimization. Often many individuals will work in teams covering different aspects of the design process, although some designers will cover them all. The term web design is normally used to describe the design process relating to the front-end (client side) design of a website including writing mark up, but this is a grey area as this is also covered by web development. Web designers are expected to have an awareness of usability and if their role involves creating mark up then they are also expected to be up to date with web accessibility guidelines.
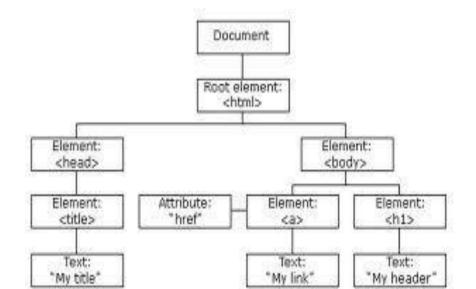
2.2 Basic Principles

- Visitor-centric, clear purpose
- Progressive disclosure
- Displays quickly
- Browser compatible
- Intuitive navigation

- Spelling, grammar, writing
- Secure (eCommerce)
- Attractive design, easy to read
- Cultural bias? (Regional? Domestic? International?)
- No technical problems (broken links, buggy scripts)
- Maintainable (separate content from style)
- Search Engine Accessible

2.3   Document Object Model

The Document Object Model (DOM) is a cross-platform and language-independent convention for representing and interacting with objects in HTML, XHTML and XML documents. Objects in the DOM tree may be addressed and manipulated by using methods on the objects. The public interface of a DOM is specified in its application programming interface (API). The history of the Document Object Model is intertwined with the history of the "browser wars" of the late 1990s between Netscape Navigator and Microsoft Internet Explorer, as well as with that of

JavaScript, the first scripting languages to be widely implemented in the layout engines of web browsers. The DOM model can be seen below for an HTML document.
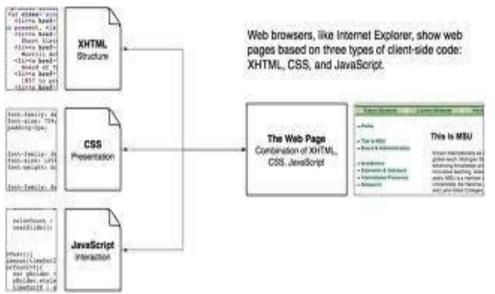
CHAPTER 3

CREATING WEB PAGES

For creating Web Pages one need to know about some tools and technologies to be used and they are:-

- Markup Languages
    - o HTML, DHTML, XML, etc....
- Cascading Style Sheets (CSS)
- Scripting languages
    - o javascript, php, etc....
- Web creation and editing software

- Notepad, FrontPage, WebPage Maker, Flash, Dreamweaver, Adobe Photoshop, etc..

As shown in the above figure the HTML, CSS, and java scripts form the basis of a web Page. So, here we try to understand briefly about these technologies.

HTML

HTML is a markup language which means it consists of markup tags which the browser understands. HTML is Hyper Text Markup Language and is derived from SGML which is Standard Generalized Markup Language. It is case Insensitive and it does not need any compiler. It is directly understood by the browser and it displays the requested information by the user. HTML documents are composed entirely of HTML elements that, in their

most general form have three components: a pair of tags, a "start tag" and "end tag"; some attributes within the start tag; and finally, any textual and graphical content between the start and end tags, perhaps including other nested elements. The HTML element is everything between and including the start and end tags. Each tag is enclosed in angle brackets.

Structure and syntax

The structure of HTML can be understood by the following code which is also the syntax for making HTML.

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"
  "http://www.w3.org/TR/html4/strict.dtd">

<html>
<head>
<title> The title of your html page </title>
</head>
<body>
<! - - your web page content and markup - ->
</body>
</html>
```

An HTML 4 document is composed of three parts:

1. A line containing HTML version information,
2. A declarative header section (delimited by the HEAD element),

3. A body, which contains the document's actual content.

HTML version information

A valid HTML document declares what version of HTML is used in the document. The document *type declaration* names the document type definition (DTD) in use for the document.

The document head

The HEAD element contains information about the current document, such as its title, keywords that may be useful to search engines, and other data that is not considered document content. User agents do not generally render elements that appear in the HEAD as content. They may, however, make information in the HEAD available to users through other mechanisms. Head element also contains information about the external style sheets and javascripts used in the document.

The document body

The body of a document contains the document's content. The content may be presented by a user agent in a variety of ways. For example, for visual browsers, you can think of the body as a canvas where the content appears: text, images, colors, graphics, etc. For audio user agents, the same content may be spoken. Since style sheets are now the preferred way to specify a document's presentation, the presentational attributes of BODY have been deprecated.

HTML Tags

HTML consists of Tags which define the type and property for the document text to be used. Some common HTML Tags are: -

<A> </A> Anchor element to set Hyperlinks.

<B> </B> Content is shown as bold type

<TITLE> </TITLE> Title of document.

<BODY> </BODY> The body part of the HTML document.

 Force line break within paragraph.

<CENTER> </CENTER> Content is centered on page (can include paragraphs etc.).

<DIV> </DIV> A dummy element which contains block-level elements. It is used with style sheets.

<EM> </EM> Emphasis: text usually displayed in italics

<FONT> </FONT> Used to define characteristics of font, according to attributes e.g. SIZE, COLOR, FACE. SIZE sets size, 1-7 e.g. SIZE="5". COLOR sets colour of text e.g. <FONT COLOR="#FF0000"> makes text red. FACE e.g. FACE="Times".

<HEAD> </HEAD> The head part of the HTML document.

<H1> </H1> <H2> </H2>...<H6> </H6> Headings (levels 1-6, i.e., H3 is a subheading within a H2 subheading).

<I> </I> Italics.

<IMG> Image. Attributes: must have SRC and ALT. SRC gives source file for image, e.g. SRC="picture.jpg". ALT gives brief description e.g. ALT="Picture of UB"

<LI> </LI> List item. Used within an ordered (<OL>) or unordered (<UL>) list <OL> </OL> Ordered list. Includes <LI> List Items, which will be numbered automatically

<P> </P> Paragraph

<SPAN> </SPAN> A dummy element which contains in-line content. It is used with style sheets.

<STRONG> </STRONG> Text is emphasised strongly - usually appears in bold.

\<SUB\> \</SUB\> Subscript

\<SUP\> \</SUP\> Superscript

\<TABLE\> \</TABLE\> Table.

\<TD\> \</TD\> Table data cell.

\<TH\> \</TH\> Table header cell.

CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation semantics (the look and formatting) of a document written in a markup language. Its most common application is to style web pages written in HTML and XHTML, but the language can also be applied to any kind of XML document, including plain XML.CSS is designed primarily to enable the separation of document content (written in HTML or a similar markup language) from document presentation, including elements such as the layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple pages to share formatting, and reduce complexity and repetition in the structural content (such as by allowing for table less web design). CSS can also allow the same markup page to be presented in different styles for different rendering methods, such as on-screen, in print, by voice (when read out by a speech-based browser or screen reader) and on Braille-based, tactile devices. It can also be used to allow the web page to display

differently depending on the screen size or device on which it is being viewed. While the author of a document typically links that document to a CSS style sheet, readers can use a different style sheet, perhaps one on their own computer, to override the one the author has specified.

Structure and syntax

CSS has a simple syntax and uses a number of English keywords to specify the names of various style properties. A style sheet consists of a list of *rules*. Each rule or rule-set consists of one or more *selectors*, and a declaration *block*. A declaration-block consists of a list of *declarations* in braces. Each declaration itself consists of a *property*, a colon (:), and a *value*. If there are multiple declarations in a block, a semi-colon (;) must be inserted to separate each declaration. Style sheet syntax is made up of three parts and can be shown as below:

```
selector
{property: value}
selector =
element.class
Example:
#label:hover
{ border-
color:blue;
}
```

Here Label is the selector which is a id named label having property of border color to be blue.

CSS Usage and Properties

In CSS, selectors are used to declare which part of the markup a style applies to, a kind of match expression. Selectors may apply to all elements of a specific type, to elements specified by attribute, or to elements depending on how they are placed relative to, or nested within, others in the document tree. Selector can be specified by:

- Id (#) :- Id is the uniquely defined named of the elements in the HTML. Example
  <div id="wrapper"></div>
- Class (.):- Class is the group of element that shares the same name and the properties can be set at once. Example <div class="main"></div>
- Html tags itself:- By writing the Html tag itself and specifying the properties and assigning their values against them. Exapmle H1 color:blue

CSS can be implemented with the HTML content in three ways:-

- Inline:- When the properties and its values are define in the HTML document itself.
- Internal:- When the Style properties are defined in the header using the style tags
- External:- These are separate files with .css extension which have the styling codes that can be linked in the HTML document. The linking path is defined in the header of the HTML document and the syntax for linking the CSS file is <link href="path/to/file.css" rel="stylesheet">

INTRODUCTION TO PHP

WHAT IS PHP?

PHP is an open source, interpreted and object-oriented language i.e. executed at server side. It is used to develop web application (an application i.e. executed at server side and generates dynamic page).

- ➢ PHP stands for HyperText Preprocessor.
- ➢ PHP is a server side scripting language.
- ➢ PHP is an interpreted language, i.e. there is no need for complication.
- ➢ PHP is an object-oriented language.
- ➢ PHP is an open-source scripting language.
- ➢ PHP is simple and easy to learn language.

HISTORY OF PHP:

PHP was created by Rasmus Lerdoff in 1994. It was initially developed for HTTP usage logging and server-side form generation.

PHP 2 (1995) transformed the language into a server-side embedded scripting language. Added database support, file uploads, variables, arrays, recursive functions, conditionals, iteration, regular experssions, etc.

PHP 3 (1998) added support for ODBC data sources, multiple platform support, email protocols (SNMP, IMAP), and new parser written by Zeev Suraski and Andi Gutman's.

PHP 4 (2000) become the important component of web server for added efficiency. The parser was renamed the Zend Engine. Many security feature were added.

PHP 5 (2004) adds Zend Engine 2 with object-oriented

programming, robust XML support using the libxml2 library. SOAP extension for interoperability with Web services, SQLite has been bundled with PHP.

Features of PHP:

There are many given features of PHP.
- ➤ **Performance:** Script written in PHP executes much faster then those scripts written in other languages such as JSP&ASP
- ➤ **Open-Source Software:** PHP source code is free available on the web, you can developed all the version of PHP according to your requirement without paying any cost.
- ➤ **Platform Independent:** PHP are available for WINDOWS, MAC, LINUX & UNIX operating system. A PHP application developed in one OS can be easily executed in other OS also.
- ➤ **Compatibility:** PHP is compatible with almost all local servers used today like Apache, IIS etc.
- ➤ **Embedded:** PHP code can be easily embedded within HTML tags and script.

A PHP code:

File: hello.php

<html>

<body>

<?php echo "<h2>hello by PHP</h2>";?>

</body>

</html>

SQL

SQL is a relational database management system which has more than 6 million installations. SQL stands for "My Structured Query Language". The program runs as a server providing multi-user access to a number of database.

USES:

SQL is used in web applications and acts as a database component of the LAMP software stack. Its popularity for use with web applications is closely tied to the popularity of PHP, which is often combined with SQL. Several high traffic websites (including Flickr, Facebook, Wikipedia, Google, Nokia and Youtube) use SQL for data storage and logging of user data.

FEATURES:

- ➢ A broad subset of ANSI SQL 99, as well as extension
- ➢ Cross-platform support.
- ➢ Stored procedures.
- ➢ Triggers.
- ➢ Cursors.
- ➢ Strict mode.
- ➢ Updatable views.

INTERNSHALA TRAININGS

Certificate of Training

Nikhil Diwan,

student of Guru Ghasidas University, has successfully completed a six weeks online training on **Web Development**. The training consisted of HTML & CSS, Bootstrap, SQL and PHP modules. Nikhil scored 100% marks in the final assessment and is a top performer in the training.
We wish Nikhil all the best for the future.

Sarvesh Agarwal
FOUNDER & CEO, INTERNSHALA

Date of certification: 2021-01-22   Certificate no. : BA81B46C-2E34-FFA6-9683-A26AD5074EF2

For certificate authentication, please visit https://trainings.internshala.com/verify_certificate