**Introduction to Web Browsing**

Web programming refers to the writing, markup and coding involved in Web development, which includes Web content, Web client and server scripting and network security. The most common languages used for Web programming are XML, HTML, JavaScript, Perl 5 and PHP. Web programming is different from just programming, which requires interdisciplinary knowledge on the application area, client and server scripting, and database technology.

Web programming can be briefly categorized into two

1) Client coding 2) Server coding.

**Client side**

The client side needs programming related to accessing data from users and providing information. It also needs to ensure there are enough plugins to enrich user experience in a graphic user interface, including security measures.

1. To improve user experience and related functionalities on the client side, JavaScript is usually used. It is an excellent client-side platform for designing and implementing Web applications.
2. HTML5 and CSS3 supports most of the client-side functionality provided by other application frameworks.

**Server coding**

The server side needs programming mostly related to data retrieval, security and performance.

Some of the tools used in Server Side

* ASP,
* Lotus Notes,
* PHP,
* Java and
* MySQL.

There are certain tools/platforms that aid in both client- and server-side programming. Some examples of these are Opa and Tersus.

**HTML /CSS /JS An Introduction**

**HTML**

HTML is the standard markup language for creating Web pages.

* HTML stands for Hyper Text Markup Language
* HTML describes the structure of Web pages using markup
* HTML elements are the building blocks of HTML pages
* HTML elements are represented by tags
* HTML tags label pieces of content such as "heading", "paragraph", "table", and so on
* Browsers do not display the HTML tags, but use them to render the content of the page

**Sample Code**

**<!DOCTYPE html>**

**<html>**

**<head>**

**<title>Page Title</title>**

**</head>**

**<body>**

**<h1>My First Heading</h1>**

**<p>My first paragraph.</p>**

**</body>**

**</html>**

**Explanation**

* The <!DOCTYPE html> declaration defines this document to be HTML5
* The <html> element is the root element of an HTML page
* The <head> element contains meta information about the document
* The <title> element specifies a title for the document
* The <body> element contains the visible page content
* The <h1> element defines a large heading
* The <p> element defines a paragraph

## 

## **CSS**

* CSS stands for **C**ascading **S**tyle **S**heets
* CSS describes how HTML elements are to be displayed on screen, paper, or in other media
* CSS saves a lot of work. It can control the layout of multiple web pages all at once
* External stylesheets are stored in CSS files

CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, layout designs,variations in display for different devices and screen sizes as well as a variety of other effects.

## **CSS Syntax**

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



The selector points to the HTML element you want to style.

The declaration block contains one or more declarations separated by semicolons.

Each declaration includes a CSS property name and a value, separated by a colon.

A CSS declaration always ends with a semicolon, and declaration blocks are surrounded by curly braces.

In the following example all <p> elements will be center-aligned, with a red text color:

### **Example**

p {

color: red;

text-align: center;

}

## 

## 

## **Three Ways to Insert CSS**

* External style sheet
* Internal style sheet
* Inline style

**Javascript**

Javascript is a dynamic computer programming language. It is lightweight and most commonly used as a part of web pages, whose implementations allow client-side script to interact with the user and make dynamic pages. It is an interpreted programming language with object-oriented capabilities.

JavaScript was first known as LiveScript, but Netscape changed its name to JavaScript, possibly because of the excitement being generated by Java. JavaScript made its first appearance in Netscape 2.0 in 1995 with the name LiveScript. The general-purpose core of the language has been embedded in Netscape, Internet Explorer, and other web browsers.

One of Most common JavaScript method

**getElementById()**.

This example uses the method to "find" an HTML element (with id="demo") and changes the element content (**innerHTML**) to "Hello JavaScript":

### **Example**

document.getElementById('demo').innerHTML = 'Hello JavaScript';

## 

## **The <script> Tag**

In HTML, JavaScript code must be inserted between <script> and </script> tags.

### **Example**

### <script>

document.getElementById("demo").innerHTML = "My First JavaScript";

</script>

**JavaScript Variables**

JavaScript variables are containers for storing data values.

In this example, x, y, and z, are variables:

**Example**

var x = 5;

var y = 6;

var z = x + y;

## **JavaScript Data Types**

JavaScript variables can hold many **data types**: numbers, strings, objects and more:

## **Primitive Data**

A primitive data value is a single simple data value with no additional properties and methods.

The **typeof** operator can return one of these primitive types:

* string
* number
* boolean
* Undefined

## **Complex Data**

The **typeof** operator can return one of two complex types:

* function
* object

The typeof operator returns object for both objects, arrays, and null.

The typeof operator does not return object for functions.

## **The typeof Operator**

You can use the JavaScript **typeof** operator to find the type of a JavaScript variable.

The **typeof** operator returns the type of a variable or an expression:

**Example**

typeof "John" // Returns "string"

**Null**

In JavaScript null is "nothing". It is supposed to be something that doesn't exist.

Unfortunately, in JavaScript, the data type of null is an object.

**References**

1. https://www.techopedia.com/definition/23898/web-programming
2. https://www.tutorialspoint.com/css/what\_is\_css.htm
3. https://www.w3schools.com/css/css\_intro.asp