Javascript

Advantages of JavaScript

The merits of using JavaScript are −

- **Less server interaction** − You can validate user input before sending the page off to the server. This saves server traffic, which means less load on your server.
- **Immediate feedback to the visitors** − They don't have to wait for a page reload to see if they have forgotten to enter something.
- **Increased interactivity** − You can create interfaces that react when the user hovers over them with a mouse or activates them via the keyboard.
- **Richer interfaces** − You can use JavaScript to include such items as drag-and-drop components and sliders to give a Rich Interface to your site visitors.

Javascript Syntax

- Javascript is case sensitive
- Semicolons are Optional
- Comments in JavaScript
  - Single Line Comments //
  - Multi Line Comments /*…….
    ……*/
- There is a flexibility given to include JavaScript code anywhere in an HTML document. However the most preferred ways to include JavaScript in an HTML file are as follows −
  - Script in <head>...</head> section.
  - Script in <body>...</body> section.
  - Script in <body>...</body> and <head>...</head> sections.
  - Script in an external file and then include in <head>...</head> section.

```
<!DOCTYPE html>
<html>
<body>

<h1 id="myH"></h1>
<p id="myP"></p>

<script>
/*
The code below will change
the heading with id = "myH"
and the paragraph with id = "myP"
*/
document.getElementById("myH").innerHTML = "JavaScript Comments";
document.getElementById("myP").innerHTML = "My first paragraph.";
</script>

</body>
</html>
```

Javascript Variables

- Variables are containers for storing data (values).
- There are 3 ways to declare a JavaScript variable:
    - Using var
    - Using let
    - Using const

```
<html>
<body>

<h2>JavaScript</h2>

<p>When adding a number and a string, JavaScript will treat the
    number as a string.</p>

<p id="demo"></p>

<script>
let x = 16 + "Volvo";
document.getElementById("demo").innerHTML = x;
</script>

</body>
</html>
```

- Remember that JavaScript identifiers (names) must begin with:
  - A letter (A-Z or a-z)
  - A dollar sign ($)
  - Or an underscore (_)

```
<!DOCTYPE html>
<html>
<body>
<h2>JavaScript $</h2>
<p>The dollar sign is treated as a letter in JavaScript names.</p>
<p id="demo"></p>
<script>
var $ = 2;
var $myMoney = 5;
document.getElementById("demo").innerHTML = $ + $myMoney;
</script>
</body>
</html>
```

Javascript Operators

Simple expression **4 + 5 is equal to 9**. Here 4 and 5 are called **operands** and '+' is called the **operator**. JavaScript supports the following types of operators.

- Arithmetic Operators
- Comparison Operators
- Logical (or Relational) Operators
- Assignment Operators
- Conditional (or ternary) Operators

JavaScript Datatypes

- JavaScript Types are Dynamic
  - var x; // Now x is undefined
    x = 5; // Now x is a Number
    x = "John"; // Now x is a String
- JavaScript variables can hold different data types: numbers, strings, objects and more:
  - let length = 16; // Number
    let lastName = "Johnson"; // String
    let x = {firstName:"John", lastName:"Doe"}; // Object

JavaScript Strings

- A string (or a text string) is a series of characters like "John Doe".
- Strings are written with quotes. You can use single or double quotes:

```
let carName1 = "Volvo XC60";   // Using double quotes
let carName2 = 'Volvo XC60';   // Using single quotes
```

Javascript Control Staments

- If---else
- switch
- while
- do---while
- for
- …….

Javascript Functions

- A JavaScript function is a block of code designed to perform a particular task.
- In javascript functions are two types
  - Built-in functions
  - User-defined functions

Thank you