JavaScript

- JavaScript is the programming language of the Web.

- All modern HTML pages are using JavaScript.

- JavaScript can be write in 2 ways:

```
1.  <script type = "text/JavaScript">
        Write Code Here
    </script>

2.

    <script language="JavaScript">
        Write Code Here
    </script>
```

➢ **JavaScript Where To**

- JavaScript can be placed in the <body> and the <head> sections of an HTML page.

➢ **The <script> Tag**

- In HTML, JavaScript code must be inserted between

  <script> and </script> tags.

➢ **Output Statement**

- JavaScript can "display" data in different ways:

- Writing into an alert box, using **window.alert().**

- Writing into the HTML output using **document.write().**

- Writing into an HTML element, using **innerHTML.**

➢ Using **window.alert()**

You can use an alert box to display data:

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

<h1>My First Web Page</h1>
<p>My first paragraph.</p>

<script>
window.alert(5 + 6);
</script>

</body>
</html>
```

➢ Using **document.write()**

For testing purposes, it is convenient to use document.write():

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

<h1>My First Web Page</h1>
<p>My first paragraph.</p>

<script>
document.write(5 + 6);
</script>

</body>
</html>
```

➢ Using **innerHTML**

- ▪ To access an HTML element, JavaScript can use the **document.getElementById(id)** method.
- ▪ The **id** attribute defines the HTML element.
- ▪ The **innerHTML** property defines the HTML content:

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

<h1>My First Web Page</h1>
<p>My First Paragraph</p>

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

<script>
document.getElementById("demo").innerHTML = 5 + 6;
</script>

</body>
</html>
```

➢ **JavaScript Variables**

Creating a variable in JavaScript is called "declaring" a variable.

You declare a JavaScript variable with the **var** keyword:

var VarName;

You can also assign a value to the variable when you declare it:

var Name= "Ali";

var num=10;

➢ **JavaScript function**

A JavaScript function is a block of code designed to perform a particular task.

A JavaScript function is executed when "something" invokes it (calls it).

```
function myFunction(p1, p2) {

  return p1 * p2;        // The function returns the product of p1 and p2

}
```

➢ **JavaScript Function Syntax**

A JavaScript function is defined with the function keyword, followed by a name, followed by parentheses ().

Function names can contain letters, digits, underscores, and dollar signs (same rules as variables).

The parentheses may include parameter names separated by commas: (parameter1, parameter2, ...)

The code to be executed, by the function, is placed inside curly brackets: {}

```
function name(parameter1, parameter2, parameter3) {

  code to be executed

}
```

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

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

<script>
var carName = "Volvo";
document.getElementById("demo").innerHTML = carName;
</script>

</body>
</html>
```

➢ **Conditional statements**

Conditional statements are used to perform different actions based on different conditions.

Very often when you write code, you want to perform different actions for different decisions.

You can use conditional statements in your code to do this.

In JavaScript we have the following conditional statements:

- Use **if** to specify a block of code to be executed, if a specified condition is true
- Use **else** to specify a block of code to be executed, if the same condition is false
- Use **else if** to specify a new condition to test, if the first condition is false
- Use **switch** to specify many alternative blocks of code to be executed

➢ **The if Statement**

Use the if statement to specify a block of JavaScript code to be executed if a condition is true.

Syntax

if (condition) {

   block of code to be executed if the condition is true

}

Example

Make a "Good day" greeting if the hour is less than 18:00:

```
if (hour< 18) {
   greeting = "Good day";
   }
```

➢ **The else Statement**

Use the else statement to specify a block of code to be executed if the condition is false.

if (condition) {

   block of code to be executed if the condition is true

} else {

   block of code to be executed if the condition is false

}

Example

If the hour is less than 18, create a "Good day" greeting, otherwise "Good evening":

if (hour < 18) {

    greeting = "Good day";

} else {

    greeting = "Good evening";

}

The result of greeting will be:

Good evening