**<html lang="en">** // The lang attribute specifies the language of the element's content. Common examples are "en" for English, "es" for Spanish, "fr" for French and so on.

**<head>**

**<meta charset="UTF-8">** // The charset attribute specifies the character encoding for the HTML document.The HTML5 specification encourages web developers to use the UTF-8 character set, which covers almost all of the characters and symbols in the world!

**<meta name="viewport" content="width=device-width, initial-scale=1.0">** //This gives the browser instructions on how to control the page's dimensions and scaling.

The **width=device-width** part sets the width of the page to follow the screen-width of the device (which will vary depending on the device).

The **initial-scale=1.0** part sets the initial zoom level when the page is first loaded by the browser.

**<title>String and Math functions</title>**

**</head>**

**<body>**

**<div>** // The <div> tag defines a division or a section in an HTML document.

<h2>String Functions</h2>

Enter the String 1:

<input type="text" id="str"><br>

Enter the String 2:

<input type="text" id="str2"><br>

How many time to repeat the String :

<input type="num" id="repeat"><br>

<input type="button" value="Generate" onclick="string\_func()">

<br><br>

<ol id="output" type="1"> </ol>

</div>

<div>

<h2>Math Functions</h2>

Enter a Number

<input type="text" id="num"><br>

Power term

<input type="text" id="pow"><br>

<input type="button" value="Generate" onclick="math\_func()">

<br><br>

<ol id="output\_math" type="1"> </ol>

</div>

<script>

**function string\_func()** {

**let sentence = document.getElementById('str').value //** Variables defined with let cannot be Redeclared, Variables defined with let must be Declared before use, Variables defined with let have Block Scope.

let anotherSentence = document.getElementById('str2').value

let count = document.getElementById('repeat').value

let li\_O = '<li>';

let li\_C = '</li>';

let list\_items;

list\_items = li\_O + "String 1 in lowercase letters: "+sentence.toLowerCase()+ li\_C;

list\_items += li\_O +"String 1 in uppercase letters: "+sentence.toUpperCase()+ li\_C;

list\_items += li\_O +"Length of the String 1: "+sentence.length+ li\_C;

list\_items += li\_O +"Character at Position 4: "+sentence.charAt(4)+ li\_C;

list\_items += li\_O +"Repeat string 1 in "+count+" times: "+sentence.repeat(count)+ li\_C;

list\_items += li\_O +"Last index position of the given String 1: "+sentence.charAt(4)+ li\_C;

list\_items += li\_O +"Concatenates String 1 & String 2: "+sentence.concat(' ',anotherSentence)+ li\_C;

list\_items += li\_O +"String sliced from Position 3 to 6:"+sentence.slice(3,6)+ li\_C; **document.getElementById('output').innerHTML = (list\_items);** // Get the HTML content of a <ol> element with id="output"

}

function math\_func() {

let number = document.getElementById('num').value;

let power = document.getElementById('pow').value;

let li\_O = '<li>';

let li\_C = '</li>';

let list\_items;

list\_items = li\_O + 'Value of PI : ' + Math.PI + li\_C;

list\_items += li\_O + 'Round of '+number+' is : ' + Math.round(number) + li\_C;

list\_items += li\_O + ''+number+' raise to '+power+' is : ' + Math.pow(number,power) + li\_C;

list\_items += li\_O + 'Square root of '+number+' is : ' + Math.sqrt(number) + li\_C;

list\_items += li\_O + 'Floor value of '+number+' is : ' + Math.floor(number) + li\_C;

list\_items += li\_O + 'Sin value of '+number+' is : ' + Math.sin(number\* Math.PI / 180) + li\_C;

list\_items += li\_O + 'Cos value of '+number+' is : ' + Math.cos(number\* Math.PI / 180) + li\_C;

list\_items += li\_O + 'A Random number is : ' + Math.random() + li\_C;

document.getElementById('output\_math').innerHTML = (list\_items);

}

</script>

</body>

</html>