**Java Script Assignment**

**1. Find the smallest number in an array**

Create a function that will display the smallest value in the array.

<!DOCTYPE html>

<html>

<body>

<p id="demo">The smallest number is </p>

<script>

var arr = [20,9,60,4,72];

document.getElementById("demo").innerHTML = findSmallest(arr);

function findSmallest(arr)

{

return Math.min.apply(null,arr);

}

</script>

</body>

</html>

2. Sort strings by Alphabetical Order

Function that will return your string in Alphabetical order

<!DOCTYPE html>

<html>

<h3>Alphabatical Order </h3>

<body>

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

<script >

var str = "hello saikumar";

document.getElementById("demo").innerHTML = alphabeticalOrder(str);

function alphabeticalOrder(str) {

return str.split("").sort().join("");

}

</script>

</body>

</html>

**3. Factorialize a number**

In mathematics, the factorial of a non-negative integer n, denoted by n!, is the product of all positive integers less than or equal to n. In simple terms, the Factorial of 7 is solved like this:

**7 \_ 6 \_ 5 \_ 4 \_ 3 \_ 2 \_ 1 = 5,040**

<!DOCTYPE html>

<html>

<h3>Factorial Of 7</h3>

<body>

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

<script >

var num = 7;

document.getElementById("demo").innerHTML = factorializer(num);

function factorializer(int) {

if (int <= 1) {

return 1;

} else {

return int \* factorializer(int - 1);

}

}

</script>

</body>

</html>

**4. Identify if a number is Odd or Even?**

A function that lets you know if a number is Even or Odd

<!DOCTYPE html>

<html>

<h3>Even Or Odd</h3>

<body>

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

<script >

var num = 7;

document.getElementById("demo").innerHTML = oddOrEven(num);

function oddOrEven(int) {

let output = int % 2;

if (output == 0) {

return "Even";

} else {

return "Odd";

}

}

</script>

</body>

</html>

**5. Eliminate all odd numbers in an array.**

Remove all Odd number(s) in an array and return a new array that contains Even numbers only

<!DOCTYPE html>

<html>

<h3>Even Values </h3>

<body>

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

<script >

var array=[20,3,6,5,24,55,32];

document.getElementById("demo").innerHTML = evenOnly(array);

function evenOnly(arr) {

let result = arr.filter(arr => arr % 2 == 0);

return result;

}

</script>

</body>

</html>

**6. Return numbers only**

Create a function that will accept an array, check the data type of each element. The function will delete string elements and will return a the new array

<!DOCTYPE html>

<html>

<h3>Return numbers only</h3>

<body>

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

<script >

var array=['text', 3, 7, 'github', 13, 'dev'];

document.getElementById("demo").innerHTML = numbersOnly(array);

function numbersOnly(arr) {

return arr.filter(arr => typeof arr == "number");

}

</script>

</body>

</html>

**7. Add up the numbers**

Return the sum of a number going back to it's root. In other words, the function will work like this:

**addUp(5);**

// 5 + 4 + 3 + 2 + 1 + 0 = **15**

**<!DOCTYPE html>**

**<html>**

**<h3>Add up the numbers </h3>**

**<body>**

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

**<script >**

**var num=10;**

**document.getElementById("demo").innerHTML = addUp(num);**

**function addUp(num) {**

**if (num <= 1) {**

**return num;**

**} else {**

**return num + addUp(num - 1);**

**}**

**}**

**</script>**

**</body>**

**</html>**

**8. Return the Min, Max, Length and Average of an Array**

Create a function that will accept an array and do the following:

* Get the lowest element
* Get the highest element
* Get the length of array
* Get the Average of all element;
* Store these criteria in a new array

<!DOCTYPE html>

<html>

<h3>Add up the numbers </h3>

<body>

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

<script >

var array=[56,83,42,74,36,12,96,25,11,64];

document.getElementById("demo").innerHTML = minMaxLengthAverage(array);

function minMaxLengthAverage(arr) {

const min = Math.min(...arr);

const max = Math.max(...arr);

const len = arr.length;

//Reducer for get Average function

const ave = arr => arr.reduce((acc, curVal) => acc + curVal, 0) / len;

const average = ave(arr);

//Return output

return [min, max, len, average];

}

</script>

</body>

</html>

**9. Sort Numbers in Ascending Order**

Array.sort() sorts the **strings** alphabetically. What if we want to sort **numbers** from lowest to highest? Will it produce a correct output?

<!DOCTYPE html>

<html>

<h3>Sort numbers in ascending sortNumsAscendingorder </h3>

<body>

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

<script >

var array=[56,83,42,74,36,12,96,25,11,64];

document.getElementById("demo").innerHTML = sortNumsAscending(array);

function sortNumsAscending(arr) {

let sorter = (a, b) => {

return a - b;

};

if (arr == []) {

return [];

} else if (arr == null) {

return [];

} else {

return arr.sort(sorter);

}

}

</script>

</body>

</html>

**10. Convert Numbers in Roman Numerals**

Convert the given number to a Roman Numeral

<!DOCTYPE html>

<html>

<h3>Roman numbers </h3>

<body>

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

<script >

var num=1967;

document.getElementById("demo").innerHTML = romanNumbers(num);

function romanNumbers(num) {

let values = [1000, 900, 500, 400, 100, 90, 50, 40, 10, 9, 5, 4, 1];

let romanNumerals = [

"M",

"CM",

"D",

"CD",

"C",

"XC",

"L",

"XL",

"X",

"IX",

"V",

"IV",

"I"

];

let roman = "";

for (i = 0; i < values.length; i++) {

while (values[i] <= num) {

roman += romanNumerals[i];

num -= values[i];

}

}

return roman;

}

</script>

</body>

</html>

**11.Absolute Sum**

Return the absolute sum of all the array elements

<!DOCTYPE html>

<html>

<h3>Absolute Sum </h3>

<body>

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

<script >

var array=[-1, -3, -5, -4, -10, 0];

document.getElementById("demo").innerHTML = getAbsSum(array);

function getAbsSum(arr) {

const reducer = (acc, currVal) => {

return acc + currVal;

};

return Math.abs(arr.reduce(reducer));

}

</script>

</body>

</html>

**12.Lopping a triangle**

Form a triangle using hash tags

**Example:**

> #

> ##

> ###

> ####

> #####

<!DOCTYPE html>

<html>

<h3>Triangle</h3>

<body>

<script >

var num=10;

for(var i=1; i <= num; i++)

{

for(var j=1; j<=i; j++)

{

document.write('#');

}

document.write('<br />');

}

</script>

</body>

</html>

**13.Count the number of words**

Return how many words was given

<!DOCTYPE html>

<html>

<h3>Words in string </h3>

<body>

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

<script >

var array="my name is saikumar";

document.getElementById("demo").innerHTML = countWords(array);

function countWords(str) {

return str.split(" ").length;

}

</script>

</body>

</html>

**14.Multiply by length**

Multiply all elements in an array by it's length

<!DOCTYPE html>

<html>

<h3>Multiply by length</h3>

<body>

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

<script >

var array=[3,5,5];

document.getElementById("demo").innerHTML = multiplyByLength(array);

function multiplyByLength(arr) {

let len = arr.length;

for (i = 0; i < len; i++) {

arr[i] = arr[i] \* len;

}

return arr;

}

</script>

</body>

</html>

**15. Repeating letters**

Create a function that will repeat each string character two times

<!DOCTYPE html>

<html>

<h3>String ends with </h3>

<body>

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

<script >

var array="saikumar ";

document.getElementById("demo").innerHTML = doubleChar(array);

function doubleChar(str) {

let x = str.split("");

return x.map(x => x.repeat(2)).join("");

}

</script>

</body>

</html>