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

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

**Example:**

> console.log(findSmallest([30, 45, 60, 7]));

> 1

Ans: <!DOCTYPE html>

<html>

<body>

<h2>smallest</h2>

<p id="small"></p>

<script>

var arr=[20,30,7];

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

function findSmallest(arr){

return Math.min(...arr);

}

</script>

</body>

</html>

*2. Sort strings by Alphabetical Order*

*Function that will return your string in Alphabetical order*

**Example:**

> console.log(AlphabeticalOrder('hello'));

> "ehllo"

Ans: <!DOCTYPE html>

<html>

<body>

<h2>Alphbetical order</h2>

<p id="small"></p>

<script>

var num=7;

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

function factorializer(int) {

if (int <= 1) {

return 1;

} else {

return int \* factorializer(int - 1);

}

}

}

</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**

**Example:**

> console.log(factorializer(7));

> 5040

Ans: <!DOCTYPE html>

<html>

<body>

<h2>factorial</h2>

<p id="small"></p>

<script>

var num=7;

document.getElementById("small").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*

**Example:**

> console.log(oddOrEven(7));

> "Odd"

Ans: <!DOCTYPE html>

<html>

<body>

<h2>evenoroddnum</h2>

<p id="small"></p>

<script>

var num=7;

document.getElementById("small").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

**Example:**

> console.log(evenOnly([1, 2, 3, 4, 5, 6]));

> [ 2, 4, 6 ]

Ans: <!DOCTYPE html>

<html>

<body>

<h2>oddnum</h2>

<p id="small"></p>

<script>

var num=[1,2,3,4,5,6];

document.getElementById("small").innerHTML=evenOnly(num);

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

**Example:**

> console.log(numbersOnly(['text', 3, 7, 'github', 13, 'dev']));

> [ 3, 7, 13 ]

Ans: <!DOCTYPE html>

<html>

<body>

<h2>oddnum</h2>

<p id="small"></p>

<script>

var num=[1,2,3,4,5,6];

document.getElementById("small").innerHTML=evenOnly(num);

function evenOnly(arr) {

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

return result;

}

</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**

**Example:**

> console.log(addUp(8));

> 36

Ans: <!DOCTYPE html>

<html>

<body>

<h2>adding</h2>

<p id="small"></p>

<script>

var num=8;

document.getElementById("small").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:

Ans: <!DOCTYPE html>

<html>

<body>

<h2>adding</h2>

<p id="small"></p>

<script>

var num=[7,54,75,1];

document.getElementById("small").innerHTML=minMaxLengthAverage(num);

function minMaxLengthAverage(arr) {

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

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

var len = arr.length;

var sum=0;

var avg=0;

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

{

sum=sum+arr[i];

avg=(sum/len);

}

return[min,max,len,avg];

}

</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?

**Example:** This is what happen if we apply *Array.sort()* to numbers:

> arr = [45, 34, 23, 12, 7]

> console.log(arr.sort());

> [ 12, 23, 34, 45, 7 ]

Ans: <!DOCTYPE html>

<html>

<body>

<h1>sort Array</h1>

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

<script>

var str=[100,28,13,4,26,99];

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

function sortArray(arr) {

return arr.sort(function(a,b) {return a-b });

}

</script>

</body>

</html>

**10. Convert Numbers in Roman Numerals**

Convert the given number to a Roman Numeral

**Example:**

> romanNumbers(1989);

> MCMLXXXIX

Ans: <!DOCTYPE html>

<html>

<body>

<h1>roman</h1>

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

<script>

var str=1111;

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

function romanNumbers(num) {

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

var romanNumerals = [

"M",

"CM",

"D",

"CD",

"C",

"XC",

"L",

"XL",

"X",

"IX",

"V",

"IV",

"I"

];

let roman = "";

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

while (values[i] <= num) {

roman += romanNumerals[i];

num -= values[i];

}

}

return roman;

}

</script>

</body>

</html>

**11. Absolutely Sum**

Return the absolute sum of all the array elements

**Example:**

> getAbsSum([-1, -3, -5, -4, -10, 0]);

> 23

Ans: <!DOCTYPE html>

<html>

<body>

<h1>sort Array</h1>

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

<script>

var str=[-100,-28,-13,-4,-26,-99];

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

function sortArray(arr) {

var len=arr.length;

var sum=0;

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

{

sum=sum+Math.abs(arr[i]);

}

return sum;

}

</script>

</body>

</html>

***12. Looping a Triangle***

*Form a triangle using hash tags*

**Example:**

> #

> ##

> ###

> ####

> #####

> ######

> #######

Ans: <!DOCTYPE html>

<html>

<body>

<h1>traingle</h1>

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

<script>

var num=7;

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

function triangle(num){

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

**Example:**

> countWords('hello from kbpsystem!');

> 3

Ans:<!DOCTYPE html>

<html>

<body>

<h1>count words</h1>

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

<script>

var str="I am ramesh";

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

function countWords(str) {

return str.split(" ").length;

}

</script>

</body>

</html>

**14. Multiply by Length**

Multiply all elements in an array by it's length

**Example:**

> MultiplyByLength([4,1,1]);

> [12, 3, 3]

Ans: <!DOCTYPE html>

<html>

<body>

<h2>smallest</h2>

<p id="small"></p>

<script>

var arr=[20,30,7];

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

function findSmallest(arr){

return Math.min(...arr);

}

</script>

</body>

</html>