**Javascript Assignment 01**

**Exercise 01 Basics**

Q1.

function evenOdd(a){

var number = a%2;

if(number === 0){

console.log("number is even.")

}else{

console.log("number is odd.")

}

}

Q2.

function maxNo(a,b,c){

var maxNo=0;

if(a>b&&a>c){

console.log("maximum no is "+a);

maxNo==a;

}else if(b>a&&b>c){

console.log("maximum no is "+b);

maxNo==b;

}else{

console.log("maximum no is "+c);

maxNo==c;

}

return maxNo;

}

Q3.

function countH(a){

var heads =0;

for(i=1;i<=a;i++){

Var coinPick = (Math.random() < 0.3) ? 'Heads' : 'Tails';

if(coinPick ==’Heads’) {

heads= heads+1;

}

}

console.log(heads);

return heads;

}

Q4.

function countH(a){

var heads =0;

var fraction =0;

for(i=1;i<=a;i++){

var coinPick = Math.floor(Math.random()\*2);

if(coinPick ==0) {

heads= heads+1;

}

}

fraction=heads/a;

console.log(fraction);

}

Q5.

function padchars(a,b){

var result="";

for(i=1;i<=a;i++){

result += b

}

console.log(result);

}

O/P:

padchars(5,"X")

Q6.

function roll(){

    var a=0;

    a=Math.floor(Math.random() \* 6) + 1;

    while (a < 6) {

        count++;

        console.log("Die:-" + a);

        a=Math.floor(Math.random() \* 6) + 1;

  }

  console.log("final dies:-" + a);

}

var count=0;

roll();

console.log("count:- " + count);

**OR**

var sides = ["One" , "Two" , "Three" , "Four" , "Five" , "Six"];

var count= 0;

var roll = sides[Math.floor(Math.random() \* 6)];

while(roll !== "Six"){

count = count +1;

console.log("Die:- "+roll);

roll = sides[Math.floor(Math.random() \* 6)];

}

console.log("final die:-" + roll);

console.log(count+1);

Q7.

**Index.hml**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta http-equiv="X-UA-Compatible" content="IE=edge">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Document</title>

</head>

<body>

    <h1 id="content"></h1>

    <script src="test.js"></script>

</body>

</html>

**Test.js**

function loadContent(){

    var h1=document.getElementById("content");

    if(Math.random()<0.5){

        h1.textContent="Have nice Day";

    }

    else{

        h1.textContent="Have Bad Day!";

    }

    h1.style.color="Red";

    h1.style.textAlign="center";

}

loadContent();

Q8.

var arr=[Math.random(),Math.random(),Math.random(),Math.random()];

console.log(arr);

Q9.

var hundredNums=[];

for(i=0;i<99;i++){

    hundredNums[i]=Math.random();

}

console.log(hundredNums);

Q10.

var strArr=["1.2","2.2","3.4"];

var numArr=strArr.map(Number);

console.log(numArr);

\*\*

Q13,14.

var x=5;

Console.log(x);

Q15.

function half(x){

return (x/2);

}

Console.log(half(4));

Q16.

function half(x){

return (x/2);

}

Console.log(half(5));

Console.log(half());

O/p: NaN.

Q17.

function seven(){

x=7;

return(x);

}

Console.log(seven());

o/p:-7

Q18.

function calculation(a,b,c){

    return(a+b)/c;

}

console.log(calculation(5,5,2));

console.log(calculation(-1,-1,0));

console.log(calculation(1,1,0));

o/p:-

5

-infinite

Infinite

Q19.

Loaded in js file.

function addNum(a,b){

    return a+b;

}

function subNum(a,b){

    return a-b;

}

Function call from browser:

Console.log(addNum(3,3));

Console.log(subNum(3,3));

Q20:

function checkNum(num){

    return (arr[num%2]);

}

var arr=["even","odd"];

console.log( checkNum(5));

**EXERCISE 02**

Q1.

document.write("Hello wold");

Q2.

var no = prompt("Enter a number: ");

console.log("Hello "+no);

Q3.

function greeting(){

    var no = prompt("Enter a number: ");

    if(no==="Alice"){

        console.log("Hello "+no);

    }

    else{

        console.log("Hello "+no);

    }

}

greeting();

Q4.

function sumOfNum(){

    sum=0;

    for(i=1;i<=num;i++){

        sum+=i;

    }

    return sum;

}

var num=prompt("Enter Number for sum of numbers");

console.log(sumOfNum());

Q5.

var num=prompt("Enter Number");

sum=0;

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

    if(i%3==0 || i%5==0){

        sum+=i;

    }

}

console.log(sum);

Q6.

var str=prompt("Enter sum. for sum of nums and product. product of nums ");

if(str === "sum"){

 var num=prompt("Enter num for sum");

        sum=0;

        for(i=1;i<=num;i++){

            sum+=i;

        }

        console.log(sum);

}else if(str === "product"){

var num=prompt("Enter num for product");

        pro=1;

        for(i=1;i<=num;i++){

            pro\*=i;

        }

        console.log(pro);

}else{

console.log("Wrong choice");

}

Q7.

var number = parseInt(prompt('Enter an integer: '));

for(let i = 1; i <= 10; i++) {

var result = i \* number;

console.log(`${number} \* ${i} = ${result}`);

}

Q8.

function isPrime(num) {

for ( var i = 2; i < num; i++ ) {

if ( num % i === 0 ) {

return false;

}

}

return true;

}

function display(n) {

var arr = [2];

for ( var i = 3; i < n; i+=2 ) {

if ( isPrime(i) ) {

arr.push(i);

}

}

console.log(arr); }

display(10);

Q9.

function game(userNumber){

var y = Math.floor(Math.random() \* 10 + 1);

var guess = 1;

var x = userNumber;

if(x == y)

{

console.log("CONGRATULATIONS!!! YOU GUESSED IT RIGHT IN "

+ guess + " GUESS ");

}

else if(x > y)

{

guess++;

console.log("OOPS SORRY!! TRY A SMALLER NUMBER");

}

else

{

guess++;

console.log("OOPS SORRY!! TRY A GREATER NUMBER")

}

}

Q10.

var yearsPrinted = 0;

var currentYear = 2021;

function leapYears() {

while (yearsPrinted < 20) {if ((currentYear % 4 === 0) && (!((currentYear % 100===0) && (currentYear % 400 !== 0)))) {

console.log(currentYear);

yearsPrinted++;

currentYear++;

} else {

currentYear++;

}

}

}

Q11.

Function largestElement(list){

var largest= 0;

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

if (array[i]>largest) {

var largest=array[i];

}

}

console.log(largest);

}

Var list=[10,78,67,98];

largestElement(list);

Q12.

function reverseArray(arr) {

var newArray = [];

for (var i = arr.length - 1; i >= 0; i--) {

newArray.push(arr[i]);

}

console.log(newArray);

}

var arr=["if", "never", "sometimes", "always", "maybe", "no", "yes"];

reverseArray(arr);

Q13.

function search(list,number){

var flag = 0;

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

if(number == array[i])

flag = 1;

}

if(flag == 1)

console.log('Element Found');

else

console.log('Element Not Found');

}

var array = [12, 5, 8, 3, 17];

search(array,8);

Q14.

var array = [1,2,3,4,5];

function odd(array){

console.log(array.filter(function(el, ind){

return ind % 2 === 0;

}));

Q15.

function runSum(a) {

var result = [a[0]];

for(var i = 1; i < a.length; i++) {

result[i] = result[i - 1] + a[i];

}

return result;

};

var a=[7,6,7,5,7,7,];

var result =runSum(a);

console.log(result);

Q16.

function checkPalindrome(string) {

var len = string.length;

for (var i = 0; i < len / 2; i++) {

if (string[i] !== string[len - 1 - i]) {

return 'It is not a palindrome';

}

}

return 'It is a palindrome';

}

checkPalindrome("madam");

Q17.

For Loop:

function runSum(array) {

var s = 0;

for (i = 0; i < array.length; i += 1)

{

s += array[i];

}

console.log(s);

};

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

runSum(array);

While Loop:

function runSum(array) {

var s = 0;

var i = 0;

while (i < array.length)

{

s += array[i];

i++;

}

console.log(s);

};

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

runSum(array);

Using Recursion:

var sum = function(array) {

if(array.length === 0){

return 0;

}

function add(array, i){

if(i === array.length-1){

return array[i];

}

return array[i] + add(array, i+1);

}

return add(array, 0);

};

sum([1, 2, 3, 4, 5, 6])

Q18:

function perfect(array){

for(i=0;i<=20;i++){

var result = Math.sqrt(array[i]);

if(Number.isInteger(result)){

console.log(array[i]);

}

}

}

Q19.

function con(array1,array2){

console.log(array1.concat(array2));

}

var array1 = ["a","b","c"];

var array2 = [1,2,3];

con(array1,array2);

Q20.

function newList(alph, num) {

var list = [];

var rlength=0;

if( alph.length > num.length){

rlength =alph.length;

}else{

rlength =num.length;

}

console.log(rlength)

for (var i=0;i<rlength ;++i) {

list.push(alph[i]);

list.push(num[i]);

}

return list;

}

console.log(newList(['a','b','c'],[1,2,3,4,5]));

Q21.

function consort(num1,num2){

var num3=num1.concat(num2);

console.log(num3.sort());

}

var num1=[1,4,6];

var num2=[2,3,5];

consort(num1,num2);

Q22.

function rotate(num1,k){

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

var n=num1.shift();

num1.push(n);

}

console.log(num1);

}

var num1=[1,2,3,4,5,6];

rotate(num1,3);

Q23.

var n1=1;

var n2=1;

var n3=0;

console.log(n1);

console.log(n2);

for(i=2;i<=100;i++){

n3=n1+n2;

console.log(n3);

n1=n2;

n2=n3;

}

Q24.

function retArrOfNum(num){

i=0;

r=0;

while(num>0) {

r=num%10;

num=parseInt(num/10);

arr[i]=r;

i++;

}

}

var arr=[];

retArrOfNum(2342);

console.log(arr);

**OR**

var num = 235345

var myArr = String(num).split("").map((num)=>{

return Number(num)

})

console.log(myArr);

Q27.

Selection Sort:

function selectionSort(arr) {

var minIdx,

aux,

len = arr.length;

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

minIdx = i;

for ( j = i + 1; j < len; j++) {

if (arr[j] < arr[minIdx]) {

minIdx = j;

}

}

aux = arr[i];

arr[i] = arr[minIdx];

arr[minIdx] = aux;

}

return arr;

console.log(arr);

}

var array = [6,8,3,7,4,9];

selectionSort(array);

Insertion Sort:

function insertionSort(arr){

var len = arr.length;

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

var el = arr[i];

var j;

for (j = i - 1; j >= 0 && arr[j] > el; j--)

arr[j + 1] = arr[j];

arr[j + 1] = el;

}

return arr;

}

var array = [6,8,3,7,4,9];

insertionSort(array);

Merge Sort:

function mergeSort(arr){

if (arr.length <= 1) {

return arr;

}

var midIdx = Math.floor(arr.length / 2);

var left = arr.slice(0, midIdx);

var right = arr.slice(midIdx);

var leftSorted = mergeSort(left);

var rightSorted = mergeSort(right);

return merge(leftSorted, rightSorted);

};

function merge (arr1, arr2) {

var merged = [];

while (arr1.length && arr2.length) {

if (arr1[0] < arr2[0]) {

merged.push(arr1.shift());

} else {

merged.push(arr2.shift());

}

}

return [...merged, ...arr1, ...arr2];

};

var array = [6,8,3,7,4,9];

var result =mergeSort(array);

console.log(result);

Quick Sort:

function quickSort (arry) {

if (arry.length === 0)

return [];

var left = [], right =[], pivot = arry[0];

for (var i=1; i< arry.length; i++) {

if(arry[i] < pivot)

left.push(arry[i]);

else

right.push(arry[i]);

};

return [...quickSort(left), pivot, ...quickSort(right)];

}

var array = [6,8,3,7,4,9];

var result =quickSort(array);

console.log(result);

Stooge Sort:

function stoogeSort (array, i, j) {

if (j === undefined) {

j = array.length - 1;

}

if (i === undefined) {

i = 0;

}

if (array[j] < array[i]) {

var aux = array[i];

array[i] = array[j];

array[j] = aux;

}

if (j - i > 1) {

var t = Math.floor((j - i + 1) / 3);

stoogeSort(array, i, j-t);

stoogeSort(array, i+t, j);

stoogeSort(array, i, j-t);

}

};

arr = [9,1,3,10,13,4,2];

stoogeSort(arr);

console.log(arr);

Q28.

Binary Search:

function binarySearch(sortedArray, key){

let start = 0;

let end = sortedArray.length - 1;

while (start <= end) {

let middle = Math.floor((start + end) / 2);

if (sortedArray[middle] === key) {

return middle;

} else if (sortedArray[middle] < key) {

start = middle + 1;

} else {

end = middle - 1;

}

}

return -1;

}

var array = [6,8,3,7,4,9];

var result =binarySearch(array,8);

if(result === false){

console.log("Number not found");

}else{

console.log("Number found");

}

Q29.

function printFrame(arr) {

function fill (str, length, char) {

return (str.length < length) ? fill(str + char, length, char) : str;

}

var size = arr.map((str) => {

return str.length;

})

.reduce((a, b) => {

return Math.max(a, b);

});

var line = fill('', size + 4, '\*');

arr = arr.map((element) => {

return '\* '+ fill(element, size, ' ') + ' \*';

})

arr.unshift(line);

arr.push(line);

return arr.join('\n');;

}

console.log(printFrame(["Hello", "World", "in", "a", "frame"]));

Q30.

function translatePigLatin(str) {

var string = str.split(" ");

var string1 = string.map(function(v) {

return v.toLowerCase();

});

var newString = [];

var newstr1 = [];

for (i=0;i<string1.length;i++){

newString += string1[i].slice(1)+string1[i][0]+"ay ";

}

return newString;

}

var string = "The quick brown fox";

console.log(translatePigLatin(string));

**Exercise 03**

Q1.

Test.js

var btn1=document.getElementById("input");

var data=document.getElementById("Fahrenheit");

btn1.onclick=function(){

    var msg=document.getElementById("text");

    var celsius=0;

    celsius = parseInt(((data.value-32) \* 5 / 9));

    msg.innerHTML="Temperature in Celsius:" + celsius;

}

var main=document.getElementById("temp");

main.style.backgroundColor="red";

Index.html

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta http-equiv="X-UA-Compatible" content="IE=edge">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Document</title>

    <style>

        .temp{

            display: block;

  margin-left: auto;

  margin-right: auto;

  width: 40%;

        }

    </style>

</head>

<body>

    <div class="temp">

    <label for="Fahrenheit">Enter temperature in Fahrenheit:</label>

    <input type="number" name="Fahrenheit" id="Fahrenheit">

    <br>

    <input type="button" value="Show" id="input">

    <h3 id="text"></h3>

    </div>

    <script src="test.js"></script>

</body>

</html>

Q2.

Test.js

function create(){

    var arr=document.getElementsByTagName("input");

    var paras=document.getElementById("main");

    var p=[];

    for(i=0;i<arr.length;i++){

        var result="";

        if(arr[i].value<=30 && arr[i].value>0){

            for(j=0;j<arr[i].value;j++){

            result+='\*';

            }

        }

        else{

            alert("Enter number in 1-30 for input" + i++);

        }

        p[i]=document.createElement("p");

        paras.appendChild(p[i]);

        p[i].textContent=""+result; } }

Index.html

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta http-equiv="X-UA-Compatible" content="IE=edge">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Document</title>

    <style>

        .temp{

            display: block;

  margin-left: auto;

  margin-right: auto;

  width: 40%;

        }

    </style>

</head>

<body>

    <label for="">Enter input1</label>

    <input type="number" id="input1"><br>

    <label for="">Enter input2</label>

    <input type="number" id="input2"><br>

    <label for="">Enter input3</label>

    <input type="number" id="input3"><br>

    <button id="button">Click</button>

    <div id="main">

    </div>

    <script src="test.js"></script>

</body>

</html>

Q3.

Test.js

function makeTable(){

var table=document.getElementById("main-table");

var colCount=document.getElementById("main-col");

var rowCount=document.getElementById("main-row");

console.log(rowCount+" "+colCount);

var row=[];

var col=[];

for(i=0;i<rowCount.value;i++){

    row[i]=document.createElement("tr");

    table.appendChild(row[i]);

    for(j=0;j<colCount.value;j++){

        col[j]=document.createElement("td");

        row[i].appendChild(col[j]);

        col[j].textContent="col:" + j + "row:" +i;

    }

}

}

document.getElementById("button").addEventListener("click",makeTable);

Index.html

!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta http-equiv="X-UA-Compatible" content="IE=edge">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Document</title>

    <style>

        .temp{

            display: block;

  margin-left: auto;

  margin-right: auto;

  width: 40%;

        }

    </style>

</head>

<body>

  <label for="main-col">Enter Columns</label>

  <input type="number" id="main-col" name="main-col"><br>

  <label for="main-row">Enter Columns</label>

  <input type="number" id="main-row" name="main-row"><br>

  <button id="button">Create</button>

      <table border="1" id="main-table">

      </table>

    <script src="test.js"></script>

</body>

</html>

Q4.

Test.js

var calci="";

function setValue(i,k)

{

    // k.target.innerHTML=`<h1>${i}</h1>`

    document.getElementById('title').innerText=i;

    calci=i;

}

function getResutl(nitin) {

    const s=document.getElementsByTagName("input");

    console.log("ss",s)

    if (calci === "add") {

        console.log("add honar");

        var i1 = document.getElementById("input1").value;

        var i2 = document.getElementById('input2').value;

        if(i1==="" || i2==="")

        {

            alert("Please enter all values")

        }

        else

        {

            document.getElementById("result").value = parseInt(i1) + parseInt(i2);

        }

    }

    else if (calci === "sub") {

        var i1 = document.getElementById("input1").value;

        var i2 = document.getElementById('input2').value;

        if(i1==="" || i2==="")

        {

            alert("Please enter all values")

        }

        else

        {

            document.getElementById("result").value = i1-i2;

        }

    }

else if (calci === "mul") {

        var i1 = document.getElementById("input1").value;

        var i2 = document.getElementById('input2').value;

        if(i1==="" || i2==="")

        {

            alert("Please enter all values")

        }

        else

        {

            document.getElementById("result").value = i1\*i2;

        }

     }

    else if (calci === "div") {

        console.log("add honar");

 var i1 = document.getElementById("input1").value;

        var i2 = document.getElementById('input2').value;

        if(i1==="" || i2==="")

        {

            alert("Please enter all values")

        }

        else

        {

            document.getElementById("result").value = i1/i2;

        }

    }

}

Inedx.html

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta http-equiv="X-UA-Compatible" content="IE=edge">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Document</title>

    <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">

    <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>

    <script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>

    <style>

        .navbar-default .navbar-nav>li>a {

            color: red;

            border: 1px solid green;

        }

        .a {

            color: blue !important;

        }

    </style>

</head>

<body>

    <h1 id="title">

            Please Select :

    </h1>

    <nav class="navbar navbar-default">

        <div class="container-fluid">

            <div class="navbar-header">

                <a class="navbar-brand" href="#">Functions</a>

            </div>

            <ul class="nav navbar-nav">

                <li><a href="#"  id="add" onclick="setValue('add',event)">1.Add</a></li>

                <li><a href="#" id="sub" onclick="setValue('sub',event)">2.Sub</a></li>

                <li><a href="#" id="Mul" onclick="setValue('mul',event)">3.Mul</a></li>

                <li><a href="#" id="div" onclick="setValue('div',event)">4.div</a></li>

            </ul>

        </div>

    </nav>

    <div id="content1" class="toggle" style="display:none">show the stuff1</div>

    <form>

        <div class="form-group">

            <label for="exampleInputEmail1">Enter First Number</label>

            <input type="text" class="form-control form-control-sm" id="input1" aria-describedby="emailHelp" placeholder="Enter number">

        </div>

        <div class="form-group">

<label for="exampleInputPassword1">Enter Second Number</label>

         <input type="text" class="form-control" id="input2" placeholder="Enter number">

        </div>

        <div class="form-group">

            <label for="exampleInputPassword1">Result</label>

            <input type="text" class="form-control" id="result" placeholder="Result">

        </div>

        <button type="button" class="btn btn-primary" value=1 onclick=getResutl(event)>Get Result</button>

    </form>

    <script src="./Calculators/test.js"></script>

</body>

</html>

Q5.

Test.js

var elements = document.getElementById("myForm").elements;

function validationForm(e){

    e.preventDefault();

    var elements = document.getElementById("myForm").elements;

    const formData = new FormData(e.target);

    const formObject = Object.fromEntries(formData);

        if(!formObject.email || !formObject.name || !formObject.DeliveryOpt || !formObject.address)

        {

            alert("Please enter all fields")

        }

        else{

            document.getElementById("sum").disabled=false;

            document.getElementById("succ").textContent="Form Submited successfuly";

        }

}

function viewSum(e){

var table=document.getElementById("main-table");

var row1=document.createElement("tr");

    table.appendChild(row1);

    var col11=document.createElement("th");

    var col12=document.createElement("td");

    row1.appendChild(col11);

    row1.appendChild(col12);

    col11.textContent="Name : ";

    col12.textContent= " " +     elements.name.value;

    var row2=document.createElement("tr");

    table.appendChild(row2);

    var col21=document.createElement("th");

    var col22=document.createElement("td");

    row2.appendChild(col21);

    row2.appendChild(col22);

    col21.textContent="Email : ";

    col22.textContent= " " +     elements.email.value;

    var row3=document.createElement("tr");

    table.appendChild(row3);

    var col31=document.createElement("th");

    var col32=document.createElement("td");

    row3.appendChild(col31);

    row3.appendChild(col32);

    col31.textContent="Address : ";

    col32.textContent= " " +     elements.address.value;

    var row5=document.createElement("tr");

    table.appendChild(row5);

    var col51=document.createElement("th");

    var col52=document.createElement("td");

    row5.appendChild(col51);

    row5.appendChild(col52);

    col51.textContent="Delivery : ";

    col52.textContent= " " +     elements.DeliveryOpt.value;

    var row6=document.createElement("tr");

    table.appendChild(row6);

    var col61=document.createElement("th");

    var col62=document.createElement("td");

    row6.appendChild(col61);

    row6.appendChild(col62);

    col61.textContent="TIP : ";

    col62.textContent= " " +     elements.tip.value;

    var row7=document.createElement("tr");

    table.appendChild(row7);

    var col71=document.createElement("th");

    var col72=document.createElement("td");

    row7.appendChild(col71);

    row7.appendChild(col72);

    col71.textContent="Total : ";

    col72.textContent= " " +     ((10+1.5)\*elements.tip.value);

}

Index.html

!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta http-equiv="X-UA-Compatible" content="IE=edge">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Document</title>

    <link rel="stylesheet" href="./style.css">

    <!-- CSS only -->

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.1/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-+0n0xVW2eSR5OomGNYDnhzAbDsOXxcvSN1TPprVMTNDbiYZCxYbOOl7+AMvyTG2x" crossorigin="anonymous">

<!-- JavaScript Bundle with Popper -->

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.1/dist/js/bootstrap.bundle.min.js" integrity="sha384-gtEjrD/SeCtmISkJkNUaaKMoLD0//ElJ19smozuHV6z3Iehds+3Ulb9Bn9Plx0x4" crossorigin="anonymous"></script>

</head>

<body>

    <form class="myForm" id="myForm" onsubmit="validationForm(event)"  >

        <div class="form-group">

          <label for="name">Name:</label>

          <input type="text" name="name" class="form-control" placeholder="Enter Name" id="name">

        </div>

        <div class="form-group">

          <label for="email">Email:</label>

          <input type="email" name="email" class="form-control" placeholder="Enter Email" id="email">

        </div>

        <h4>Toppings</h4>

        <div class="form-check form-check-inline">

            <input class="form-check-input" type="checkbox" id="inlineCheckbox1" value="2" name="checkbox1">

            <label class="form-check-label" for="inlineCheckbox1">Extra Cheese</label>

          </div>

          <div class="form-check form-check-inline">

            <input class="form-check-input" type="checkbox" id="inlineCheckbox2" value="Pepperoni" name="checkbox2">

            <label class="form-check-label" for="inlineCheckbox2">Pepperoni</label>

          </div>

          <div class="form-check form-check-inline">

            <input class="form-check-input" type="checkbox" id="inlineCheckbox3" value="Mushrooms" name="checkbox3">

            <label class="form-check-label" for="inlineCheckbox3">Mushrooms</label>

          </div>

          <div class="form-check form-check-inline">

            <input class="form-check-input" type="checkbox" id="inlineCheckbox3" value="Onions" name="checkbox4">

            <label class="form-check-label" for="inlineCheckbox3">Onions</label>

          </div>

          <br>

          <h4>Payment Option</h4>

          <div class="form-check form-check-inline">

            <input class="form-check-input" type="radio" name="DeliveryOpt" id="inlineRadio1" value="cod">

            <label class="form-check-label" for="inlineRadio1">Cash On Delivery</label>

          </div>

          <div class="form-check form-check-inline">

            <input class="form-check-input" type="radio" name="DeliveryOpt" id="inlineRadio2" value="online">

            <label class="form-check-label" for="inlineRadio2">Online</label>

          </div>

          <br><br>

          <label for="tip">TIP</label>

         <input type="number" name="tip" min="0" max="100" id="myPercent" step="10" placeholder="%"/><br><br>

         <div class="form-group">

            <label for="exampleFormControlTextarea1">ADDRESS</label>

            <textarea class="form-control" id="exampleFormControlTextarea1" rows="3" name="address" ></textarea>

          </div><br>

          <button class="btn btn-primary" type="submit" value="Submit" id="submit"  >Submit</button>

          <button class="btn btn-primary" type="reset">Reset</button>

          <button class="btn btn-primary" type="button" id="sum" disabled=true onclick="viewSum(event)">Show Summary</button>

        <p id="succ" ></p>

        <table   id="main-table" style="border: 1px solid; margin: 20px 20px;"></table>

      </form>

      <script src="test.js"></script>

</body>

</html>

style.css

\*{

    padding: 0;

    margin: 0;

    box-sizing: border-box;

}

.center{

    margin: 20px 20px;

    width: 80%;

}

.col{column-width: 300px;

    margin: 20px 20px;

}

.form-check-inline{

 margin: 50px 20px;

 padding-left: 20px;

}

**Exercise 04**

**Q1.**

function allPossibilities(){

var mem = ["1"], combos;

for(var i = 2; i <= 9; i++){

combos = [];

mem.forEach(function(x){

combos.push(x + i, x + " +" + i, x + " -" + i);

});

mem = combos;

}

return combos.filter(function(combo){

return combo.split(" ").reduce(function(x,y){

return x/1+y/1;

}) == 100; // and check if the sum is 100

})

.map(function(x){

return x.replace(/([+-])/g,'$1 ');

});

}

console.log(allPossibilities());

Q6.

function convert(text){

var letters = ['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h', 'i', 'j', 'k', 'l', 'm', 'n', 'o', 'p', 'q', 'r', 's', 't', 'u', 'v', 'w', 'x', 'y', 'z', '1', '2', '3', '4', '5', '6', '7', '8', '9', '0' ];

var morseLetters = [ ". -", "- . . .", "- . - .", "- . .", ".", ". . - .", "- - .", "....", ". .", ". - - -", "- . -", ". - . .", "- -", "- .", "- - -", ". - - .", "- - . -", ". - .", ". . .", "\_", ". . -", ". . . -", ". - -", "- . . -", "- . - -", "- - . .", ". - - - -", ". . - - -", ". . . - -", ". . . . -", ". . . . .", "- . . . .", "- - . . .", "- - - . .", "- - - - .", "- - - - -" ];

var newText = "";

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

for (var j = 0; j < 37; j++) {

if (text[i].toLowerCase() == letters[j]) {

newText += morseLetters[j];

newText = newText + ' ';

break;

}

}

}

console.log(newText);

}

convert("hey there!")

Q7.

var longestPalindrome = function(s) {

let len = s.length;

var len1 = s.length-len+1;

console.log(len);

console.log(len1)

while (len>0) {

for (let i=0; i<s.length-len+1; i++) {

let str = s.slice(i, i+len);

if (isPalindrom(str))

return str;

}

len--;

}

return "";

};

const isPalindrom = function(arr) {

let i=0;

let j=arr.length-1;

while (i<=j) {

if (arr[i]!==arr[j])

return false;

i++; j--;

}

return true;

}

console.log(longestPalindrome("abaabc56dcba"));

Q9.

function createArrayWithLength(n) {

var arr = new Array(100);

var len =arr.length;

if(n<=len){

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

arr.push(i);

}

return arr;

}else{

console.log("out of bound")

}

}

console.log(createArrayWithLength(101));

Q16.

function longestCommonSubstring(str1, str2) {

if (str1 === str2) return str2;

if (!str2.split('').some(ele => str1.includes(ele))) return '';

var commonSubStr = '';

var commanstr = [];

var strLength = str2.length;

for (let i = 0; i < strLength; i++) {

let ind = str1.indexOf(str2[i]);

if (ind === -1) continue;

for (let j = i, k = ind; j < strLength; j++, k++) {

if (str2[j] === str1[k]) commonSubStr += str2[j];

else{

commanstr.push(commonSubStr);

commonSubStr = '';

}

}

commanstr.push(commonSubStr);

commonSubStr = '';

}

return commanstr.sort((a, b) => b.length - a.length)[0];

}

console.log(longestCommonSubstring("abcdef5678","abcegf5678"));

**OR**

function longest\_common\_starting\_substring(arr1){

var arr= arr1.concat().sort(),

a1= arr[0], a2= arr[arr.length-1], L= a1.length, i= 0;

while(i< L && a1.charAt(i)=== a2.charAt(i)) i++;

return a1.substring(0, i);

}

console.log(longest\_common\_starting\_substring(['go', 'google']));

Q18. It prints minimum operation requried.

function minOps(A, B)

{

// This parts checks whether conversion

// is possible or not

if (A.length != B.length)

return -1;

let i, j, res = 0;

let count = new Array(256);

for(let i = 0; i < 256; i++)

{

count[i] = 0;

}

// count characters in A

// Subtract count for every character in B

for(i = 0; i < A.length; i++)

{

count[A[i].charCodeAt(0)]++;

count[B[i].charCodeAt(0)]--;

}

// Check if all counts become 0

for(i = 0; i < 256; i++)

if (count[i] != 0)

return -1;

i = A.length - 1;

j = B.length - 1;

while(i >= 0)

{

// If there is a mismatch, then

// keep incrementing result 'res'

// until B[j] is not found in A[0..i]

if (A[i] != B[j])

res++;

else

j--;

i--;

}

return res;

}

let A = "EACBD";

let B = "EABCD";

console.log(minOps(A, B));

Q19.

function multiplyMatrices(m1, m2) {

var result = [];

for (var i = 0; i < m1.length; i++) {

result[i] = [];

for (var j = 0; j < m2[0].length; j++) {

var sum = 0;

for (var k = 0; k < m1[0].length; k++) {

sum += m1[i][k] \* m2[k][j];

}

result[i][j] = sum;

}

}

return result;

}

var m1 = [[1,2,3],[3,4,5],[4,6,9]]

var m2 = [[5,6,6],[7,8,7],[5,9,2]]

var mResult = multiplyMatrices(m1, m2)

console.log(mResult);