Experiment 1

CODE:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Experiment 1</title>

</head>

<body>

<script>

const pi = 3.14;

var a = 12;

var b = 8;

document.write("For rectangle: <br>");

document.write("Length = " + a + " Width = " + b + "<br>");

document.write("Area = " + (a\*b) + "<br><hr style='border-top: dashed #B9B4C7' width = '400' size = '3' align = 'left'>");

document.write("For Triangle: <br>");

document.write("Height = " + a + " Base = " + b + "<br>");

document.write("Area = " + (a\*b)/2 + "<br><hr style='border-top: dashed #B9B4C7' width = '400' size = '3' align = 'left'>");

document.write("For circle: <br>");

document.write("Radius = " + a + "<br>");

document.write("Area = " + (pi\*a\*a) + "<br><hr style='border-top: dashed #B9B4C7' width = '400' size = '3' align = 'left'>");

document.write("Shivam Gaonkar")

</script>

</body>

</html>

Experiment 2

CODE:

<!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>Experiment 2</title>

</head>

<body>

<script>

var n = prompt("Enter the integer: ");

document.write("Table of "+ n + ":<br>");

for (let i=1; i<11;i++){

document.write(n\*i+"</br>");

}

document.write("<hr style='border-top: dashed #B9B4C7' width = '400' size = '3' align = 'left'> Shivam Gaonkar ");

</script>

</body>

</html>

Experiment 3

CODE:

<!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>Experiment 3</title>

</head>

<body>

<script>

const str = prompt("Enter your word: ");

const length = str.length;

//reverse string

document.write("Original String: " + str + "<br>");

var reversedString = "";

for (let i = length; i > -1; i--) {

reversedString += str.charAt(i);

}

document.write("Reversed String: " + reversedString + "<br>");

//replace string

const oldChar = prompt("Enter the character to be replaced: ");

const newChar = prompt("Enter the new character: ");

var replacedString = str.replace(oldChar, newChar);

document.write("Replaced String: " + replacedString + "<br>");

//is palindrome

var isPalindrome = true;

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

if (str[i] !== str[length - 1 - i]) {

isPalindrome = false;

break;

}

}

if (isPalindrome) {

document.write(str + " is palindrome.");

} else {

document.write(str + " is not palindrome.");

}

document.write("<hr style='border-top: dashed #B9B4C7' width = '400' size = '3' align = 'left'> Shivam Gaonkar");

</script>

</body>

</html>

Experiment 4

CODE:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Experiment 4</title>

</head>

<body>

<script>

const string1 = "Apples";

const string2 = "Mango";

document.write("String 1: " + string1 + "<br>");

document.write("String 2: " + string2 + "<br>");

document.write("Compare using equality operator (===): " + (string1 === string2) + "<br>");

document.write("Comparing length of the strings: " + (string1.length > string2.length) + "<br>");

document.write("Compare using localeCompare() method: " + (string1.localeCompare(string2)) + "<br>");

document.write("<hr style='border-top: dashed #B9B4C7' width = '400' size = '3' align = 'left'> Shivam Gaonkar");

</script>

</body>

</html>

Experiment 5

<!DOCTYPE html>

<html>

<head>

<title>Experiment 5</title>

</head>

<style>

body {

margin-top: 10%;

text-align: center;

background-color: #D0E7D2;

color: #12486B;

font-family: 'Playfair Display', serif;

}

h1 {

font-weight: normal;

letter-spacing: .125rem;

}

li {

display: inline-block;

font-size: 1.5em;

padding: 1em;

}

li span {

font-size: 4.5rem;

}

</style>

<body>

<div>

<div>

<h1 id="heading">Timer To New Year</h1>

</div>

<div>

<div id="countDown">

<ul>

<li><span id="days"></span>Days</li>

<li><span id="hours"></span>Hours</li>

<li><span id="minutes"></span>Minutes</li>

<li><span id="seconds"></span>Seconds</li>

</ul>

</div>

</div>

<div><h4>Shivam Gaonkar</h4></div>

</div>

<script>

var deadline = new Date("December 31, 2023 23:59:59").getTime();

let x = setInterval(function () {

var currentTime = new Date().getTime();

var timeLeft = deadline - currentTime;

document.getElementById('days').innerHTML = Math.floor(timeLeft / (1000 \* 60 \* 60 \* 24)),

document.getElementById('hours').innerHTML = Math.floor((timeLeft % (1000 \* 60 \* 60 \* 24)) / (1000 \* 60 \* 60)),

document.getElementById('minutes').innerHTML = Math.floor((timeLeft % (1000 \* 60 \* 60)) / (1000 \* 60)),

document.getElementById('seconds').innerHTML = Math.floor((timeLeft % (1000 \* 60)) / (1000));

if (timeLeft <= 0) {

clearInterval(x);

document.getElementById('heading').innerHTML = 'Happy New Year!';

}

}, 1000);

</script>

</body>

</html>

Experiment 6

CODE:

const arr = ['Apple', 'Banana', 'Mango', 'Litchi', 'Guava'];

console.log(arr);

console.log('After sort(): ' + arr.sort());

console.log('Removed fruit using pop(): ' + arr.pop());

console.log('Removed fruit using shift(): ' + arr.shift());

console.log('Array includes Guava: ' + arr.includes('Guava'));

console.log('Index of Apple: ' + arr.indexOf('Apple'));

console.log('Index of Banana: ' + arr.indexOf('Banana'));

console.log('Add "Watermelon" using push(): ' + arr.push('Watermelon'));

console.log('Add "Cherry" using push(): ' + arr.unshift('Cherry'));

function emptyArr(arr){

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

arr.pop();

}

return arr;

}

console.log(arr);

console.log('Final Array: ' + emptyArr(arr));

console.log('Shivam Gaonkar');

Experiment:7

CODE:

function union (a, b){

let unionSet = new Set(a);

for (let i of b){

unionSet.add(i);

}

return unionSet;

}

function intersection(a, b){

let intersectionSet = new Set();

for (let i of b){

if (a.has(i)){

intersectionSet.add(i);

}

}

return intersectionSet;

}

function difference(a, b){

let differenceSet = new Set(a);

for (let i of b){

differenceSet.delete(i);

}

return differenceSet;

}

function subset(a, b){

for (let i of b){

if(!a.has(i)){

return false

}

}

return true

}

let setA = new Set(['Pune', 'Mumbai', 'Banglore']);

let setB = new Set(['Chennai', 'Delhi', 'Pune']);

console.log("Set A: ");

console.log(setA);

console.log("Set B: ");

console.log(setB);

console.log("Union Set: ");

console.log(union(setA, setB));

console.log("Intersection Set: ");

console.log(intersection(setA, setB));

console.log("Difference Set: ");

console.log(difference(setA, setB));

console.log("Subset: ");

console.log(subset(setA, setB));

console.log("Shivam Gaonkar");

Experiment: 8

CODE:

<html>

<head>

<body>

<button class="button" onmouseover="document.bgColor='yellow' ">

mouseover</button></br></br>

<button class="button" onmouseout="document.bgColor='Red' ">

mouseout</button></br></br>

<button class="button" onfocus="document.bgColor='Blue' ">

focus</button></br></br>

</body>

</html>