1.Library Management system:

Anns- 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">
</head>
<body>
   <nav>
        <h3><i class="fa-solid fa-user-tie"></i> <span class="a"></span> Library Management
System </h3>
       <l
           <i class="fa-regular fa-address-card"></i> Home 
           <i class="fa-solid fa-book"></i> Books 
           <i class="fa-solid fa-phone"></i> Contact 
           <input type="search" placeholder="search books"><button class="btn-1">Search</button>
        </nav>
    <section class="firstsection">
        <div class="leftsection">
           <h3> <span class="namecolour"><b>Alpha Publication</b></span></h3><b></b>
           <h5> <b>Kolkata</b></h5>
           <br>
           <h6 class="Photographer">All types of books are available here</h6>
       </div>
       <div class="rightsection">
            <img src="https://cdn.kobo.com/book-images/bc852c9f-2f5e-46fc-8bd5-</pre>
92adb413189b/1200/1200/False/bhagavad-gita-as-it-is-1.jpg" title="Search">
        </div>
    </section>
       <h3 class="book"> Interested to read books ? </h3>
   </div>
    <br>
    <button class="button">Click here</putton>
    <footer>
        <div class="footer ">
```

```
<div class="footer-first">
   <h3>
       <br/>b>Alpha Publication</b>
   </h3>
</div>
<div class="footer-third">
   <l
       <a class="home"><i class="fa-solid fa-house"></i> Home </a>  <br>
           <a class="about"><i class="fa-regular fa-address-card"></i> About </a>
        <br>
       <a class="email"><i class="fa-regular fa-envelope"></i> Email </a> <br>
       <a class="contacts"><i class="fa-solid fa-address-book"></i> Reach Me</a>
        <br>
   </div>
<div class="footer-fourth">
   <l
       <
           <class="facebook"><i class="fab fa-facebook"></i> Facebook </a>
        <br>
       <1i>>
           <class="instagram"><i class="fa-brands fa-instagram"></i> Instagram </a>
        <br>
       <
           <class="linkedin"><i class="fa-brands fa-linkedin"></i> Linkedin </a>
        <br>
       <
           <class="telegram"><i class="fa-brands fa-telegram"></i> Telegram
              </a>
```

```
 <br>
               </div>
        </div>
    </footer>
</body>
</html>
Css-
* {
   margin: 0;
    padding: 0;
}
body {
    background-image: url(https://www.kortext.com/wp-content/uploads/Book-blog-image.jpg);
    background-size: cover;
    color: white;
}
nav {
    display: flex;
    justify-content: space-around;
    align-items: center;
    height: 40px;
    background-color: rgba(0, 140, 255, 0.651);
   width: auto;
}
nav ul {
    display: flex;
    justify-content: center;
}
nav ul li {
   list-style: none;
   margin: 0 23px;
}
nav ul li a {
   text-decoration: none;
    color: white;
}
```

```
.firstsection {
    display: flex;
    justify-content: space-around;
    margin: 23px 0;
    align-items: center;
}
.firstsection div {
    width: 30%;
}
.leftsection {
   font-size: 2.6rem;
   width: 34px;
    /* margin-left: 2%; */
}
.pv {
    font-size: xx-large;
    font-style: italic;
    color: rgb(0, 255, 55);
}
.Photographer {
    font-size: xx-large;
    font-style: italic;
   color: rgb(202, 8, 8);
   font-family: 'Courier New', Courier, monospace;
}
.coder {
    font-size: xx-large;
    font-style: italic;
    color: rgb(0, 174, 255);
    font-family: 'Franklin Gothic Medium', 'Arial Narrow', Arial, sans-serif;
    font-weight: 800;
}
.rightsection img {
    width: 50%;
    margin: 50px 0;
    padding: 10px;
    border-radius: 20px;
    border: solid;
    border-color: blue;
    box-shadow: 5px 5px 20px 10px yellow;
    margin-left: 20%;
```

```
}
h5 {
    font-size: 25px;
    color: rgb(4, 0, 255);
    margin-left: 2%;
}
.book {
    color: rgb(253, 253, 253);
    font-size: x-large;
    font-style: italic;
    font-family: 'Courier New', Courier, monospace;
    text-align: center;
}
.button {
    margin-left: 45%;
    border: solid;
    border-color: aqua;
    color: red;
    padding: 10px 10px;
    font-family: cursive;
    font-size: large;
    cursor: pointer;
}
.btn-1 {
    /* margin-left: 45%; */
    border: solid;
    border-color: aqua;
    color: red;
   /* padding: 10px 10px; */
    font-family: cursive;
    /* font-size: large; */
    cursor: pointer;
}
footer {
    margin-top: 10%;
}
.footer {
    display: flex;
    padding: 2px 1px;
    justify-content: space-evenly;
    height: 40vh;
    background-color: rgba(0, 140, 255, 0.596);
}
```

```
ul li {
   list-style: none;
    margin: 0 23px;
    cursor: pointer;
}
footer ul li a {
    text-decoration: none;
    color: white;
}
.footer-first h3 {
    margin-left: 20%;
    font-size: xx-large;
}
.footer-third {
    margin-left: 15%;
    margin-top: 4%;
    font-size: large;
}
.footer-fourth {
    margin-right: 40%;
    margin-top: 4%;
    font-size: large;
}
marquee {
    width: 280%;
}
.backg z-iroundcolour {
    width: 105vw;
    height: 290vh;
    position: absolute;
    transition: 1s;
   margin-top: 19%;
}
.ForPhoto {
    margin-left: 16%;
    margin-top: 2%;
    width: 65vw;
}
```

2. Write a java script program to evaluate the following mathematical Expression 1+2/2!+3/3!+.....+n/n!.

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Mathematical Expression Evaluation</title>
</head>
<body>
<script>
  // Function to calculate factorial
  function factorial(num) {
    if (num === 0 | | num === 1) {
      return 1;
    } else {
      return num * factorial(num - 1);
    }
  }
  // Function to evaluate the mathematical expression
  function evaluateExpression(n) {
    let sum = 0;
    for (let i = 1; i \le n; i++) {
      sum += i / factorial(i);
    }
    return sum;
  }
  // Example usage:
const n = 5; // Change the value of n as needed
  const result = evaluateExpression(n);
  console.log(`The result of the expression for n=${n} is:`, result);
```

```
Web development Lab
```

```
</script>
</body>
</html>
Output:
```

3. Write a Java Script program to display Greatest Number among Three Numbers.

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Greatest Number among Three Numbers</title>
</head>
<body>
<script>
 // Function to find the greatest number among three numbers
  function findGreatestNumber(num1, num2, num3) {
    if (num1 >= num2 && num1 >= num3) {
      return num1;
    } else if (num2 >= num1 && num2 >= num3) {
      return num2;
    } else {
      return num3;
    }
  }
 // Example usage:
  const num1 = 10;
const num2 = 25;
  const num3 = 15;
```

```
const greatestNumber = findGreatestNumber(num1, num2, num3);
console.log(`The greatest number among ${num1}, ${num2}, and ${num3} is:`, greatestNumber);
</script>
</body>
</html>
Output:
```

The greatest number among 10, 25, and 15 is: 25

4. Write a java script program to sort the array (Bubble Sort).

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Bubble Sort</title>
</head>
<body>
<script>
  // Function to perform Bubble Sort
  function bubbleSort(arr) {
    const n = arr.length;
    for (let i = 0; i < n - 1; i++) {
      for (let j = 0; j < n - i - 1; j++) {
         if (arr[j] > arr[j + 1]) {
           // Swap arr[j] and arr[j + 1]
           let temp = arr[j];
           arr[j] = arr[j + 1];
           arr[j + 1] = temp;
         }
      }
```

```
return arr;

// Example usage:

const unsortedArray = [64, 34, 25, 12, 22, 11, 90];

console.log("Unsorted Array:", unsortedArray);

const sortedArray = bubbleSort(unsortedArray);

console.log("Sorted Array:", sortedArray);

</script>

</body>

</html>

Output:
```

```
Unsorted Array: ▶ (7) [64, 34, 25, 12, 22, 11, 90]

Sorted Array: ▶ (7) [11, 12, 22, 25, 34, 64, 90]
```

5. Create a login Page for the railway reservation system.

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Railway Reservation System - Login</title>
<style>
body {
font-family: Arial, sans-serif;
}
.container {
max-width: 400px;
margin: 100px auto;
padding: 20px;
```

```
border: 1px solid #ccc;
    border-radius: 5px;
    box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
  }
  h2 {
    text-align: center;
    margin-bottom: 20px;
  }
  input[type="text"],
  input[type="password"],
  input[type="submit"] {
    width: 100%;
    padding: 10px;
    margin-bottom: 15px;
    border: 1px solid #ccc;
    border-radius: 3px;
    box-sizing: border-box;
  }
  input[type="submit"] {
    background-color: #4CAF50;
    color: white;
    cursor: pointer;
  }
  input[type="submit"]:hover {
    background-color: #45a049;
  }
</style>
</head>
<body>
<div class="container">
  <h2>Railway Reservation System - Login</h2>
```

```
<form action="login.php" method="POST">
    <label for="username">Username:</label>
    <input type="text" id="username" name="username" required>

    <label for="password">Password:</label>
    <input type="password" id="password" name="password" required>

    <input type="submit" value="Login">
    </form>

</div>
</div>
</body>
</html>
Output:
```

Railway Reservation System - Login							
Username:							
Password:							
		Login					

6. Write a Java Script program to calculate Area and circumference of a Circle.

<!DOCTYPE html>

```
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Circle Area and Circumference Calculator</title>
</head>
<body>
<script>
 // Function to calculate the area of a circle
  function calculateArea(radius) {
    return Math.PI * radius * radius;
  }
  // Function to calculate the circumference of a circle
  function calculateCircumference(radius) {
    return 2 * Math.PI * radius;
  }
// Example usage:
  const radius = 5;
  const area = calculateArea(radius);
  const circumference = calculateCircumference(radius);
  console.log(`For a circle with radius ${radius}:`);
  console.log(`Area: ${area.toFixed(2)}`); // Displaying area rounded to 2 decimal places
  console.log(`Circumference: ${circumference.toFixed(2)}`); // Displaying circumference rounded to
2 decimal places
</script>
</body>
</html>
Output:
For a circle with radius 5:
Area: 78.54
Circumference: 31.42
```

7. Write a Java Script program to demonstrate a multiplication table. <!DOCTYPE html> <html lang="en"> <head> <meta charset="UTF-8"> <meta name="viewport" content="width=device-width, initial-scale=1.0"> <title>Multiplication Table</title> <style> table { border-collapse: collapse; width: 100%; } th, td { border: 1px solid #ddd; padding: 8px; text-align: center; } th { background-color: #f2f2f2; } </style> </head> <body> <script> // Function to generate multiplication table function generateMultiplicationTable(rows, cols) { let table = ''; // Create table header table += '×'; for (let j = 1; $j \le cols$; j++) { table += `\${j}`;

```
}
    table += '';
    // Create table rows
    for (let i = 1; i <= rows; i++) {
      table += `${i}`;
      for (let j = 1; j <= cols; j++) {
        table += `${i * j}`;
      }
      table += '';
    }
    table += '';
    return table;
  }
  // Example usage:
  const rows = 10;
  const cols = 10;
  const multiplicationTable = generateMultiplicationTable(rows, cols);
  document.body.innerHTML = multiplicationTable;
</script>
</body>
</html>
Output:
```

×	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

8. Create a Web page with an image, when the mouse is doubled clicked the new image should replace the existing.

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Image Replacement on Double Click</title>
<style>
    body {
        text-align: center;
    }
    img {
        max-width: 100%;
        height: auto;
        cursor: pointer;
    }
</style>
</head>
<body>
<!-- Original Image -->
<img id="originalImage" src="waterbottle.jpg" alt="Original Image">
<script>
    var images = ['waterbottle.jpg', 'bat.webp']; // List of image URLs
    var currentIndex = 0;
    // Function to replace image on double click
    document.getElementById('originalImage').addEventListener('dblclick',
function() {
        // Increment index to display the next image
        currentIndex = (currentIndex + 1) % images.length;
        this.src = images[currentIndex];
    });
</script>
</body>
</html>
9. Create a java script program to accept the first, middle, last names of user and print them.
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>User Name Input</title>
</head>
<body>
```

```
<h2>Enter Your Name</h2>
<form id="nameForm">
    <label for="firstName">First Name:</label>
    <input type="text" id="firstName" name="firstName"><br><br></pr>
    <label for="middleName">Middle Name:</label>
    <input type="text" id="middleName" name="middleName"><br><br></pr>
    <label for="lastName">Last Name:</label>
    <input type="text" id="lastName" name="lastName"><br><br>
    <input type="button" value="Submit" onclick="printNames()">
</form>
<div id="output"></div>
<script>
    function printNames() {
        // Get the values of first, middle, and last names from the form
        var firstName = document.getElementById('firstName').value;
        var middleName = document.getElementById('middleName').value;
        var lastName = document.getElementById('lastName').value;
        // Display the names on the web page
  document.getElementById('output').innerHTML =
"First Name: " + firstName + "" + "Middle Name: "+middleName+"""
+"Last Name: " + lastName + "";
</script>
</body>
</html>
Output:
Enter Your Name
First Name: Tarak
Middle Name: nath
Last Name: Chakraborty
Submit
First Name: Tarak
Middle Name: nath
Last Name: Chakraborty
```

```
Write a HTML program to marquee the image and text.
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Image and Text Marquee</title>
</head>
<body>
<marquee behavior="scroll" direction="left" scrollamount="3">
    <img src="image.jpg" alt="Marquee Image" style="height: 100px;">
<!-- Replace "image.jpg" with your image URL -->
    <span>This is a sample text for the marquee effect. </span>
</marquee>
</body>
</html>
Write a Java Script program to demonstrate Arithmetic Operations using Switch
case.Sum of n numbers in HTML.
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Arithmetic Operations and Sum of n Numbers</title>
</head>
<body>
<h2>Arithmetic Operations</h2>
Enter two numbers and select the operation:
<input type="number" id="num1" placeholder="Enter first number">
<input type="number" id="num2" placeholder="Enter second number">
<select id="operation">
    <option value="add">Addition (+)</option>
    <option value="subtract">Subtraction (-)</option>
    <option value="multiply">Multiplication (*)</option>
    <option value="divide">Division (/)</option>
</select>
<button onclick="performOperation()">Calculate</button>
```

```
<h2>Sum of n Numbers</h2>
Enter the value of 'n' and click on 'Calculate Sum':
<input type="number" id="n" placeholder="Enter value of n">
<button onclick="calculateSum()">Calculate Sum</button>
p id="sum">
<script>
    // Function to perform arithmetic operations
    function performOperation() {
        var num1 = parseFloat(document.getElementById('num1').value);
        var num2 = parseFloat(document.getElementById('num2').value);
        var operation = document.getElementById('operation').value;
        var result;
        switch(operation) {
            case 'add':
                result = num1 + num2;
                break;
            case 'subtract':
                result = num1 - num2;
                break;
            case 'multiply':
                result = num1 * num2;
                break;
            case 'divide':
                if(num2 === 0) {
                    result = "Cannot divide by zero!";
                    result = num1 / num2;
                }
                break;
            default:
                result = "Invalid operation";
        }
        document.getElementById('result').textContent = "Result: " + result;
    }
    // Function to calculate sum of n numbers
    function calculateSum() {
        var n = parseInt(document.getElementById('n').value);
        var sum = 0;
        for(var i = 1; i <= n; i++) {
            sum += i;
        }
```

```
document.getElementById('sum').textContent = "Sum of first " + n + "
numbers is: " + sum;
}
</script>
</body>
</html>
Output:
```

Arithmetic Operations

Enter two numbers and select the operation:



Result: 0

Sum of n Numbers

Enter the value of 'n' and click on 'Calculate Sum':

```
10 Calculate Sum
```

Sum of first 10 numbers is: 55

<!DOCTYPE html>
<html lang="en">

```
Write a JavaScript program to find out the Fibonacci Series.
```

```
// Function to generate Fibonacci series
    function generateFibonacciSeries() {
        var numTerms = parseInt(document.getElementById('numTerms').value);
        var fibonacciSeries = [];
        // First two terms of Fibonacci series
        var term1 = 0, term2 = 1;
        // Push the first two terms into the series
        fibonacciSeries.push(term1);
        fibonacciSeries.push(term2);
        // Generate subsequent terms
        for (var i = 2; i < numTerms; i++) {</pre>
            var nextTerm = term1 + term2;
            fibonacciSeries.push(nextTerm);
            term1 = term2;
            term2 = nextTerm;
        }
        // Display the Fibonacci series
        document.getElementById('result').textContent = "Fibonacci Series: " +
fibonacciSeries.join(', ');
    }
</script>
</body>
</html>
Output:
```

Generate Fibonacci Series

Enter the number of terms: 8

Fibonacci Series: 0, 1, 1, 2, 3, 5, 8, 13

Write a HTML program to create Four Vertical Frames.

<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">

```
<title>Four Vertical Frames</title>
<style>
  /* Style for the frames */
  .frame {
    width: 24%; /* Adjust the width as needed */
    height: 100vh; /* Full height of the viewport */
    border: 1px solid #000; /* Border for each frame */
    float: left; /* Align frames horizontally */
    box-sizing: border-box; /* Include border and padding in the element's total width and height */
  }
</style>
</head>
<body>
  <div class="frame">
    <!-- Content for the first frame -->
    <h2>Frame 1</h2>
    This is the content of frame 1.
  </div>
  <div class="frame">
    <!-- Content for the second frame -->
    <h2>Frame 2</h2>
    This is the content of frame 2.
  </div>
  <div class="frame">
    <!-- Content for the third frame -->
    <h2>Frame 3</h2>
    This is the content of frame 3.
  </div>
  <div class="frame">
    <!-- Content for the fourth frame -->
    <h2>Frame 4</h2>
```

```
This is the content of frame 4.
  </div>
</body>
</html>
Write a java script program to implement Stack methods in an Array.
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Stack Implementation using JavaScript</title>
</head>
<body>
<script>
  class Stack {
    constructor() {
      this.items = []; // Array to store stack elements
    }
    // Function to add an element to the stack
    push(element) {
      this.items.push(element);
    }
    // Function to remove the top element from the stack
    pop() {
      if (this.items.length === 0) {
        return "Underflow"; // If stack is empty
      }
      return this.items.pop();
```

```
}
  // Function to view the top element in the stack
  peek() {
    #top a j element ta ache
    return this.items[this.items.length - 1];
  }
  // Function to check if the stack is empty
  isEmpty() {
    return this.items.length === 0;
  }
  // Function to get the size of the stack
  size() {
    return this.items.length;
  }
}
// Example usage:
const stack = new Stack();
// Pushing elements onto the stack
stack.push(10);
stack.push(20);
stack.push(30);
// Printing the top element
console.log("Top element is:", stack.peek());
// Removing elements from the stack
```

```
console.log(stack.pop(), "popped from stack");
console.log(stack.pop(), "popped from stack");

// Checking if stack is empty
console.log("Is stack empty?", stack.isEmpty());

// Getting the size of the stack
console.log("Size of stack:", stack.size());

</script>
</body>
</html>
```

Output:

```
Top element is: 30
30 'popped from stack'
20 'popped from stack'
Is stack empty? false
Size of stack: 1
```

Write a program to create a Pull down menu on various Web Designing Software.

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Dropdown Menu</title>

<style>

/* Style for the dropdown menu */

```
.dropdown {
    position: relative;
    display: inline-block;
  }
  .dropdown-content {
    display: none;
    position: absolute;
    background-color: #f9f9f9;
    min-width: 160px;
    box-shadow: 0 8px 16px 0 rgba(0,0,0,0.2);
    z-index: 1;
  }
  .dropdown-content a {
    color: black;
    padding: 12px 16px;
    text-decoration: none;
    display: block;
  }
  .dropdown-content a:hover {
    background-color: #f1f1f1;
  }
  .dropdown:hover .dropdown-content {
    display: block;
  }
  .dropdown:hover .dropbtn {
    background-color: #3e8e41;
  }
</style>
</head>
<body>
<div class="dropdown">
```

```
<button class="dropbtn">Web Designing Software</button>
  <div class="dropdown-content">
    <a href="#">Adobe Dreamweaver</a>
    <a href="#">Sketch</a>
    <a href="#">Figma</a>
    <a href="#">Adobe XD</a>
    <a href="#">InVision Studio</a>
    <!-- Add more software options as needed -->
  </div>
</div>
</body>
</html>
Write a java Script program to print all prime numbers.
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Prime Numbers</title>
</head>
<body>
<script>
function printPrimes(limit) {
  // Function to check if a number is prime
  function isPrime(num) {
    if (num <= 1) return false;
    if (num === 2) return true;
    if (num % 2 === 0) return false;
    for (let i = 3; i <= Math.sqrt(num); i += 2) {
      if (num % i === 0) return false;
 }
```

```
return true;
  }
  // Print prime numbers up to the specified limit
  for (let i = 2; i <= limit; i++) {
    if (isPrime(i)) {
      console.log(i);
      document.write(i + "<br>"); // Write prime numbers to the document
    }
  }
}
// Example usage: Print prime numbers up to 100
printPrimes(100);
</script>
</body>
</html>
Output:
2
3
5
7
11
13
17
 19
23
29
31
37
41
43
47
 53
 59
61
 67
 71
73
 79
 83
89
 97
```