Lab Practice -2 [404184C] : ELECTIVE-III(C) - JavaScript

ACADEMIC YEAR: 2024-25

CLASS	: BE	DIV	: 7	Batch	: R-7	DATE	:
Roll No	42315	ABC ID	: 187-311-403-781			SEMESTER	: I

Experiment No.: 2

HTML ➔

1. Using for loop

<!DOCTYPE html>

<html lang="en">

<head>

 <meta charset="UTF-8">

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

 <title>Multiplication Table Generator using for loop</title>

 <link rel="stylesheet" href="style_2.css">

</head>

<body>

 <div class="container">

  <h1>Multiplication Table Generator Using For Loop</h1>

  <label for="numberInput">Enter a number: </label>

  <input type="number" id="numberInput" placeholder="Enter number">

  <button onclick="generateTableUsingForLoop()">Generate Table</button>

  <div id="tableResult"></div>

  <div class="info">

   <h2>Name: Tanmay Deo</h2>

   <h3>Roll Number: 42315</h3>

  </div>

 </div>

```html
    <script src="script_2.js"></script>

    </body>

    </html>
```

2. Using while loop

```html
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

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

  <title>Multiplication Table Generator using while loop</title>

  <link rel="stylesheet" href="style_2.css">

</head>

<body>

  <div class="container">

    <h1>Multiplication Table Generator Using While Loop</h1>

    <label for="numberInput">Enter a number: </label>

    <input type="number" id="numberInput" placeholder="Enter number">

    <button onclick="generateTableUsingWhileLoop()">Generate Table</button>

    <div id="tableResult"></div>

    <div class="info">

      <h2>Name: Tanmay Deo</h2>

      <h3>Roll Number: 42315</h3>

    </div>

  </div>

  <script src="script_2.js"></script>

</body>

</html>
```

3. Using do-while loop

```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Multiplication Table Generator using do-while loop</title>
  <link rel="stylesheet" href="style_2.css">
</head>
<body>
  <div class="container">
    <h1>Multiplication Table Generator Using Do-While Loop</h1>
    <label for="numberInput">Enter a number: </label>
    <input type="number" id="numberInput" placeholder="Enter number">
    <button onclick="generateTableUsingDoWhileLoop()">Generate Table</button>
    <div id="tableResult"></div>
    <div class="info">
      <h2>Name: Tanmay Deo</h2>
      <h3>Roll Number: 42315</h3>
    </div>
  </div>
  <script src="script_2.js"></script>
</body>
</html>
```

CSS ➔

```css
body {

  font-family: Arial, sans-serif;

  background-color: #f0f8ff;

  display: flex;

  justify-content: center;

  align-items: center;

  height: 100vh;

  margin: 0;

}
.container {

  background-color: white;

  padding: 20px;

  border-radius: 8px;

  box-shadow: 0px 4px 8px rgba(0, 0, 0, 0.1);

  text-align: center;

}
input {

  display: block;

  margin: 10px auto;

  padding: 10px;

  border: 1px solid #ccc;

  border-radius: 4px;

}
```

```css
button {
  padding: 10px 20px;
  margin-top: 10px;
  background-color: #4caf50;
  color: white;
  border: none;
  border-radius: 4px;
  cursor: pointer;
}
button:hover {
  background-color: #45a049;
}
h1 {
  color: #333;
}
#tableResult {
  margin-top: 20px;
  color: #333;
  background-color: #e0f7fa;
  padding: 10px;
  border-radius: 4px;
}
```
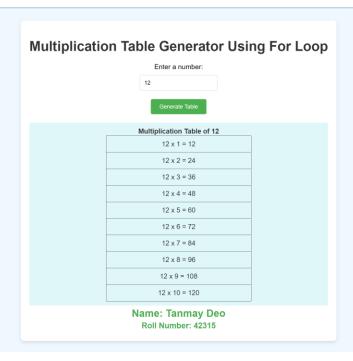
```css
table {
  margin: 0 auto;
  border-collapse: collapse;
  width: 50%;
}
td {
  border: 1px solid #333;
  padding: 10px;
  text-align: center;
}
h2,
h3 {
  margin: 5px;
  color: #4caf50;
}
```
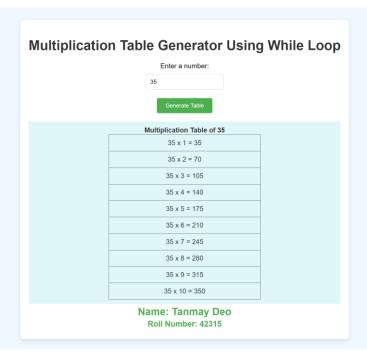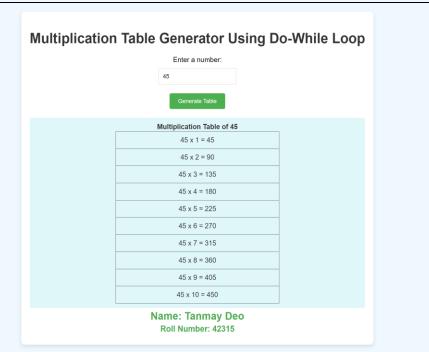
JavaScript ➔

```javascript
function generateTableUsingForLoop() {
  let number = parseInt(document.getElementById("numberInput").value)
  if (isNaN(number)) {
    document.getElementById("tableResult").innerHTML =
      "Please enter a valid number.";
    return;
  }
  let tableHTML = `<table><tr><th>Multiplication Table of ${number}</th></tr>`;
  for (let i = 1; i <= 10; i++) {
    tableHTML += `<tr><td>${number} x ${i} = ${number * i}</td></tr>`;
  }
  tableHTML += "</table>";
  document.getElementById("tableResult").innerHTML = tableHTML;
}
function generateTableUsingWhileLoop() {
  let number = parseFloat(document.getElementById("numberInput").value);
  if (isNaN(number)) {
    document.getElementById("tableResult").innerHTML =
      "Please enter a valid number.";
    return;
  }
  let tableHTML = `<table><tr><th>Multiplication Table of ${number}</th></tr>`;
  let i = 1;
  while (i <= 10) {
    tableHTML += `<tr><td>${number} x ${i} = ${number * i}</td></tr>`;
    i++;
  }
```

```javascript
    tableHTML += "</table>";

    document.getElementById("tableResult").innerHTML = tableHTML;

}

function generateTableUsingDoWhileLoop() {

  let number = parseFloat(document.getElementById("numberInput").value);

  if (isNaN(number)) {

    document.getElementById("tableResult").innerHTML =

      "Please enter a valid number.";

    return;

  }

  let tableHTML = `<table><tr><th>Multiplication Table of ${number}</th></tr>`;

  let i = 1;

  do {

   tableHTML += `<tr><td>${number} x ${i} = ${number * i}</td></tr>`;

   i++;

  } while (i <= 10);

  tableHTML += "</table>";

  document.getElementById("tableResult").innerHTML = tableHTML;

}
```

Output ➜

Multiplication Table Generator Using For Loop

Enter a number:

12

Generate Table

Multiplication Table of 12

12 x 1 = 12
12 x 2 = 24
12 x 3 = 36
12 x 4 = 48
12 x 5 = 60
12 x 6 = 72
12 x 7 = 84
12 x 8 = 96
12 x 9 = 108
12 x 10 = 120

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Multiplication Table Generator Using While Loop

Enter a number:

35

Generate Table

Multiplication Table of 35

35 x 1 = 35
35 x 2 = 70
35 x 3 = 105
35 x 4 = 140
35 x 5 = 175
35 x 6 = 210
35 x 7 = 245
35 x 8 = 280
35 x 9 = 315
35 x 10 = 350

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Multiplication Table Generator Using Do-While Loop

Enter a number:

45

Generate Table

Multiplication Table of 45

45 x 1 = 45
45 x 2 = 90
45 x 3 = 135
45 x 4 = 180
45 x 5 = 225
45 x 6 = 270
45 x 7 = 315
45 x 8 = 360
45 x 9 = 405
45 x 10 = 450

Name: Tanmay Deo
Roll Number: 42315

Date: Course Teacher Sign