



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

ACADEMIC YEAR: 2024-25

CLASS	: BE	DIV	: 6	Batch	: P6	DATE	: / /24
Roll No	42130	ABC ID	:			SEMESTER	: I

Experiment No.:

Code:

```
<!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</title>
  <script src="scripts.js" defer></script>
  <style>
    body {
      font-family: Arial, sans-serif;
      background-color: #f9f9f9;
      padding: 20px;
      display: flex;
      justify-content: center;
      align-items: center;
      flex-direction: column;
      height: 100vh;
      margin: 0;
    }

    h1 {
      text-align: center;
    }

    input[type="number"] {
      width: 200px;
      padding: 5px;
      margin-bottom: 10px;
      border: 1px solid #ccc;
      border-radius: 4px;
    }

    button {
      background-color: #6f4ac7;
      color: white;
      padding: 10px;
      border: none;
      border-radius: 5px;
      cursor: pointer;
```

```

        margin-right: 5px;
        margin-bottom: 10px;
    }

    button:hover {
        background-color: #4ab8c7;
    }

    #result {
        margin-top: 20px;
        font-size: 1.1em;
        font-weight: bold;
        background-color: #fff;
        padding: 15px;
        border-radius: 10px;
        border: 1px solid #ddd;
        text-align: left;
        width: 100%;
        max-width: 400px;
    }

    .center {
        text-align: center;
    }
</style>
</head>

<body>
    <h1>Multiplication Table Generator</h1>

    <div class="center">
        <label for="number-input">Enter a Number:</label>
        <input type="number" id="number-input" min="0"><br>
        <!-- <button onclick="generateAllTables()">Generate All Tables</button> -->
        <button onclick="generateTableForButton()">Generate For Table</button>
        <button onclick="generateTableWhileButton()">Generate While Table</button>
        <button onclick="generateTableDoWhileButton()">Generate Do-While Table</button>
        <button onclick="generateAllTables()">Generate All Table</button>
    </div>

    <div id="result"></div>
</body>

</html>

```

Script.js

```
function generateTableFor(number) {
  let result = '<p>Multiplication Table using <strong>for loop</strong>:</p>';
  for (let i = 1; i <= 10; i++) {
    result += `${number} x ${i} = ${number * i}<br>`;
  }
  return result;
}

function generateTableWhile(number) {
  let result = '<p>Multiplication Table using <strong>while loop</strong>:</p>';
  let i = 1;
  while (i <= 10) {
    result += `${number} x ${i} = ${number * i}<br>`;
    i++;
  }
  return result;
}

function generateTableDoWhile(number) {
  let result = '<p>Multiplication Table using <strong>do-while loop</strong>:</p>';
  let i = 1;
  do {
    result += `${number} x ${i} = ${number * i}<br>`;
    i++;
  } while (i <= 10);
  return result;
}

function generateAllTables() {
  const numberInput = document.getElementById('number-input');
  const number = numberInput.value;

  if (number === "") {
    alert('Please enter a number');
    return;
  }

  let resultDiv = document.getElementById('result');

  resultDiv.innerHTML = "";

  let forLoopResult = generateTableFor(number);
  let whileLoopResult = generateTableWhile(number);
  let doWhileLoopResult = generateTableDoWhile(number);

  resultDiv.innerHTML = forLoopResult + '<br>' + whileLoopResult + '<br>' + doWhileLoopResult;

  numberInput.value = "";
}
```

// Additional functions to handle button clicks for individual loop types

```
function generateTableForButton() {  
  const numberInput = document.getElementById('number-input');  
  const number = numberInput.value;  
  
  if (number === "") {  
    alert('Please enter a number');  
    return;  
  }  
  
  let resultDiv = document.getElementById('result');  
  resultDiv.innerHTML = generateTableFor(number);  
}
```

```
function generateTableWhileButton() {  
  const numberInput = document.getElementById('number-input');  
  const number = numberInput.value;  
  
  if (number === "") {  
    alert('Please enter a number');  
    return;  
  }  
  
  let resultDiv = document.getElementById('result');  
  resultDiv.innerHTML = generateTableWhile(number);  
}
```

```
function generateTableDoWhileButton() {  
  const numberInput = document.getElementById('number-input');  
  const number = numberInput.value;  
  
  if (number === "") {  
    alert('Please enter a number');  
    return;  
  }  
  
  let resultDiv = document.getElementById('result');  
  resultDiv.innerHTML = generateTableDoWhile(number);  
}
```

Output:

Multiplication Table Generator

Enter a Number:

[Generate For Table](#) [Generate While Table](#) [Generate Do-While Table](#) [Generate All Table](#)

Multiplication Table using for loop:

- 4 x 1 = 4
- 4 x 2 = 8
- 4 x 3 = 12
- 4 x 4 = 16
- 4 x 5 = 20
- 4 x 6 = 24
- 4 x 7 = 28
- 4 x 8 = 32
- 4 x 9 = 36
- 4 x 10 = 40

Multiplication Table Generator

Enter a Number: 4

Generate For Table Generate While Table **Generate Do-While Table** Generate All Table

Multiplication Table using while loop:

```
4 x 1 = 4
4 x 2 = 8
4 x 3 = 12
4 x 4 = 16
4 x 5 = 20
4 x 6 = 24
4 x 7 = 28
4 x 8 = 32
4 x 9 = 36
4 x 10 = 40
```

Multiplication Table Generator

Enter a Number: 4

Generate For Table Generate While Table **Generate Do-While Table** Generate All Table

Multiplication Table using do-while loop:

```
4 x 1 = 4
4 x 2 = 8
4 x 3 = 12
4 x 4 = 16
4 x 5 = 20
4 x 6 = 24
4 x 7 = 28
4 x 8 = 32
4 x 9 = 36
4 x 10 = 40
```

Date:

Course Teacher Sign