WEB TECHNOLOGY

Lab 5

Name: Gourab Chowdhury

Roll No: 22cs3069

Branch: CSE

T1. Make a simple web page that contains an h2 with the word “Hello” a text input box, and a button. When the user types a word or phrase into the input box and presses the button, replace the old h2 with the word entered. Using animation, make the word spin.

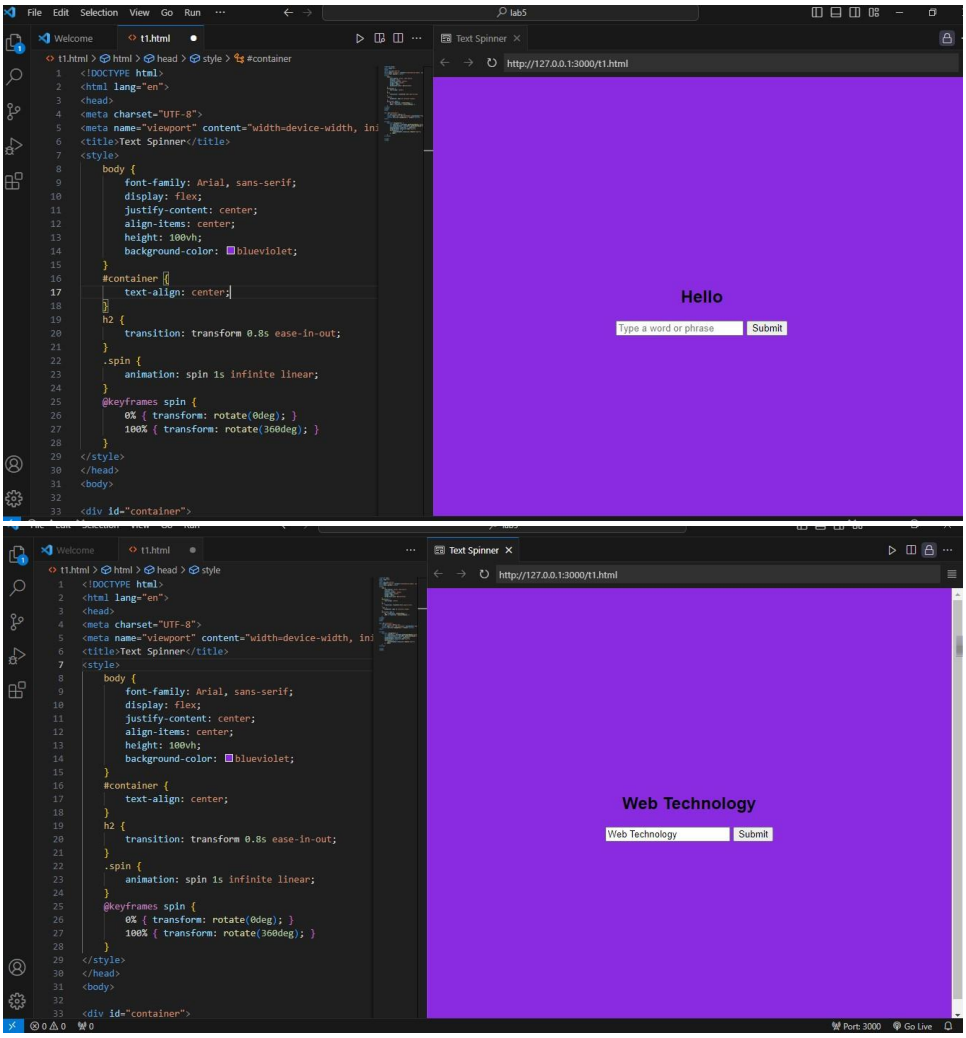
HTML Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Text Spinner</title>
<style>
    body {
        font-family: Arial, sans-serif;
        display: flex;
        justify-content: center;
        align-items: center;
        height: 100vh;
```

```
        background-color: blueviolet;
    }
    #container {
        text-align: center;
    }
    h2 {
        transition: transform 0.8s ease-in-out;
    }
    .spin {
        animation: spin 1s infinite linear;
    }
    @keyframes spin {
        0% { transform: rotate(0deg); }
        100% { transform: rotate(360deg); }
    }
</style>
</head>
<body>

<div id="container">
    <h2 id="output">Hello</h2>
    <input type="text" id="textInput" placeholder="Type a word or phrase">
    <button onclick="changeText()">Submit</button>
</div>

<script>
    function changeText() {
        var inputText = document.getElementById("textInput").value;
        var outputElement = document.getElementById("output");
```

```
        outputElement.innerText = inputText;
        outputElement.classList.add("spin");
        setTimeout(() => {
            outputElement.classList.remove("spin");
        }, 1000);
    }
</script>

</body>
</html>
```

Output:



T2. Make a simple web page that contains a button and a paragraph with the id of count Whenever this button is pressed increment the count by 1 and update the paragraph text. Also update the font size so that as the number gets larger, so does the font.

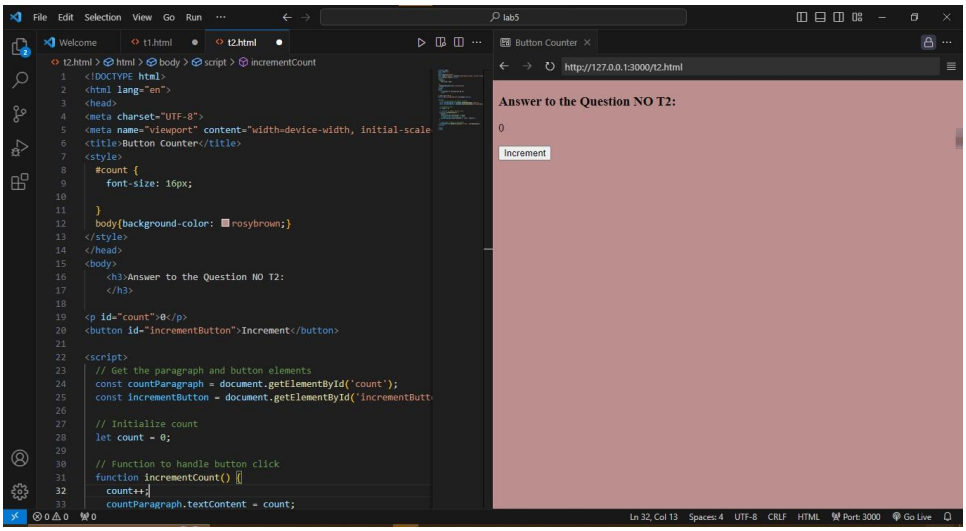
HTML CODE:

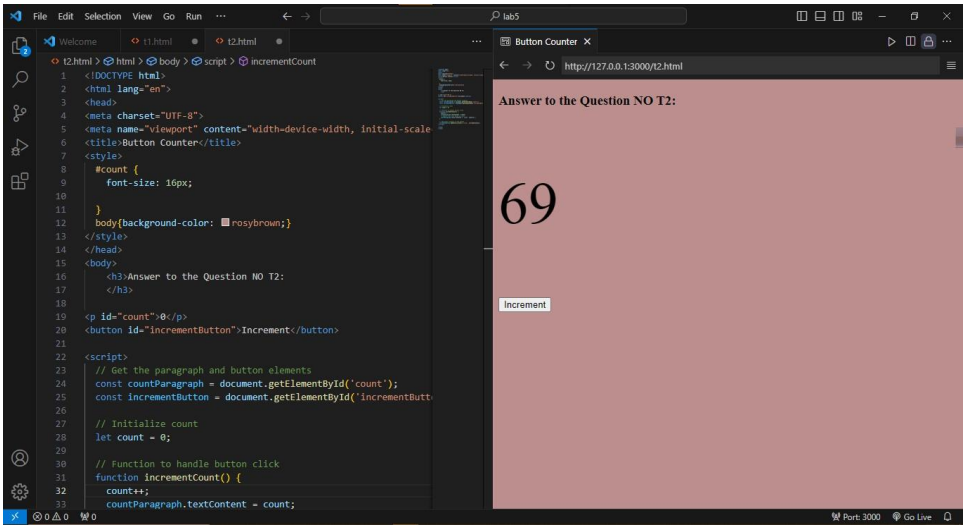
```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
```

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Button Counter</title>
<style>
  #count {
    font-size: 16px;

  }
  body{background-color: rosybrown;}
</style>
</head>
<body>
    <h3>Answer to the Question NO T2:
    </h3>

<p id="count">0</p>
<button id="incrementButton">Increment</button>

<script>
  // Get the paragraph and button elements
  const countParagraph = document.getElementById('count');
  const incrementButton = document.getElementById('incrementButton');

  // Initialize count
  let count = 0;

  // Function to handle button click
  function incrementCount() {
    count++;
    countParagraph.textContent = count;
```

```
    // Update font size based on count
    countParagraph.style.fontSize = `${16 + count}px`;
  }

  // Add event listener to the button
  incrementButton.addEventListener('click', incrementCount);
</script>

</body>
</html>
```

Output:





T3. Repeat the previous exercise but make a list of numbers. In this case you will not be able to simply update the innerHTML of the paragraph, you will need to use the document.createElement() and document.appendChild() functions to add a new list item.

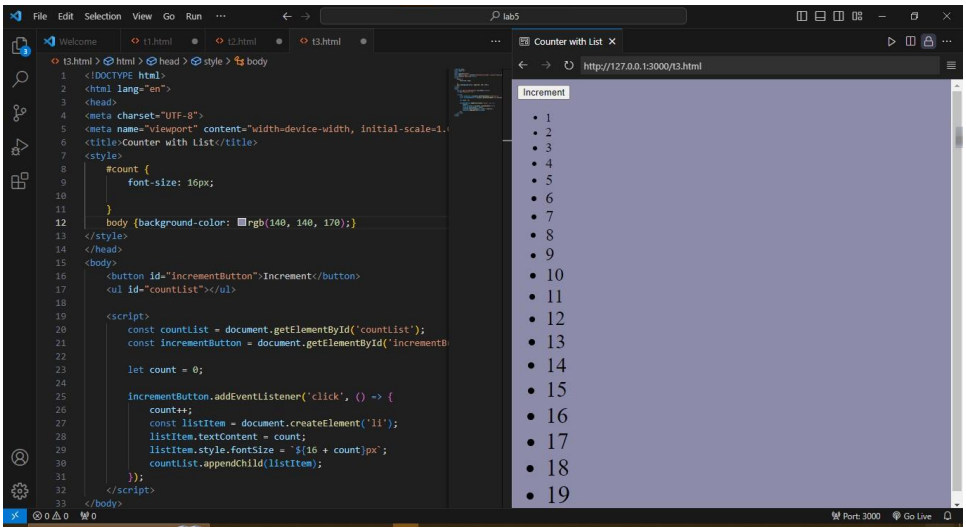
HTML CODE:

```
<!DOCTYPE html>
```

```
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Counter with List</title>
<style>
    #count {
        font-size: 16px;

    }
    body {background-color: rgb(140, 140, 170);}
</style>
</head>
<body>
    <button id="incrementButton">Increment</button>
    <ul id="countList"></ul>

    <script>
        const countList = document.getElementById('countList');
        const incrementButton = document.getElementById('incrementButton');

        let count = 0;

        incrementButton.addEventListener('click', () => {
            count++;
            const listItem = document.createElement('li');
            listItem.textContent = count;
            listItem.style.fontSize = `${16 + count}px`;
            countList.appendChild(listItem);
```

```
        });
    </script>
</body>
</html>
```

Output:



T4. Given the following html. Every time the button is pressed you should add a row to the table, where the new row of the table contains the sum of the previous two rows. You should make use of the lastChild, previousSibling, and innerText attributes in this exercise.

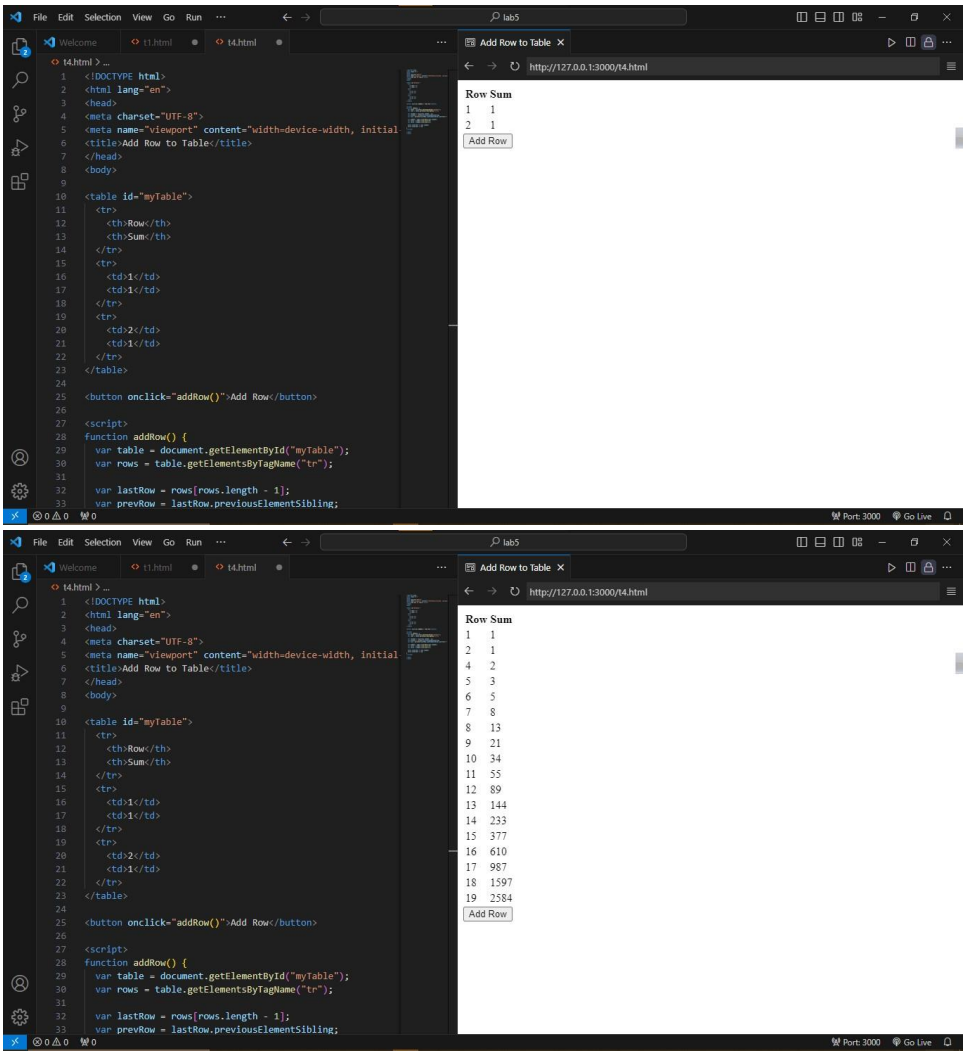
HTML CODE:

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
```

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Add Row to Table</title>
</head>
<body>

<table id="myTable">
  <tr>
    <th>Row</th>
    <th>Sum</th>
  </tr>
  <tr>
    <td>1</td>
    <td>1</td>
  </tr>
  <tr>
    <td>2</td>
    <td>1</td>
  </tr>
</table>

<button onclick="addRow()">Add Row</button>

<script>
function addRow() {
  var table = document.getElementById("myTable");
  var rows = table.getElementsByTagName("tr");

  var lastRow = rows[rows.length - 1];
  var prevRow = lastRow.previousElementSibling;
```

```
  var sum = parseInt(lastRow.lastElementChild.innerText) +
parseInt(prevRow.lastElementChild.innerText);

  var newRow = table.insertRow(rows.length);
  var cell1 = newRow.insertCell(0);
  var cell2 = newRow.insertCell(1);

  cell1.innerText = rows.length;
  cell2.innerText = sum;
}
</script>

</body>
</html>
```

Output :



T5. Create an html page with two text input boxes and four buttons. The buttons should be labeled +, -, *, and /. When one of these buttons is pressed you should get the value from both text input boxes and add, subtract, multiply, or divide the numbers entered in the text input boxes. The result should be displayed below the buttons. Note In order to do math on the values you read from the text input boxes you will need to use Number.parseInt on the value. for example suppose you get a reference to input box 1 using myIn1 = document.querySelector("#in1id"); then the statement value1 = Number.parseInt(myIn1.value) converts the string from

the text input box to an integer. In fact most of the time Javascript will do the conversion for you automatically except for addition.

HTML CODE:

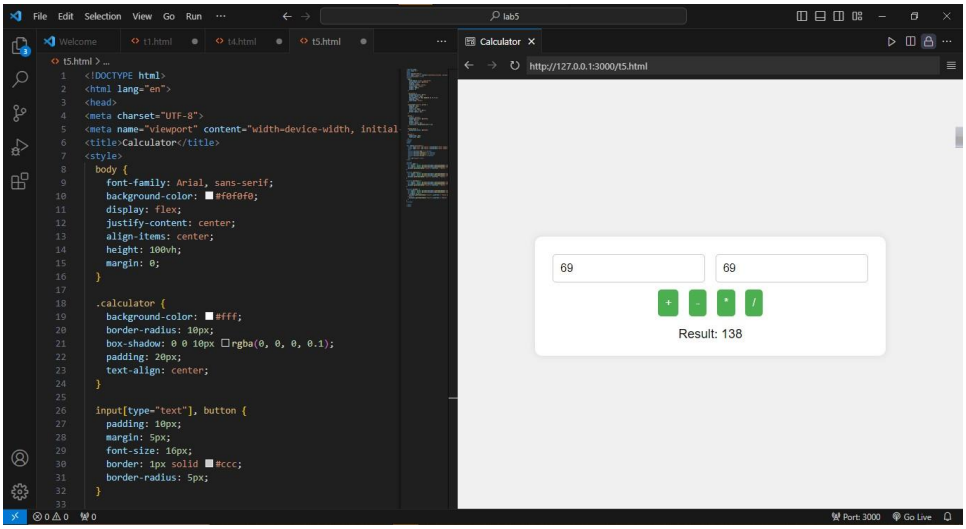
```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Calculator</title>
<style>
  body {
    font-family: Arial, sans-serif;
    background-color: #f0f0f0;
    display: flex;
    justify-content: center;
    align-items: center;
    height: 100vh;
    margin: 0;
  }

  .calculator {
    background-color: #fff;
    border-radius: 10px;
    box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
    padding: 20px;
    text-align: center;
  }
```

```
    input[type="text"], button {
      padding: 10px;
      margin: 5px;
      font-size: 16px;
      border: 1px solid #ccc;
      border-radius: 5px;
    }

    button {
      cursor: pointer;
      background-color: #4CAF50;
      color: white;
      border: none;
      border-radius: 5px;
      transition: background-color 0.3s;
    }

    button:hover {
      background-color: #45a049;
    }

    #result {
      margin-top: 10px;
      font-size: 18px;
    }
</style>
</head>
<body>
```

```
<div class="calculator">
  <input type="text" id="input1" placeholder="Enter number">
  <input type="text" id="input2" placeholder="Enter number">
  <br>
  <button onclick="add()">+</button>
  <button onclick="subtract()">-</button>
  <button onclick="multiply()">*</button>
  <button onclick="divide()">/</button>
  <br>
  <div id="result"></div>
</div>

<script>
function add() {
  var input1 = Number.parseInt(document.getElementById("input1").value);
  var input2 = Number.parseInt(document.getElementById("input2").value);
  document.getElementById("result").innerText = "Result: " + (input1 + input2);
}

function subtract() {
  var input1 = Number.parseInt(document.getElementById("input1").value);
  var input2 = Number.parseInt(document.getElementById("input2").value);
  document.getElementById("result").innerText = "Result: " + (input1 - input2);
}

function multiply() {
  var input1 = Number.parseInt(document.getElementById("input1").value);
  var input2 = Number.parseInt(document.getElementById("input2").value);
  document.getElementById("result").innerText = "Result: " + (input1 * input2);
```

```
}

function divide() {
  var input1 = Number.parseInt(document.getElementById("input1").value);
  var input2 = Number.parseInt(document.getElementById("input2").value);
  if (input2 === 0) {
    document.getElementById("result").innerText = "Cannot divide by zero!";
  } else {
    document.getElementById("result").innerText = "Result: " + (input1 / input2);
  }
}
</script>

</body>
</html>
```

OUTPUT:



T6. Starting with the code given, create a page that looks like the following image: The rest

of the page must be created using javascript. You must use document.createElement and

the appendChild functions.

<html>

<body>

<button onclick="makePage();">Click Here</button>

</body>

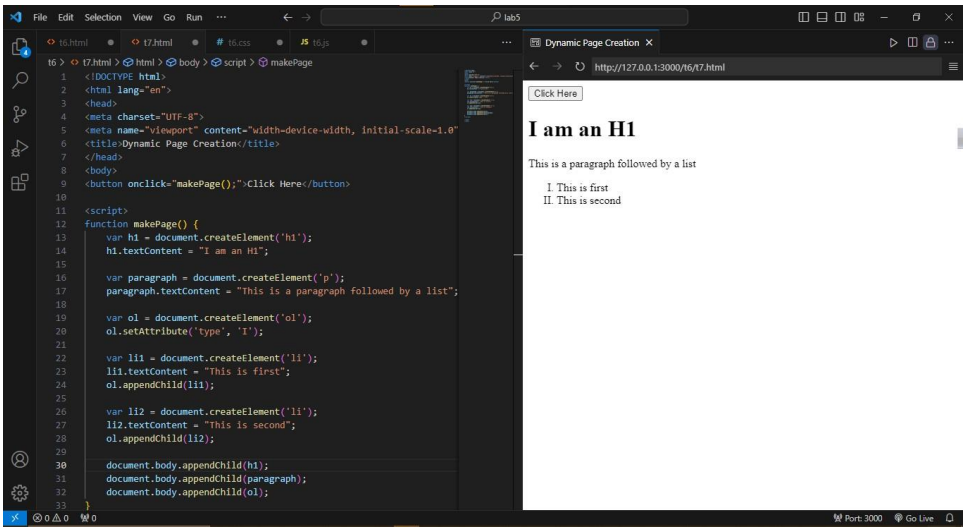
</html>

HTML CODE:

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Dynamic Page Creation</title>
</head>
<body>
<button onclick="makePage();">Click Here</button>

<script>
function makePage() {
    var h1 = document.createElement('h1');
    h1.textContent = "I am an H1";
```

```
    var paragraph = document.createElement('p');
    paragraph.textContent = "This is a paragraph followed by a list";

    var ol = document.createElement('ol');
    ol.setAttribute('type', 'I');

    var li1 = document.createElement('li');
    li1.textContent = "This is first";
    ol.appendChild(li1);

    var li2 = document.createElement('li');
    li2.textContent = "This is second";
    ol.appendChild(li2);

    document.body.appendChild(h1);
    document.body.appendChild(paragraph);
    document.body.appendChild(ol);
}
</script>

</body>
</html>
```

Output:



T7. Create a Tip Calculator as a single page web application (SPA). Design an interface that allows you to enter the amount of the tip. The percentage you would like to tip, and the number of people to split the tip with. Do not use 3 text input elements! Calculate and dynamically display the tip.

HTML CODE:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Tip Calculator</title>
  <link rel="stylesheet" href="t6.css">
</head>
<body>
  <div class="container">
```

```
    <h1>Tip Calculator</h1>
    <div class="input-group">
      <label for="billAmount">Bill Amount:</label>
      <input type="number" id="billAmount" placeholder="Enter bill amount" min="0" step="0.01">
    </div>
    <div class="input-group">
      <label for="tipPercentage">Tip Percentage:</label>
      <input type="range" id="tipPercentage" min="0" max="30" value="15">
      <span id="tipPercentageValue">15%</span>
    </div>
    <div class="input-group">
      <label for="split">Split Between:</label>
      <input type="number" id="split" placeholder="Enter number of people" min="1">
    </div>
    <div class="result">
      <h2>Tip Amount:</h2>
      <span id="tipAmount">INR : 0.00</span>
    </div>
  </div>
  <script src="t6.js"></script>
</body>
</html>
```

CSS CODE:

```
body {
    font-family: Arial, sans-serif;
    margin: 0;
    padding: 0;
```

```
  display: flex;
  justify-content: center;
  align-items: center;
  height: 100vh;
  background-color: #f4f4f4;
}

.container {
  text-align: center;
}

.input-group {
  margin-bottom: 20px;
}

.input-group label {
  font-weight: bold;
}

input[type="number"],
input[type="range"] {
  width: 100%;
  padding: 8px;
  margin-top: 5px;
}

.result {
  margin-top: 30px;
}
```

```
  .result h2 {
    margin-bottom: 10px;
  }
```

JS CODE:

```
document.addEventListener('DOMContentLoaded', function() {
    const billAmountInput = document.getElementById('billAmount');
    const tipPercentageInput = document.getElementById('tipPercentage');
    const tipPercentageValue = document.getElementById('tipPercentageValue');
    const splitInput = document.getElementById('split');
    const tipAmountSpan = document.getElementById('tipAmount');

    billAmountInput.addEventListener('input', calculateTip);
    tipPercentageInput.addEventListener('input', calculateTip);
    splitInput.addEventListener('input', calculateTip);

    function calculateTip() {
      const billAmount = parseFloat(billAmountInput.value);
      const tipPercentage = parseFloat(tipPercentageInput.value);
      const split = parseInt(splitInput.value);

      if (!isNaN(billAmount) && !isNaN(tipPercentage) && !isNaN(split) &&
billAmount >= 0 && split >= 1) {
        const tipAmount = (billAmount * tipPercentage) / 100 / split;
        tipAmountSpan.textContent = `$${tipAmount.toFixed(2)}`;
      } else {
        tipAmountSpan.textContent = '$0.00';
      }
    }
```

```
    tipPercentageInput.addEventListener('input', function() {
      tipPercentageValue.textContent = `${this.value}%`;
    });
});
```

Output: