

Lab-5 Web Technology

Name- Abhijeet Sandeep Jadhav

Roll No.- 22mc3002

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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.

```
<!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>
    #text {
      transition: transform 2s ease-in-out; /* Increased duration for
slower rotation */
    }
  </style>
</head>
<body>
  <h2 id="text">Hello</h2>
  <input type="text" id="textInput" placeholder="Enter text">
  <button onclick="changeText()">Change Text</button>

  <script>
    function changeText() {
      const inputText = document.getElementById('textInput').value;
      const textElement = document.getElementById('text');

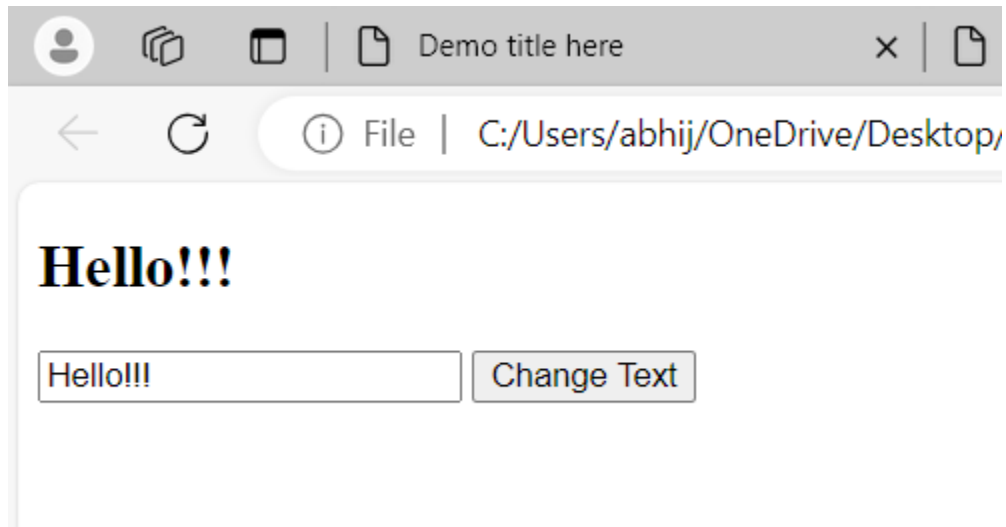
      textElement.textContent = inputText;
      textElement.style.transform = 'rotate(360deg)';

      // Reset the rotation after the animation ends
      setTimeout(() => {
        textElement.style.transform = 'rotate(0deg)';
      }, 2000); // Adjust the time to match the transition time (1s)
```

```

    }
</script>
</body>
</html>

```



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.

```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Counter Page</title>
  <style>
    #count {
      font-size: 16px; /* Initial font size */
    }
  </style>
</head>
<body>
  <p id="count">0</p>
  <button onclick="incrementCount()">Increment Count</button>

```

```

<script>
  function incrementCount() {
    // Get the paragraph element
    const countParagraph = document.getElementById('count');

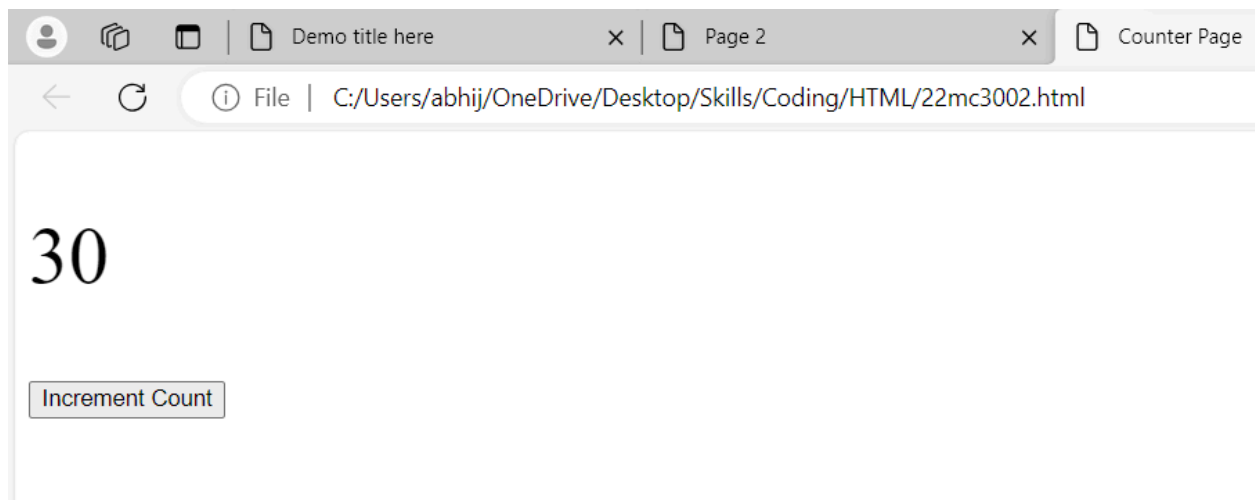
    // Get the current count value and convert it to a number
    let currentCount = parseInt(countParagraph.textContent);

    // Increment the count by 1
    currentCount++;

    // Update the paragraph text with the new count value
    countParagraph.textContent = currentCount;

    // Update the font size based on the count value
    // Increase font size by 1px for every count
    countParagraph.style.fontSize = (16 + currentCount) + 'px';
  }
</script>
</body>
</html>

```



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.

```
<!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>
    #countList {
      list-style-type: none; /* Remove default list styles */
    }
    .listItem {
      font-size: 16px; /* Initial font size */
    }
  </style>
</head>
<body>
  <ul id="countList"></ul>
  <button onclick="incrementCount()">Increment Count</button>

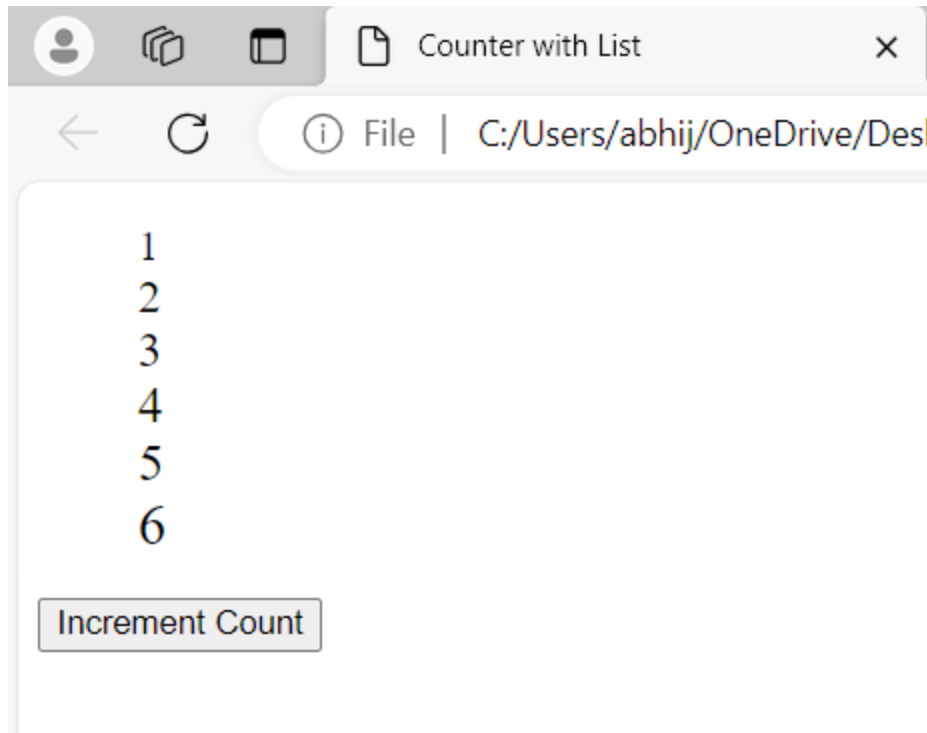
  <script>
    let count = 0;

    function incrementCount() {
      count++;

      // Create a new list item element
      const listItem = document.createElement('li');
      listItem.classList.add('listItem'); // Add a class for styling
      listItem.textContent = count;

      // Append the new list item to the ul element
      const countList = document.getElementById('countList');
      countList.appendChild(listItem);

      // Update font size based on count value
      listItem.style.fontSize = (16 + count) + 'px';
    }
  </script>
</body>
</html>
```



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.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Table Rows Sum</title>
</head>
<body>
  <button onclick="addRow()">Add Row</button>
  <table id="myTable">
    <thead>
      <tr>
        <th>Row Number</th>
        <th>Sum of Previous Two Rows</th>
      </tr>
```

```
</thead>
<tbody>
  <tr>
    <td>1</td>
    <td>0</td>
  </tr>
  <tr>
    <td>2</td>
    <td>1</td>
  </tr>
</tbody>
</table>

<script>
function addRow() {
  // Get the table and its body
  const table = document.getElementById('myTable');
  const tbody = table.querySelector('tbody');

  // Get the last two rows
  const lastRow = tbody.lastChild.previousSibling;
  const secondLastRow = lastRow.previousSibling;

  // Extract the sums from the last two rows
  const sum1 = parseInt(secondLastRow.lastChild.innerText);
  const sum2 = parseInt(lastRow.lastChild.innerText);

  // Calculate the sum of the previous two rows
  const sum = sum1 + sum2;

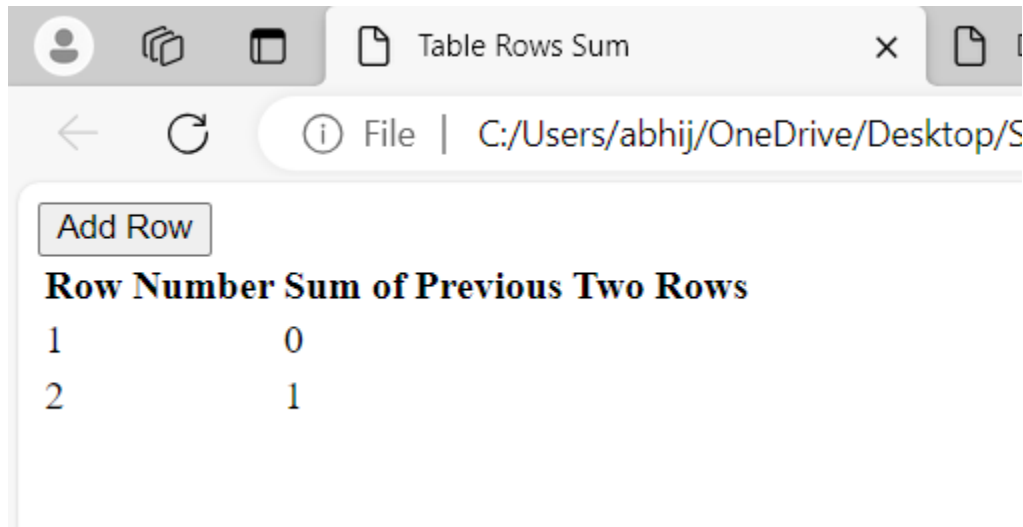
  // Create a new row
  const newRow = document.createElement('tr');
  const rowNumber = tbody.childElementCount + 1;

  // Populate the new row with data
  const newRowContent = `
    <td>${rowNumber}</td>
    <td>${sum}</td>
  `;
  newRow.innerHTML = newRowContent;
```

```

        // Append the new row to the table body
        tbody.appendChild(newRow);
    }
</script>
</body>
</html>

```



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.

```

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

```

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Simple Calculator</title>
</head>
<body>
  <input type="text" id="input1">
  <input type="text" id="input2">
  <br>
  <button onclick="calculate('+')">+</button>
  <button onclick="calculate('-')">-</button>
  <button onclick="calculate('*')">*</button>
  <button onclick="calculate('/')">/</button>
  <br>
  <p id="result"></p>

  <script>
    function calculate(operator) {
      // Get the values from the input boxes
      const input1 =
Number.parseInt(document.getElementById('input1').value);
      const input2 =
Number.parseInt(document.getElementById('input2').value);

      // Perform the operation based on the operator parameter
      let result;
      switch (operator) {
        case '+':
          result = input1 + input2;
          break;
        case '-':
          result = input1 - input2;
          break;
        case '*':
          result = input1 * input2;
          break;
        case '/':
          if (input2 === 0) {
            result = "Cannot divide by zero";
          } else {
            result = input1 / input2;
          }
      }
    }
  </script>

```

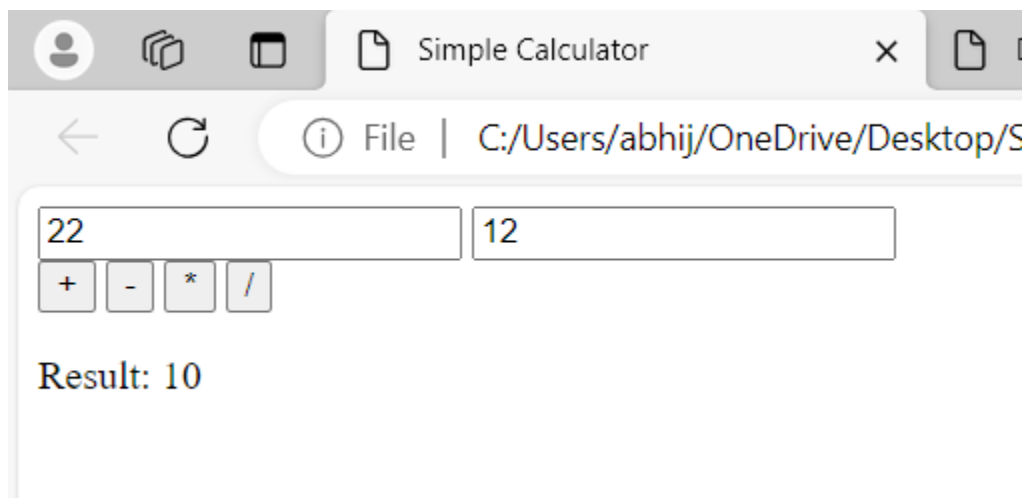
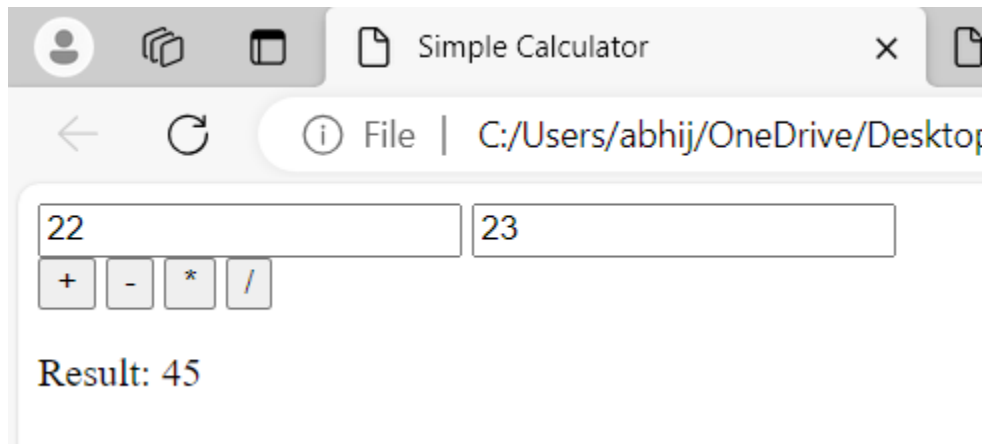


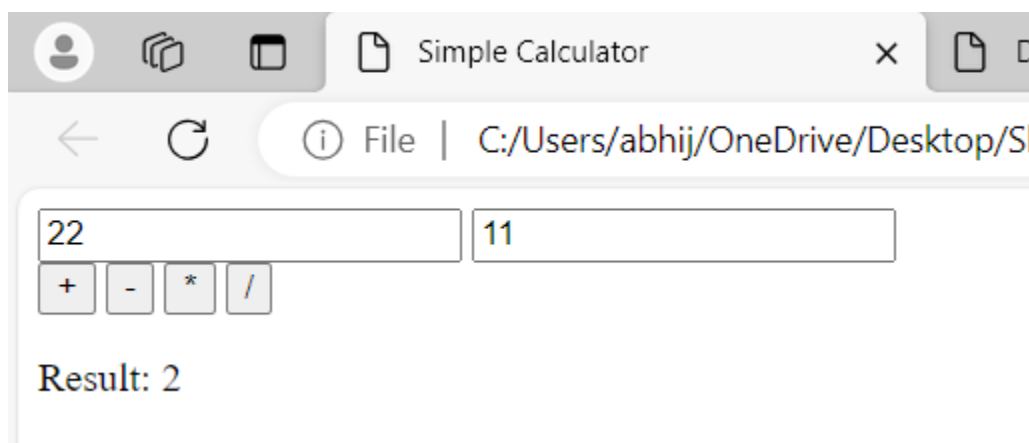
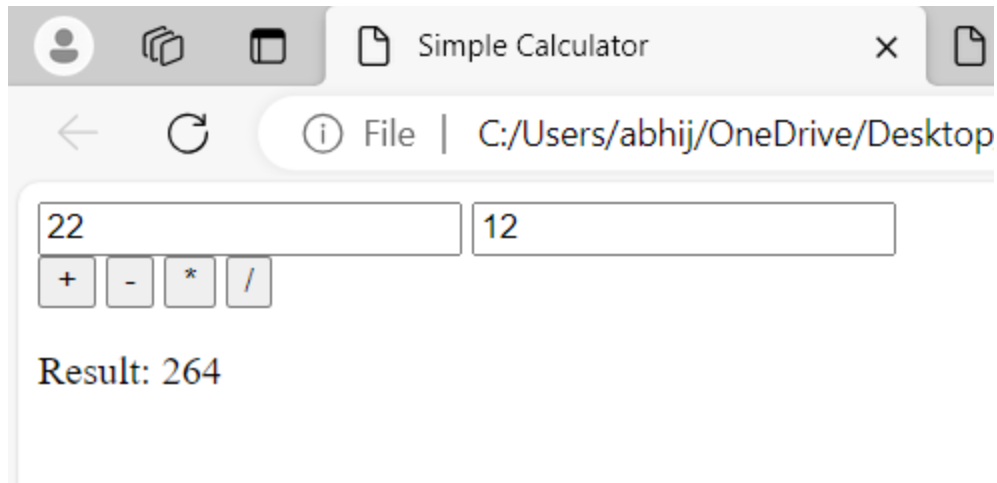
```

        break;
    default:
        result = "Invalid operator";
    }

    // Display the result below the buttons
    document.getElementById('result').textContent = "Result: " + result;
}
</script>
</body>
</html>

```





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.

```
<!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>
  <style>
    body {
      font-family: Arial, sans-serif;
    }
  </style>
</head>
<body>
  <div>
    <input type="text" value="22" />
    <input type="text" value="11" />
    <div>
      <button>+</button>
      <button>-</button>
      <button>*</button>
      <button>/</button>
    </div>
    <div>Result: 2</div>
  </div>
</body>
</html>
```

```
.container {
  max-width: 400px;
  margin: 50px auto;
  padding: 20px;
  background-color: #f4f4f4;
  border-radius: 8px;
  box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
}
label {
  display: block;
  margin-bottom: 8px;
}
input {
  width: 100%;
  padding: 8px;
  margin-bottom: 16px;
  border: 1px solid #ccc;
  border-radius: 4px;
  box-sizing: border-box;
}
button {
  width: 100%;
  padding: 10px;
  background-color: #007bff;
  color: #fff;
  border: none;
  border-radius: 4px;
  cursor: pointer;
}
button:hover {
  background-color: #0056b3;
}
#tipAmount {
  font-size: 24px;
  font-weight: bold;
  margin-top: 20px;
}
</style>
</head>
<body>
```

```
<div class="container">
  <h2>Tip Calculator</h2>
  <label for="billAmount">Bill Amount ($)</label>
  <input type="number" id="billAmount" min="0" step="0.01">

  <label for="tipPercentage">Tip Percentage (%)</label>
  <input type="number" id="tipPercentage" min="0" step="1">

  <label for="numberOfPeople">Number of People</label>
  <input type="number" id="numberOfPeople" min="1" step="1">

  <button onclick="calculateTip()">Calculate Tip</button>

  <div id="tipAmount"></div>
</div>

<script>
  function calculateTip() {
    var billAmount =
parseFloat(document.getElementById('billAmount').value);
    var tipPercentage =
parseFloat(document.getElementById('tipPercentage').value);
    var numberOfPeople =
parseInt(document.getElementById('numberOfPeople').value);

    if (isNaN(billAmount) || isNaN(tipPercentage) ||
isNaN(numberOfPeople)) {
      alert('Please enter valid numbers.');
```

```
      return;
    }

    if (billAmount <= 0 || tipPercentage < 0 || numberOfPeople <= 0) {
      alert('Please enter positive numbers.');
```

```
      return;
    }

    var tipAmount = (billAmount * (tipPercentage / 100)) / numberOfPeople;
```

```
        document.getElementById('tipAmount').innerText = 'Tip Amount per  
Person: $' + tipAmount.toFixed(2);  
    }  
</script>  
  
</body>  
</html>
```

Tip Calculator

Bill Amount (\$)

123

Tip Percentage (%)

4

Number of People

5

Calculate Tip

Tip Amount per Person: \$0.98