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Q1.
```html
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Dynamic Text Animation</title>
<style>
  #hello {
    transition: transform 0.5s ease-in-out;
  }
</style>
</head>
<body>
<h2 id="hello">Hello</h2>
<input type="text" id="textInput" placeholder="Enter text">
<button id="changeTextBtn">Change Text</button>

<script>
  const helloHeading = document.getElementById('hello'); const
  textInput = document.getElementById('textInput'); const
  changeTextBtn = document.getElementById('changeTextBtn');

  changeTextBtn.addEventListener('click', () => {
    const newText = textInput.value.trim();
    if (newText) {
      helloHeading.textContent = newText;
      helloHeading.style.transform = 'rotate(0deg)';
      // Trigger reflow
      void helloHeading.offsetWidth;
      helloHeading.style.transform = 'rotate(360deg)';
    }
  });
</script>
```

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


Q2. <!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Increment Counter</title>
<style>

```html
    #count {
      font-size: 16px; /* Initial font size */
      transition: font-size 0.2s ease-in-out;
    }
  </style>
</head>
<body>
<button id="incrementBtn"
onclick="incrementCounter()">Increment</button>
<p id="count">0</p>
<script>
  let count = 0;

  function incrementCounter() {
    count++;
    document.getElementById('count').innerText = count;
    updateFontSize();
  }

  function updateFontSize() {
    // Increase font size as the count gets larger
    const baseFontSize = 16;
    const fontSizeIncrement = 2; // Adjust this value as needed
document.getElementById('count').style.fontSize = baseFontSize + count *
fontSizeIncrement + 'px';
    }
</script>
</body>
</html>
```
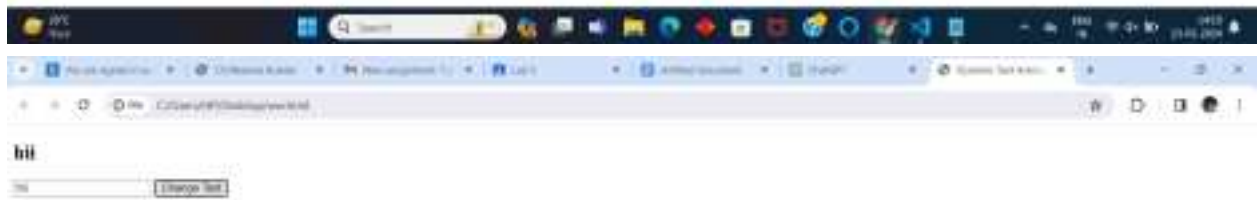
Q3.
```html
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Increment Counter with List</title>
<style>
 #count {
   font-size: 16px; /* Initial font size */
   transition: font-size 0.2s ease-in-out;
 }
</style>
</head>
<body>
<button id="incrementBtn"
onclick="incrementCounter()">Increment</button>
<ul id="countList">
 <!-- Initial list item -->
 <li id="countItem">0</li>
</ul>

<script>
 let count = 0;
 const countList = document.getElementById('countList');
```
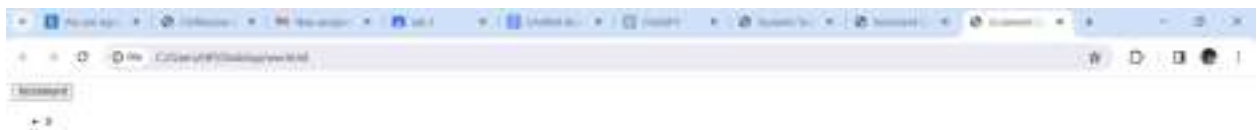
```javascript
function incrementCounter() {
  count++;
  const newListItem = document.createElement('li');
  newListItem.textContent = count;
  countList.appendChild(newListItem);
  updateFontSize(newListItem);
}

function updateFontSize(listItem) {
  // Increase font size as the count gets larger
  const baseFontSize = 16;
  const fontSizeIncrement = 2; // Adjust this value as needed
  listItem.style.fontSize = baseFontSize + count * fontSizeIncrement +
    'px';
}
</script>
</body>
</html>
```

Q4. <!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Add Row with Sum to Table</title>
</head>
<body>
<button id="addRowBtn">Add Row</button>

```html
<table id="dataTable">
  <thead>
    <tr>
      <th>Row</th>
      <th>Sum</th>
    </tr>
  </thead>
  <tbody>
    <!-- Initial rows -->
    <tr>
      <td>1</td>
      <td>1</td>
    </tr>
    <tr>
      <td>2</td>
      <td>1</td>
    </tr>
  </tbody>
</table>

<script>
  const addRowBtn = document.getElementById('addRowBtn');
  const tableBody = document.querySelector('#dataTable tbody');

  addRowBtn.addEventListener('click', () => {
    const rows = tableBody.children;
    const lastRow = rows[rows.length - 1];
    const previousRow = lastRow.previousElementSibling;

    const newRow = document.createElement('tr');

    const newRowNumber = parseInt(lastRow.firstElementChild.innerText) + 1;
    const newRowSum = parseInt(lastRow.lastElementChild.innerText) + parseInt(previousRow.lastElementChild.innerText);

    const newRowData1 = document.createElement('td');
    newRowData1.innerText = newRowNumber;
```

```
      newRow.appendChild(newRowData1);

      const newRowData2 = document.createElement('td');
      newRowData2.innerText = newRowSum;
      newRow.appendChild(newRowData2);

      tableBody.appendChild(newRow);
   });
</script>
</body>
</html>
```

Q5.
```html
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Calculator</title>
</head>
<body>
<input type="text" id="input1" placeholder="Enter number">
<input type="text" id="input2" placeholder="Enter number">
<br>
<button onclick="calculate('+')">+</button>
<button onclick="calculate('-')">-</button>
<button onclick="calculate('*')">*</button>
<button onclick="calculate('/')">/</button>
<p id="result"></p>

<script>
  function calculate(operation) {
    const input1 =
Number.parseInt(document.getElementById('input1').value);
    const input2 =
Number.parseInt(document.getElementById('input2').value);
```

```
      let result;

      switch (operation) {
        case '+':
          result = input1 + input2;
          break;
        case '-':
          result = input1 - input2;
          break;
        case '*':
          result = input1 * input2;
          break;
        case '/':
          result = input1 / input2;
          break;
        default:
          result = 'Invalid operation';
      }

      document.getElementById('result').textContent = 'Result: ' + result;
    }
</script>
</body>
</html>
```

Q6. <!DOCTYPE html>

```html
<!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>
<style>
  body {
    font-family: Arial, sans-serif;
    margin: 0;
    padding: 0;
    display: flex;
    justify-content: center;
    align-items: center;
    height: 100vh;
    background-color: #f0f0f0;
  }

  #container {
    width: 400px;
    padding: 20px;
    background-color: #fff;
    border-radius: 10px;
```

```css
      box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
      text-align: center;
    }

    h1 {
      color: #007bff;
      margin-bottom: 20px;
    }

    p {
      margin-bottom: 20px;
    }

    ul {
      text-align: left;
      margin-left: 40px;
      margin-bottom: 20px;
    }

    li {
      margin-bottom: 10px;
    }
    .button {
      display: inline-block;
      margin: 5px;
      padding: 10px 20px;
      background-color: #007bff;
      color: #fff;
      border: none;
      border-radius: 5px;
      cursor: pointer;
      transition: background-color 0.3s ease;
    }

    .button:hover {
      background-color: #0056b3;
    }
</style>
```

```html
</head>
<body>
<button onclick="makePage();" class="button">Click Here</button>

<script>
function makePage() {
  // Clear existing content
  document.body.innerHTML = '';

  // Create container div
  const container = document.createElement('div');
  container.id = 'container';

  // Create h1
  const title = document.createElement('h1');
  title.textContent = 'I am an H1';

  // Create paragraph
  const paragraph = document.createElement('p');
  paragraph.textContent = 'This paragraph is followed by a list';

  // Create list
  const list = document.createElement('ul');
  const items = ['This is First', 'This is Second'];
  items.forEach(text => {
    const listItem = document.createElement('li');
    listItem.textContent = text;
    list.appendChild(listItem);
  });

  // Append elements to container
  container.appendChild(title);
  container.appendChild(paragraph);
  container.appendChild(list);

  // Append container to body
  document.body.appendChild(container);
}
```
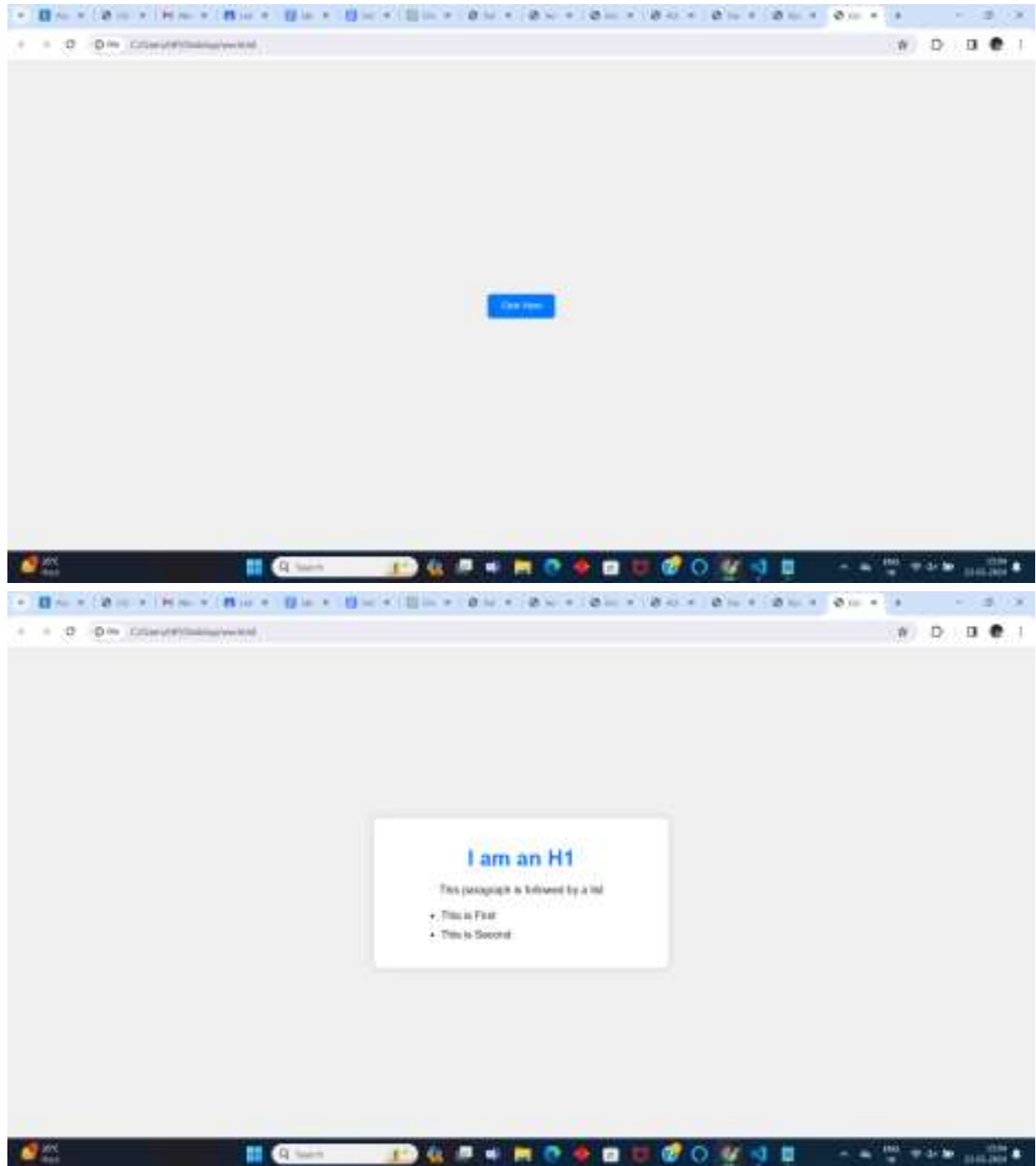
```
</script>
</body>
</html>
```


Q7. <!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>

```html
<style>
  body {
    font-family: Arial, sans-serif;
    margin: 0;
    padding: 0;
    display: flex;
    justify-content: center;
    align-items: center;
    height: 100vh;
    background-color: #f0f0f0;
  }

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

  label {
    display: block;
    margin-bottom: 10px;
  }

  input {
    width: 100%;
    padding: 10px;
    margin-bottom: 20px;
    border-radius: 5px;
    border: 1px solid #ccc;
    box-sizing: border-box;
  }
  button {
    padding: 10px 20px;
    background-color: #007bff;
    color: #fff;
    border: none;
```

```css
    border-radius: 5px;
    cursor: pointer;
    transition: background-color 0.3s ease;
  }

  button:hover {
    background-color: #0056b3;
  }

  #tipResult {
    margin-top: 20px;
    font-size: 24px;
  }
</style>
</head>
```

```html
<body>
<div id="calculator">
  <label for="billAmount">Bill Amount ($):</label>
  <input type="number" id="billAmount" placeholder="Enter bill amount">

  <label for="tipPercentage">Tip Percentage (%):</label> <input type="number" id="tipPercentage" placeholder="Enter tip percentage">

  <label for="numPeople">Number of People:</label>
  <input type="number" id="numPeople" placeholder="Enter number of people">

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

<script>
function calculateTip() {
  const billAmount = parseFloat(document.getElementById('billAmount').value);
  const tipPercentage = parseFloat(document.getElementById('tipPercentage').value);
```

```
  const numPeople =
parseFloat(document.getElementById('numPeople').value);

  if (isNaN(billAmount) || isNaN(tipPercentage) || isNaN(numPeople) ||
billAmount <= 0 || tipPercentage < 0 || numPeople <= 0) {
document.getElementById('tipResult').textContent = 'Please enter valid
inputs';
    return;
  }

  const tipAmount = (billAmount * tipPercentage) / 100;
  const totalAmount = billAmount + tipAmount;
  const tipPerPerson = tipAmount / numPeople;
  const totalPerPerson = totalAmount / numPeople;

    const tipResult = `Tip Amount: $${tipAmount.toFixed(2)}<br> Total
  Amount (including tip): $${totalAmount.toFixed(2)}<br> Tip per person:
                $${tipPerPerson.toFixed(2)}<br>
          Total per person: $${totalPerPerson.toFixed(2)}`;

  document.getElementById('tipResult').innerHTML = tipResult;
}
</script>
</body>
</html>
```

Bill Amount ($):

5000

Tip Percentage (%):

5

Number of People:

10

Calculate Tip

Tip Amount: $250.00
Total Amount (including tip): $5250.00
Tip per person: $25.00
Total per person: $525.00