Web Technology

Lab Assignment 5

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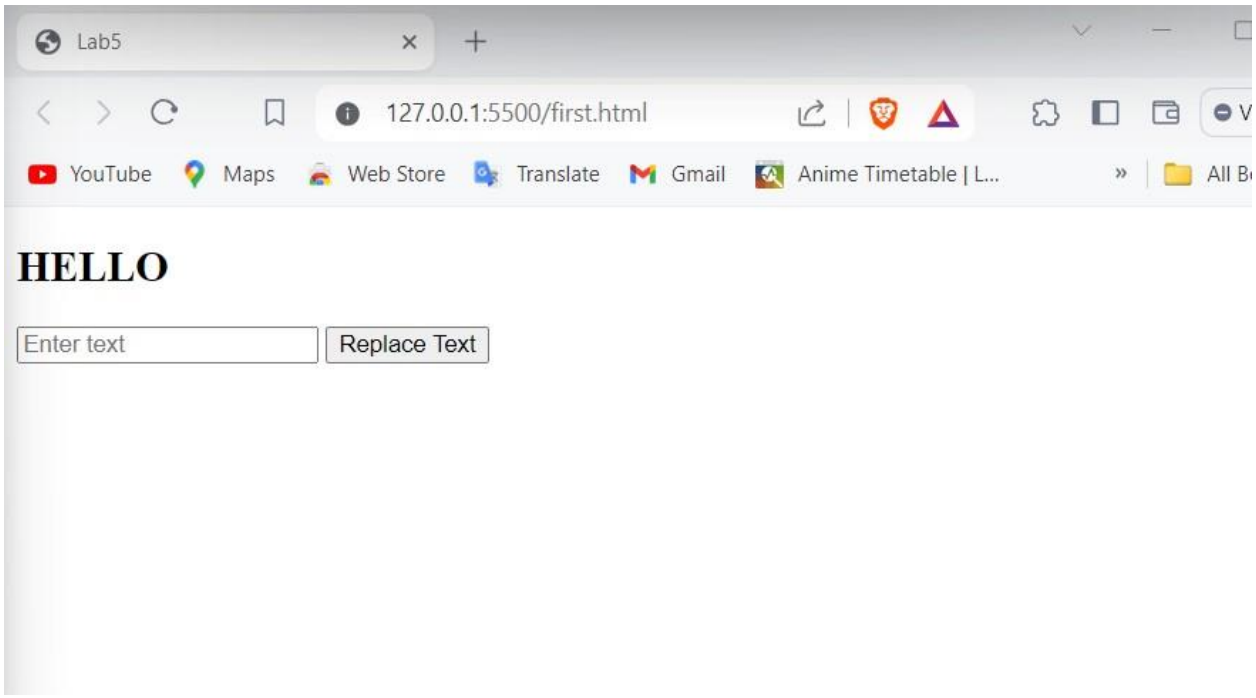
T1. Make a simple web page that contains an h2 with the word “Hello” a text input box, and a button. When the user types a word or phrase into the input box and presses the button, replace the old h2 with the word entered. Using animation, make the word spin.

Ans

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Lab5</title>
    <link rel="stylesheet" href="style.css">
</head>
<body>
  <h2 id="head1">HELLO</h2>
  <input type="text" id="textbox" placeholder="Enter text">
```

```
  <button onclick="replaceText()">Replace Text</button>
```

```
  <script src="pro.js"></script>
</body>
</html>
//Css code
@keyframes spin{
   from { transform: rotate(0deg);}
   to {transform: rotate(360deg);}
}
.spinning {
    animation: spin 2s linear infinite;
}
//Js code
function replaceText() {
    var t1 = document.getElementById("textbox").value;
    var t2 = document.getElementById("head1");
    t2.textContent = t1;
    t2.classList.add("spinning");
}
```

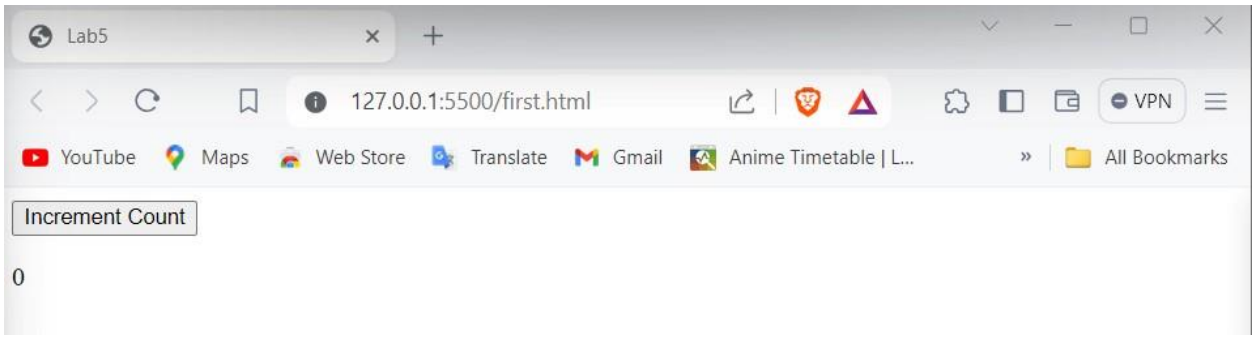


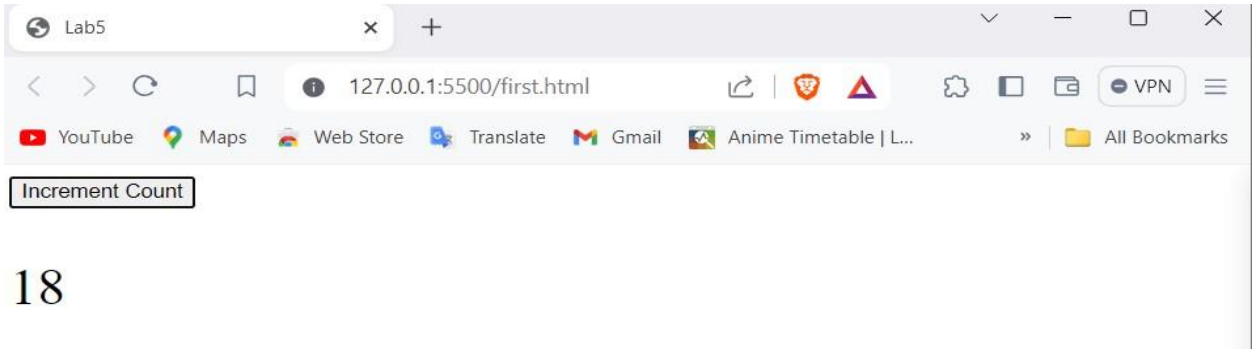
T2. Make a simple web page that contains a button and a paragraph with the id of count whenever this button is pressed, increment the count by 1 and update the paragraph text. Also update the font size so that as the number gets larger, so does the font.

Ans

```
<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Lab5</title>

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

</head>

<body>
```

```
  <button onclick="incrementCount()">Increment Count</button>

  <p id="count">0</p>



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

</body>

</html>

//Css code

#count{

    font-size: 1em

}

//Js code

 var count = 0;

var countElement = document.getElementById("count");



function incrementCount() {

    count++;

    countElement.textContent = count;



    var fontSize = 16 + count;

    countElement.style.fontSize = fontSize + "px";

}
```





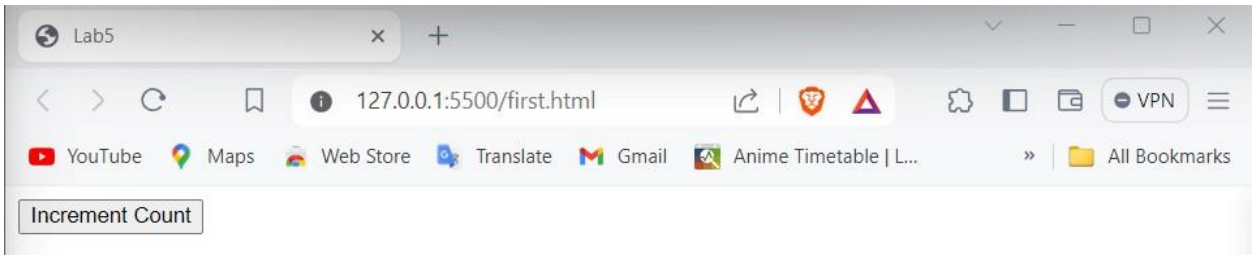
T3. Repeat the previous exercise but make a list of numbers. In this case you will not be able to simply update the innerHTML of the paragraph, you will need to use the document.createElement() and document.appendChild() functions to add a new list item.

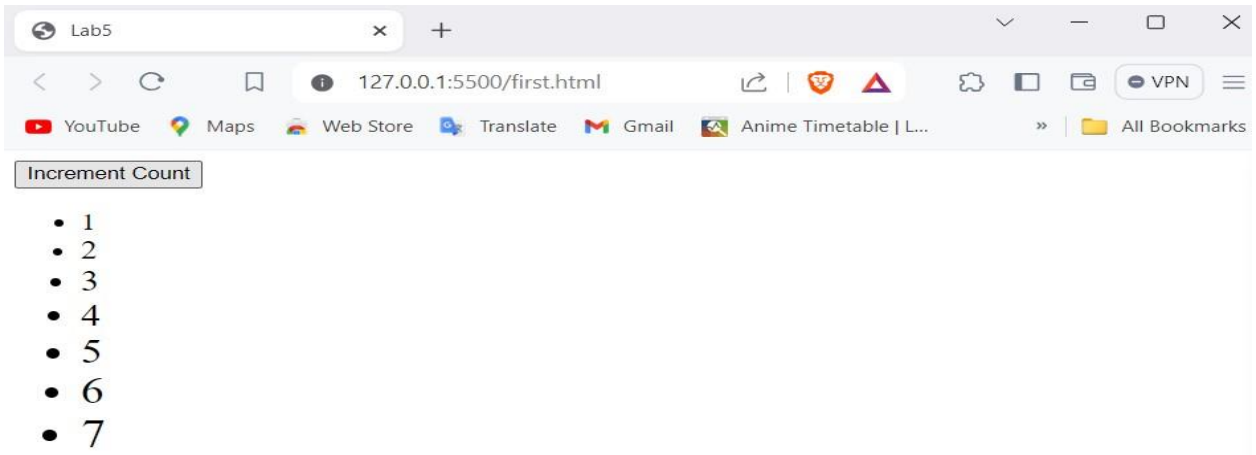
Ans

```
<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Lab5</title>

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

</head>
```

```
<body>
```

```
  <button onclick="incrementCount()">Increment Count</button>

  <ul id="countList"></ul>



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

</body>

</html>

//Js code

 var count = 0;

var countList = document.getElementById("countList");



function incrementCount() {

    count++;

    var listItem = document.createElement("li");

    listItem.textContent = count;

    var fontSize = 16 + count * 2;

    listItem.style.fontSize = fontSize + "px";



    countList.appendChild(listItem);

}
```






```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Lab5</title>
    <link rel="stylesheet" href="style.css">
```

```
</head>
```

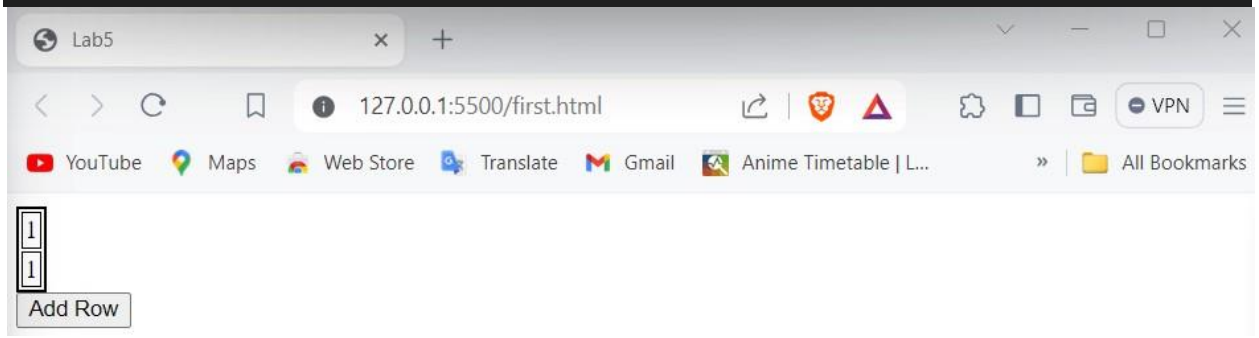
T4. Given the following html. Every time the button is pressed you should add a row to the table, where the new row of the table contains the sum of the previous two rows. You should make use of the lastChild, previousSibling, and innerText attributes in this exercise.

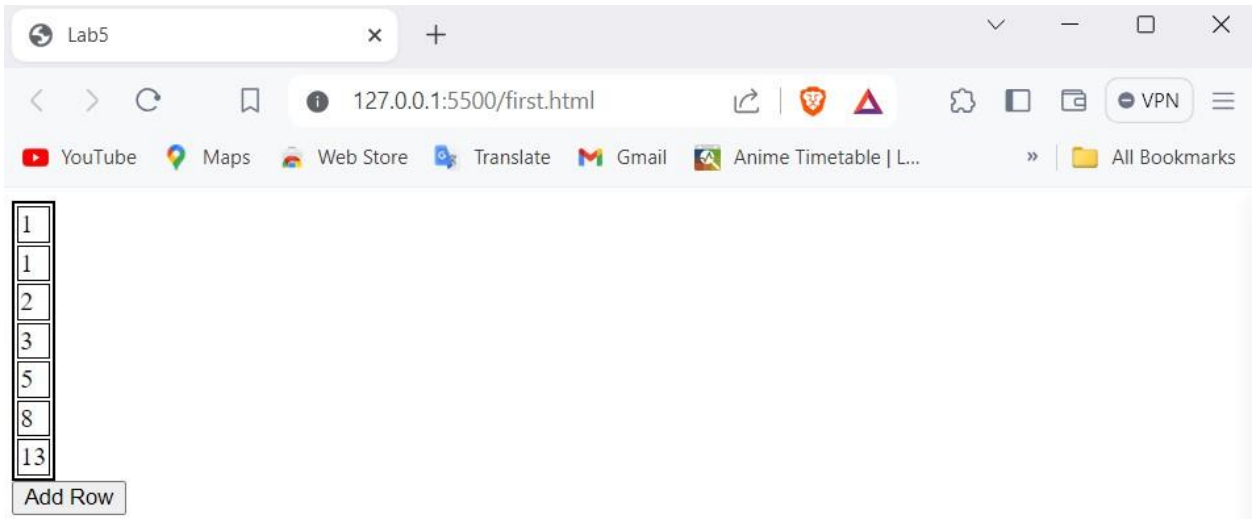
Ans

```
<body>

  <table id="myTable">

    <tr>

        <td>1</td>

    </tr>

    <tr>

        <td>1</td>

    </tr>

  </table>

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

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

</body>

</html>

//Css code

td{

   border: 1px solid black;

}
```

```
#myTable{

    border: 2px solid black;

}

//Js code

function addTableRow() {

    var table = document.getElementById("myTable");
```

```
    var rows = table.getElementsByTagName("tr");

    var newRow = document.createElement("tr");

    var sum = parseInt(rows[rows.length - 1].innerText) +
parseInt(rows[rows.length - 2].innerText);



    var newCell = document.createElement("td");

    newCell.innerText = sum;

    newRow.appendChild(newCell);

    table.appendChild(newRow);

}
```





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.

Ans

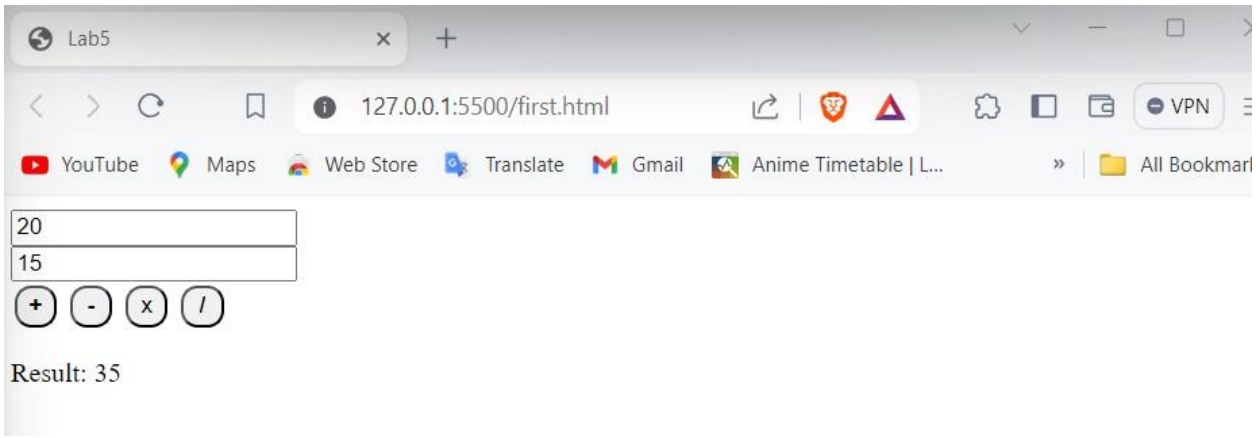
```
<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Lab5</title>

    <link rel="stylesheet" href="style.css">
```

```
</head>

<body>

  <input type="text" id="input1"><br>

  <input type="text" id="input2">

  <br>

  <button onclick="performOperation('+')"><b>+</b></button>

  <button onclick="performOperation('-')"><b>-</b></button>

  <button onclick="performOperation('*')">x</button>
```

```
  <button onclick="performOperation('/')"><b>/</b></button>



  <p id="result"></p>



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

</body>

</html>

//Css code

button{

    margin: 2px;

    width: 25px;

    height: 25px;

    border-radius: 10px;

    text-align: center;
```

```
}

//Js code

function performOperation(operator) {

    var input1 = Number.parseInt(document.getElementById("input1").value);

    var input2 = Number.parseInt(document.getElementById("input2").value);

    var result;



    switch(operator) {

        case '+':

            result = input1 + input2;

            break;

        case '-':

            result = input1 - input2;

            break;

        case '*':

            result = input1 * input2;

            break;

        case '/':

            result = input1 / input2;

            break;

        default:

            result = "Invalid operator";
```

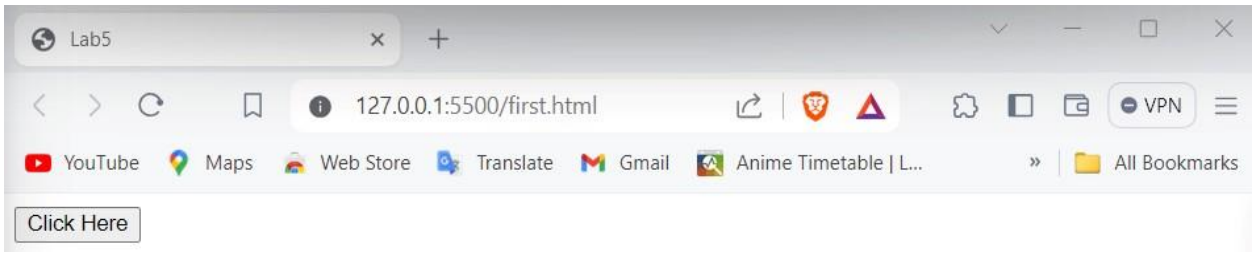
```
    }

    document.getElementById("result").textContent = "Result: " + result;

}
```



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.

```
<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Lab5</title>

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

</head>

<body>

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



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

</body>

</html>

//Js code

function makePage(){

    var button = document.createElement("button");

    button.textContent = "Click Here";

    document.body.appendChild(button);
```

```
    var h1 = document.createElement("h1");

    h1.textContent = "I am an H1";

    document.body.appendChild(h1);



    var paragraph = document.createElement("p");

    paragraph.textContent = "This is a paragraph followed by a list";

    document.body.appendChild(paragraph);



    var ol = document.createElement("ol");



    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(ol);

}
```


Lab5
127.0.0.1:5500/first.html
VPN
YouTube
Maps
Web Store
Translate
Gmail
Anime Timetable | L...
All Bookmarks
Click Here

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.

Ans

```
<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Lab5</title>

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

</head>

<body>

  <div class="tip-calculator">

    <label for="totalBill">Total Bill:</label>

    <span>$</span><span id="totalBill" contenteditable="true">0</span>

    <br>

    <label for="tipPercentage">Tip Percentage:</label>

    <span>%</span><span id="tipPercentage"
contenteditable="true">10</span>

    <br>

    <label for="numberOfPeople">Number of People:</label>

    <span id="numberOfPeople" contenteditable="true">1</span>
```

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

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

  <script src="pro.js"></script>
</body>
</html>
//Css code
.tip-calculator {
    margin-bottom: 20px;
}

label, span {
    display: inline-block;
    margin-bottom: 5px;
}

span[contenteditable="true"] {
    border: 1px solid #ccc;
    padding: 2px 5px;
```

```
    min-width: 30px;
```

```
    text-align: center;

    outline: none;

    cursor: text;

}



button {

    margin-top: 10px;

    padding: 8px 16px;

    background-color: #007bff;

    color: #fff;

    border: none;

    border-radius: 4px;

    cursor: pointer;

}



#tipAmount {

    font-size: 20px;

}

//Js code

function calculateTip() {

    var totalBill =
```

```
parseFloat(document.getElementById("totalBill").innerText);

    var tipPercentage =
parseFloat(document.getElementById("tipPercentage").innerText);
```

```
    var numberOfPeople =
parseFloat(document.getElementById("numberOfPeople").innerText);



    if (isNaN(totalBill) || isNaN(tipPercentage) || isNaN(numberOfPeople)
|| totalBill <= 0 || tipPercentage < 0 || numberOfPeople <= 0) {

        document.getElementById("tipAmount").textContent = "Please enter
valid numbers.";

        return;

    }



    var tipAmount = (totalBill * (tipPercentage / 100)) / numberOfPeople;

    document.getElementById("tipAmount").textContent = "Tip per person: $"
+ tipAmount.toFixed(2);

}
```