

Tip calculator

Here's the updated summary:

Project Summary

I developed a tip calculator web application using HTML, CSS, and JavaScript. The app allows users to calculate tips based on a bill amount and tip percentage.

Output

When the user enters a bill amount, tip percentage, and number of people, the app calculates the total amount and amount per person. For example:

- Bill Amount: \$100.00
- Tip Percentage: 15%
- Number of People: 4
- Round Tip: None

Output: Total Amount: \$115.00 | Amount per person: \$28.75

Key Features

1. Input validation: The app includes input validation to ensure users enter valid numbers for bill amount and number of people.
2. Error handling: The app handles errors well, displaying informative error messages to users.
3. Customizable tip percentages: The app allows users to choose from different tip percentages or enter a custom percentage.
4. Responsive design: The app is designed to work well on different devices.

Technical Details

1. Front-end development: The project uses front-end development technologies such as HTML, CSS, and JavaScript.
2. Client-side scripting: The app uses client-side scripting to handle user input and calculate tips.

Program

```
<!DOCTYPE html>
<html>
<head>
  <title>Tip Calculator</title>
</style>
  body {
    font-family: Arial, sans-serif;
  }
  form {
    width: 50%;
    margin: 40px auto;
    padding: 20px;
    border: 1px solid #ccc;
    border-radius: 10px;
```

```

        box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
    }
    label {
        display: block;
        margin-bottom: 10px;
    }
    input[type="number"] {
        width: 100%;
        height: 40px;
        margin-bottom: 20px;
        padding: 10px;
        border: 1px solid #ccc;
    }
    select {
        width: 100%;
        height: 40px;
        margin-bottom: 20px;
        padding: 10px;
        border: 1px solid #ccc;
    }
    button {
        width: 100%;
        height: 40px;
        background-color: #4CAF50;
        color: #fff;
        padding: 10px;
        border: none;
        border-radius: 5px;
        cursor: pointer;
    }
    button:hover {
        background-color: #3e8e41;
    }
    #result {
        font-size: 24px;
        font-weight: bold;
        margin-top: 20px;
    }
    .error {
        color: red;
        font-size: 12px;
        margin-bottom: 10px;
    }
</style>
</head>
<body>
<h1>Tip Calculator</h1>
<form>

```

```

<label>Bill Amount:</label>
<input type="number" id="bill-amount" step="0.01" min="0.01">
<span id="bill-error" class="error"></span>
<label>Tip Percentage:</label>
<select id="tip-percentage">
  <option value="0.10">10%</option>
  <option value="0.15">15%</option>
  <option value="0.20">20%</option>
  <option value="custom">Custom</option>
</select>
<input type="number" id="custom-tip" style="display: none;" step="0.01" min="0">
<span id="custom-tip-error" class="error"></span>
<label>Round Tip:</label>
<select id="round-tip">
  <option value="none">None</option>
  <option value="dollar">To nearest dollar</option>
  <option value="cent">To nearest cent</option>
</select>
<label>Number of People:</label>
<input type="number" id="num-people" min="1">
<span id="people-error" class="error"></span>
<button id="calculate">Calculate</button>
<button id="clear" type="reset">Clear</button>
</form>
<p id="result"></p>
<script>
  // JavaScript code to calculate tip and display result
  document.getElementById('calculate').addEventListener('click', function(event) {
    event.preventDefault();
    calculateTip();
  });

  function calculateTip() {
    const billAmount = parseFloat(document.getElementById('bill-amount').value);
    const numPeople = parseInt(document.getElementById('num-people').value);
    let tipPercentage;

    if (document.getElementById('tip-percentage').value === 'custom') {
      tipPercentage = parseFloat(document.getElementById('custom-tip').value) / 100;
    } else {
      tipPercentage = parseFloat(document.getElementById('tip-percentage').value);
    }

    const roundTip = document.getElementById('round-tip').value;
    const tip = billAmount * tipPercentage;
    let totalAmount;

    if (roundTip === 'dollar') {

```

```

    totalAmount = billAmount + Math.round(tip);
  } else if (roundTip === 'cent') {
    totalAmount = billAmount + Math.round(tip * 100) / 100;
  } else {
    totalAmount = billAmount + tip;
  }

  const amountPerPerson = totalAmount / numPeople;
  document.getElementById('result').innerText = `Total Amount: ${totalAmount.toFixed(2)}
| Amount per person:

```

Sample output

Bill Amount:

4000

Tip Percentage:

20%

Round Tip:

To nearest cent

Number of People:

2

Calculate

Total Amount: \$4800.00 | Amount per person: \$2400.00

Project Outcome

1. Functional tip calculator: The app is a functional tip calculator that accurately calculates tips based on user input.
2. User-friendly interface: The app has a user-friendly interface that makes it easy for users to enter information and calculate tips.
3. Error handling: The app handles errors well, displaying informative error messages to users.
4. Customizable tip percentages: The app allows users to choose from different tip percentages or enter a custom percentage.