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project tip form javascript
SHAPEAI

Design a tip calculater using html css and java script

Introduction

TIP FORM JAVASCRIPT PROJECT

JavaScript Used

- DOM Manipulation
- Control Structures
- Array.forEach()
- JavaScript CSS Manipulation
- eventListeners
- setTimeout()
- Immediately Invoked Function Expressions

Project Description/Summary

This project involves using JavaScript to wire up a tip calculator.

New Things Learned or Refreshed

I spent a lot of time on this project. I watched about 20 of John's 40 minute solution before tackling the project myself. I wanted to watch the first couple of minutes to make sure I was on the right steps towards completing the project, but then he said he wasn't going to touch any of the HTML. I was curious to see how he would wire

up the Service selection option on the from. This brought me to the first thing I learned: How to dynamically include options into an HTML from using a JavaScript object. I didn't end up watching the rest of John's solution. Still, I managed to get the project working as described in the project introduction video. I don't know how John finished the project but here some things I did that I know I he did not do:

- I broke up the feedback statement. Before breaking up the feedback statement, if there was an error in one spot, the user would get all three validation errors.
- I created two functions. One function handles error validation and the other handles the calculations for the tips.
- I add a validation statement to make calculations only if there were no errors. I did this by creating and returning a Boolean flag called 'isFeedback' to indicated whether error feedback existed.
- I add the 'toFixed(2)' method to my output to ensure two decimals in my output.
- I made the users output and the users input disappear from the form after five seconds to give visual feedback that the calculations were complete.

Time to Code

This took about **3 hours**, start to finish, including watching part of John's solution and then going back to finish my own solution.

Lines of Code

This took 40 lines of code, including comments and white space.

Biggest Take Away(s)

I had yet another BUG in my code. I typed in setInterval() instead of setTimeout(). It didn't hit me until after watching my CSS mysterically appear and disappear in a fixed interval of about every 2 seconds. Then I was like, why are my CSS classes appearing and reappearing in set intervals?...Duh! One more takeaway but not necessarily a bug was when I used the HTML input form field. I tried to input a

decimal number (18.67) but got an error. Luckily, I remember from an earlier project that the reason for the error was the HTML input was set to number. **When the HTML input has type="number", you have to add step="0.1" to set the interval to accept decimals.**

What to Accomplish

1. Download the source code from the github repository above.
2. Delete the contents of the `app.js` file.
3. Implement the JavaScript code in your own `app.js file.`
4. If you think you need to see a video solution first, be sure to pick up John's [JavaScript Tutorial and Projects Course](.).
5. Add a link to your finished project below!

What You Should See

1. In the case of tip form calculator above, you should be able to use the calculator to enter an amount of a bill, the number of people who will split the bill, and a selection as to how the service went.
2. If a user forgets to add input or if the input is blank (or less than zero), feedback should be alerted to the user and then go away after 5 seconds.
3. During the calculation, a GIF animation should show for a couple seconds before the user's answer show up on the screen.
4. After about 5 seconds, the calculator should reset all forms.

Design a Tip Calculator using HTML, CSS and JavaScript

The tip is the money given as a gift for good service, to the person who serves you in a restaurant. In this project, a simple tip calculator is made which takes billing amount, type of service, and a number of persons as input. As per the three inputs it generates a tip for the serving person.

Approach:
To find out the tip we will take input from the user: Bill Amount (it is the amount of the total bill, we are taking this into amount variable), for the type of service we are using a drop-down menu having quality as the options in percentage (like good, bad, excellent, etc.), lastly, we are taking the number of persons as input (it will help to divide the tip equally among all the person). A per the inputs from the user, we are calculating the tip and then printing it using the console.log() function.
Total is basically amount multiplied by type of service divided by a number of persons.

Using HTML we are giving desired structure, option for the input, and submit button. With the help of CSS, we are beautifying our structure by giving colors and desired font, etc.

In the JavaScript section, we are processing the taken input and after calculating, the respective output is printed.

Example:

- index.html

```
<html>



<head>

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

    <script type="text/javascript" src="app.js">
```

```html
        </script>

</head>


<body>

    <div class="container">

        <h1>TIP CALCULATOR</h1>

        <div class="wrapper">



<p>Bill Amount</p>



            <input type="text" id="amount"

                placeholder="Amount to be paid"> ₹




<p>How was the service ?</p>



            <select id="services">

                <option selected disabled hidden>

                    Select

                </option>
```

```html
                    <option value="0.25">25% - Top Notch</option>

                    <option value="0.20">20% - Excellent</option>

                    <option value="0.15">15% - Good</option>

                    <option value="0.10">10% - Bad</option>

                    <option value="0.05">5% - Worst</option>

            </select>




<p>Total number of persons</p>



            <input type="text" id="persons"

                placeholder="Number of people sharing the bill">

            <button id="calculate">Calculate</button>

        </div>



        <div class="tip">



<p>Tip Amount</p>



            <span id="total">0</span>₹
```

```html
        <span id="each">each</span>

    </div>

</div>

</body>



</html>
```

- style.css

```css
body {

    background-color: #001f4f;

    font-family: "Raleway", sans-serif;

}



.container {

    width: 350px;

    height: 500px;

    background-color: #fff;

    position: absolute;

    left: 50%;

    top: 50%;
```

```css
    transform: translateX(-50%) translateY(-50%);

    border-radius: 20px;

}


h1 {

    position: absolute;

    left: 50%;

    top: -60px;

    width: 300px;

    transform: translateX(-50%);

    background-color: #ff851b;

    color: #fff;

    font-weight: 100;

    border-top-left-radius: 20px;

    border-top-right-radius: 20px;

    font-size: 18px;

    text-align: center;

    padding: 10px;

}


.wrapper {
```

```css
    padding: 20px;

}


input,

select {

    width: 80%;

    border: none;

    border-bottom: 1px solid #0074d9;

    padding: 10px;

}


input:focus,

select:focus {

    border: 1px solid #0074d9;

    outline: none;

}


select {

    width: 88% !important;

}
```

```css
button {

    margin: 20px auto;

    width: 150px;

    height: 50px;

    background-color: #39cccc;

    color: #fff;

    font-size: 16px;

    border: none;

    border-radius: 5px;

}


.tip {

    text-align: center;

    font-size: 18px;

    display: none;

}
```

- app.js

```js
window.onload = () =>

    //the function called when Calculate button is clicked.

    {
```

```javascript
        /*calling a function calculateTip

         which will calculate the tip for the bill.*/

        document.querySelector('#calculate').onclick =
calculateTip;


    }



function calculateTip() {

    /*assing values of ID : amount, person and service to

    variables for further calculations.*/

    let amount = document.querySelector('#amount').value;

    let persons = document.querySelector('#persons').value;

    let service = document.querySelector('#services').value;



    console.log(service);

    /*if statement will work when user presses

        calculate without entering values. */

    //so will display an alert box and return.

    if (amount === '' && service === 'Select') {

        alert("Please enter valid values");

        return;

    }
```

```javascript
    //now we are checking number of persons

    if (persons === '1')

    //if there is only one person then we need not to display
each.

        document.querySelector('#each').style.display = 'none';

    else

    //if there are more than one person we will display each.

        document.querySelector('#each').style.display = 'block';



    /*calculating the tip by multiplying total-bill and type of

     service; then dividing it by number of persons.*/

    //fixing the total amount upto 2 digits of decimal

    let total = (amount * service) / persons;

    total = total.toFixed(2);



    //finally displaying the tip value

    document.querySelector('.tip').style.display = 'block';

    document.querySelector('#total').innerHTML = total;

}
```

Complete code:

- HTML

```html
<html>



<head>

    <style>

        body {

            background-color: #001f4f;

            font-family: 'Raleway', sans-serif;

        }


        .container {

            width: 350px;

            height: 500px;

            background-color: #fff;

            position: absolute;

            left: 50%;

            top: 50%;

            transform: translateX(-50%) translateY(-50%);

            border-radius: 20px;

        }
```

```css
h1 {

    position: absolute;

    left: 50%;

    top: -60px;

    width: 300px;

    transform: translateX(-50%);

    background-color: #FF851B;

    color: #fff;

    font-weight: 100;

    border-top-left-radius: 20px;

    border-top-right-radius: 20px;

    font-size: 18px;

    text-align: center;

    padding: 10px;

}


.wrapper {

    padding: 20px;

}


input,
```

```css
select {

    width: 80%;

    border: none;

    border-bottom: 1px solid #0074D9;

    padding: 10px;

}


input:focus,

select:focus {

    border: 1px solid #0074D9;

    outline: none;

}


select {

    width: 88% !important;

}


button {

    margin: 20px auto;

    width: 150px;

    height: 50px;
```

```
            background-color: #39CCCC;

            color: #fff;

            font-size: 16px;

            border: none;

            border-radius: 5px;

        }



        .tip {

            text-align: center;

            font-size: 18px;

            display: none;

        }

    </style>

</head>



<body>

    <div class="container">

        <h1>TIP CALCULATOR</h1>

        <div class="wrapper">



<p>Bill Amount</p>
```

```html
<input type="text"

    id="amount"

    placeholder="Amount to be paid"> ₹
```

```html
<p>How was the service ?</p>
```

```html
<select id="services">

    <option selected disabled hidden>Select</option>

    <option value="0.25">25% - Top Notch</option>

    <option value="0.20">20% - Excellent</option>

    <option value="0.15">15% - Good</option>

    <option value="0.10">10% - Bad</option>

    <option value="0.05">5% - Worst</option>

</select>
```

```html
<p>Total number of persons</p>
```

```html
        <input type="text"

            id="persons"

            placeholder="Number of people sharing the
bill">

        <button id="calculate">Calculate</button>

    </div>



    <div class="tip">


<p>Tip Amount</p>


        <span id="total">0</span>₹

        <span id="each">each</span>

    </div>

</div>

<script>

    //the function called when Calculate button is clicked.

    window.onload = () =>

        {

            /*calling a function calculateTip which

             will calculate the tip for the bill.*/
```
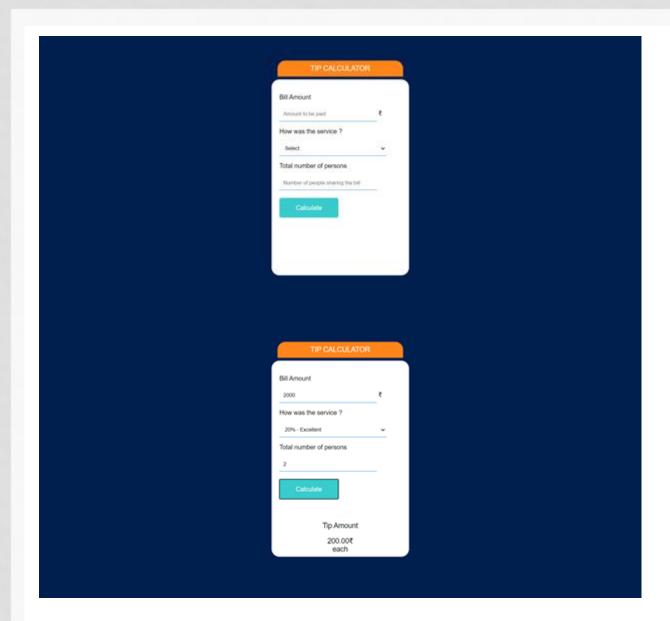
```javascript
        document.querySelector('#calculate').onclick =

        calculateTip;


    }



    function calculateTip() {

        /*assing values of ID : amount, person and

        service to variables for further calculations.*/

        let amount =
document.querySelector('#amount').value;

        let persons =
document.querySelector('#persons').value;

        let service =
document.querySelector('#services').value;



        console.log(service);

        /*if statement will work when user

           presses calculate without entering values. */

        //so will display an alert box and return.

        if (amount === '' && service === 'Select') {

            alert("Please enter valid values");

            return;

        }
```

```javascript
            //now we are checking number of persons

            if (persons === '1')

//if there is only one person then we need not to display each.

                document.querySelector('#each').style.display =
'none';

            else

            //if there are more than one person we will display
each.

                document.querySelector('#each').style.display =
'block';




    /*calculating the tip by multiplying total-bill and type of
service;

     then dividing it by number of persons.*/

            //fixing the total amount upto 2 digits of decimal

            let total = (amount * service) / persons;

            total = total.toFixed(2);



            //finally displaying the tip value

            document.querySelector('.tip').style.display =
'block';

            document.querySelector('#total').innerHTML = total;

        }

    </script>
```

```
</body>
```

```
</html>
```

Output:

TIP CALCULATOR

Bill Amount

Amount to be paid   ₹

How was the service ?

Select   ⌄

Total number of persons

Number of people sharing the bill

[Calculate]

[Type the closing]

Alok kumar
[Type the sender title]
project tip form javascript