Lesson 03.04

RESTAURANT BILL TAX AND TIP CALCULATOR

The restaurant bill calculator consists of a web form:

- inputs for Food and Beverage subtotals
- select menus for Tip and Tax percent
- a Calculate button to call the **calcBill** function
- an h2 to display the itemized bill made by the function

1. Get the form objects:

```
let food = document.getElementById('food');
let bev = document.getElementById('bev');
let taxMenu = document.getElementById('tax-menu');
let tipMenu = document.getElementById('tip-menu');
let calcBtn = document.getElementById('calc-btn');
let response = document.getElementById('response');
```

2. Have the button listen for a click and call the calcBill function when it is clicked:

```
calcBtn.addEventListener('click', calcBill);
```

3. Start writing the function. First thing it does is prevent the form from doing a default page reload:

```
function calcBill(event) {
    event.preventDefault();
```

4. Get the values from the form.

○ Use the Number() method to convert the "number-like strings" to real numbers. Add the food and bev together to obtain the sub-total:

```
let foodTot = Number(food.value);
let bevTot = Number(bev.value);
let tipPct = Number(tipMenu.value);
let taxPct = Number(taxMenu.value);
let subTot = foodTot + bevTot;
```

5. Calc the tax and tip totals by mutiplying the subTot by the tax and tip rates. Since 15% is 0.15 (not 15) divide by 100:

```
let taxTot = subTot * taxPct / 100;
let tipTot = subTot * tipPct / 100;
```

6. Add the tax and tip to the subtotal and round off tipTot, taxTot and total to two decimal places with toFixed(2). Be sure to do toFixed() AFTER the math is done, because toFixed() converts number to strings:

```
let total = subTot + taxTot + tipTot;
tipTot = tipTot.toFixed(2);
taxTot = taxTot.toFixed(2);
total = total.toFixed(2);
```

7. Get the date and time, so that they can be added to the bill. This is all review of Unit 02.04 – Date Object, so we won't discuss the code again here:

```
let d = new Date();
let hr = d.getHours();
let min = d.getMinutes();
let sec = d.getSeconds();
if(min < 10) min = '0' + min;
if(sec < 10) sec = '0' + sec;
let timeIs = `${hr}:${min}:${sec}`;
let mo = d.getMonth(); // 0-11
let date = d.getDate(); // 1-31
let yr = d.getFullYear();
let dateIs = `${mo+1}/${date}/${yr}`;
```

8. Concatenate the itemized bill and output it. The string includes tags, so use **innerHTML**, rather than **textContent**:

```
// concatenate bill
let bill = `
    ***JS CAFE***
    <br>***GUEST CHECK***
    <br>Date: ${dateIs}
    <br>Time: ${timeIs}
    <br>Food: $${foodTot}
    <br>Beverage: $${bevTot}
    <br>Sub-Total: $${subTot}
    <br>Tax %: ${taxPct}
    <br>Tax: $${taxTot}
    <br>Tip Pct %: ${tipPct}
    <br>Tip: $${tipTot}
    <br>***PLEASE PAY:***
    <br>TOTAL: $${total}
    <br>***THANK YOU!***`;
```

```
        // output the bill to the web page (DOM)
        response.innerHTML = bill;
} // end calcBill function
```