



PROG1128 JavaScript Programming

JavaScript Programming MPG App

1. See the attached video for implementation
2. Create an **index.html** page
3. Add the following controls
 - Input type text with id **txtMiles**
 - Input type text with id **txtGallons**
 - Button with id **btnCalculate**
 - div tag with id **answer**
4. Create an **app.js** file and reference it in your index.html page in the head tag
5. Ensure you add the **defer** attribute to the script tag
6. The **app.js** script file will do the following:
 - Create an **errors** array
 - Create a function expression called **isValidNumeric** that accepts a parameter called **value**
 - i. Within this function, validate the **value** parameter is numeric and return true if valid, false if not a valid numeric
 - Create a declarative function called **calculateMPG** that accepts two parameters **milesTravelled** and **gallonsConsumed**. Within the function do the following:
 - i. Validate the **milesTravelled** using the **isValidNumeric** method. Also the **milesTravelled** cannot be zero. If either of these validation fail, add an appropriate error to the **errors array** using the push method.
 - ii. Validate the **gallonsConsumed** using the **isValidNumeric** method. Also the **gallonsConsumed** cannot be zero. If either of these validation fail, add an appropriate error to the **errors array** using the push method.
 - iii. If the incoming parameters are valid, calculate miles/per gallon and round to the nearest whole number. Return the value from this function
 - Create variables for the following and get a reference to the DOM elements using **document.getElementById** and the Id's:
 - i. **txtMiles**
 - ii. **txtGallons**
 - iii. **btnCalculate**
 - iv. **answer**
 - Add an event listener to **btnCalculate** button for the click event. Handle event with a method called **calculateButtonHandler**

Ensure the proper commenting for assignments is included at the top of your code. Commit and push to GitHub regularly until the due date.



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- Create a declarative function called **calculateButtonHandler** Within this function complete the following:
 - i. Get the values from the **txtMiles** TextBox using the value property and store in a variable
 - ii. Get the values from the **txtGallons** TextBox using the value property and store in a variable
 - iii. Call the **calculateMPG** passing in the required parameters. Store the answer in a variable called **answer**
 - iv. If there are no errors after the call to **calculateMPG** produce a message displaying all information collected and calculated. See video. Place this message in the **answer** div using innerHTML
 - v. If there are errors, created an unordered list to display the errors. See the video. Place this message in the **answer** div using innerHTML

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