

7. MPG Calculator

Student learning outcomes

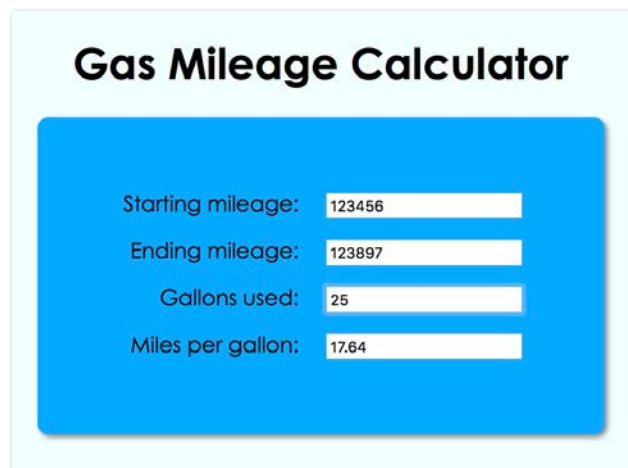
- Students will create a form to perform a mathematical calculation on user-supplied data.
- Students will explore how to let users enter data in a way that they easily understand.
- Students will learn how to make a more extensive form look nice.
- Students will learn how to create an interactive form that does not have a submit button.

Real world applications:

- Travel apps and financial apps are two popular app categories.
- Students will create an app "to spec" based on a mockup drawing, to simulate client interaction.
- Students will understand what MPG is and how to calculate it.

Assignment requirements:

- Students will work independently to reproduce a calculator based on a mockup and make it work.
 - Students will use knowledge of labels and other features from the previous form-based projects, especially the BMI calculator.
 - Students will be expected to create a nice UI.
 - Students will create a UI based on a client mockup and are expected to conform to it as closely as possible.
- Because the form does not have a submit button, the calculations will be performed "live" every time the user changes the contents of any form field. This will use the following event handlers:
 - onchange (activates when input field focus is changed)
 - oninput (activates whenever input field content changes)
- Will use toFixed() to reduce the number of decimal places displayed.



The image shows a mockup of a "Gas Mileage Calculator" form. The form is titled "Gas Mileage Calculator" in bold black text. Below the title, there are four input fields, each with a label and a value: "Starting mileage: 123456", "Ending mileage: 123897", "Gallons used: 25", and "Miles per gallon: 17.64". The form has a blue background and is set against a light blue background.