

Programming Logic - Beginning

152-101

Rental Gas Cost Estimate Program

20 points

General Program Requirements

Your relatives own a rental car company and have asked you to create a program to help customers estimate the gasoline costs they will have to pay in addition to the rental fee. The ~~program~~**form** should first allow the user to enter the customer's name, the date the estimate was provided, and a description of the trip the customer plans to take. This description could be many lines long. Then, the user should be allowed to enter the estimated number of city and highway miles the customer plans to drive (whole numbers).- Next, the program must allow the user to enter the estimated miles per gallon (MPG) city and highway the customer's rental car usually gets (might contain decimal places for accuracy).- Finally, the program should allow the user to enter the approximate cost of a gallon of gasoline. When the user clicks the calculate button, display the estimated number of gallons needed for the trip and the estimated gasoline cost for the trip. Because the company often provides these estimates well in advance of the rental, your program should display the date the estimate expires. The company guarantees estimates for fifteen days.

Program Design

- Follow the design you created for this program in Unit 3.
- If necessary, update the design
- **Submit the design with your program**

Detailed Program Requirements

Use group boxes (appropriately labeled) to group similar data.

Provide a button to clear the form input and output fields. Reset the estimate date field to the current date.

Make the calculate button the form's Accept Button. Make the Clear button the form's Cancel button.

Format all dollar amounts for currency (including inputs). Format the gallons needed to display two decimal places. Format the estimate date using the long date format. Format the estimate expiration date using the short date format. Format the miles inputs to show commas.

Insert an appropriate image on the form. Create a professional appearance for the form.

If the user enters invalid numeric data, display an appropriate error message.

Include a Welcome Screen for this project. You may use your Unit 3 Welcome screen, but customize the welcome screen for this program. Display the Welcome Screen for 5 seconds. Provide buttons to exit the program without launching the main form and another button to start the program immediately, without waiting for the timer.

Follow the class [programming standards](#), incorporating all highlighted standards.

Challenge Points - 1 point EACH

- Change the processing to round the number of gallons needed UP to the nearest whole number. Tip: Use the Math.Ceiling function to accomplish this.
- Add a version number displayed in an appropriate place on the main form. You may only earn this challenge point once for Unit 4 assignments.
- Display the estimate expiration date in a *custom format* of your choice. You may only earn this challenge point once for Unit 4 assignments.
- Anchor the form buttons, the version number (if provided) and any other appropriate objects to the appropriate locations of the form so they move appropriately when the form is resized. You may only earn this challenge point once for Unit 4 assignments.