

Programming Project 1

25 points

Submission Instructions

Open Eclipse and create a Java Project called *Project1*. In the src folder of this project, add a package named `project1`. In this package, add a class named *RoadTrip*.

At the top of your file, enter a comment with your name, the assignment number, the date, and a short description of what the program does. For example, if I were submitting the assignment my comment might look like this:

```
/**
 * Author: Susanne Sherba
 * Programming Project 1
 * September 26, 2018
 * Calculates gallons of gas needed and number of stops for a road trip.
 */
```

When you are finished, export your project from Eclipse and upload it to Canvas before the due date. To do this, right click on the project name and select Export. Select General->Archive File and click Next. Select the project you wish to export (Project1 in this case) and click Browse to browse to a location to save your file. Name this file *YourLastNameYourFirstNameProject1*. Upload this file to Canvas. Remember that late assignments are not accepted in this course.

Assignment

You and your friends are planning a road trip. Write a program that asks the user for information about where they are going and the car they are driving and then gives them some helpful information about their trip. Specifically, you should ask the user for:

- the name of the city they are leaving from
- the name of the city they are going to
- the distance between the two cities
- how many miles per gallon their car gets
- how many gallons the car's gas tank holds

You should output the name of the starting and ending cities, the number of gallons of gas the trip requires (with one decimal place) and the number of stops you will need to make along the way (as an integer). Make sure the first letter of the city names are capitalized, even if the user didn't capitalize them. You may assume that your gas tank is full at the beginning of the trip.

Here's a sample interaction with the user:

Enter city you are leaving from: denver
Enter city you are driving to: jacksonville
Enter distance in miles: 1748
Enter miles per gallon your car gets: 34
Enter the number of gallons your car's tank holds: 15.3

Your trip from Denver to Jacksonville will require 51.4 gallons of gas.
Assuming your gas tank is full when you leave, you will need to stop to fill up 3 times.

Grading Criteria (25 points possible)

Points	Criteria
0-5 points	Input: Does the program clearly prompt the user for the required values and correctly read in these values from the keyboard?
0-10 points	Correctness: Does the program correctly calculate all required values?
0-5 points	Output: Is the output displayed in a way that is easy to read? Is the number of stops displayed as an integer? Is the number of gallons displayed with one decimal place? Is the first letter of each city name capitalized?
0-5 points	Style: Is the code easy to read? Is the code indented in a style similar to that shown in the textbook? Are blank lines used to divide the code into sections? Is a comment with the required information included at the top of the file? Are comments used to provide details that are not obvious? Are meaningful variable names used? (See Section 1.4 of the textbook for documentation and style guidelines.)