

Summary

Write a program that will calculate the number of miles per gallon and the number of kilometers per liter given gallons used and starting and ending odometer readings. The results will be displayed to the user.

Requirements

- From the user, get the number of gallons used (Could contain a decimal point.)
- **If** the number of gallons used is positive then
 - Get the starting and ending odometer readings (integers)
 - **If** the ending odometer reading is greater than the starting odometer reading
 - Compute and display the miles per gallon and liters per kilometer to exactly 4 digits of precision
 - **Else**
 - Display the error message shown in the sample run
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- Note the structure presented above for a nested if-else. Follow this structure in your program.
- Match the exact output shown below. Note that in the sample run with valid input there is a blank line between the input and the displayed computations.
- Use the following assumptions (constants) for metric conversion. Remember to create named constants rather than hard-code in the literal numbers.
 - 1.60934 kilometers per mile
 - 3.78541 liters per gallon)
- Follow all coding style guidelines presented thus far. Remember to make paragraphs of code preceded by a comment.
- You may work with one other person in the class, provided that you work together on it equally. If you do this, only hand in and submit one solution for your team.

Sample Runs (User input shown in dark red)

Sample run with invalid input for gallons
Please enter number of gallons used: -1 I'm sorry, gallons used must be greater than 0.
Sample run with invalid input for odometer readings
Please enter number of gallons used: 12.5 Please enter the beginning odometer reading: 1000 Please enter the ending odometer reading: 950 I'm sorry, the ending odometer reading must be greater than the starting odometer reading.
Sample run with invalid input for odometer readings
Please enter number of gallons used: 12 Please enter the beginning odometer reading: 1223 Please enter the ending odometer reading: 1223 I'm sorry, the ending odometer reading must be greater than the starting odometer reading.
Sample run with valid input
Please enter number of gallons used: 11.6 Please enter the beginning odometer reading: 32001 Please enter the ending odometer reading: 32400 The number of miles per gallons is: 34.3966 The number of kilometers per liter is: 14.6234

Submission

- Before class: Upload the source code (.java file) to the drop box. Print the source code
- Beginning of class: Hand in the source code.