CS 210 - Fundamentals of Programming I
Spring 2019 - In-class Exercise 2 for 01/17/2019

Write a program that implements a solution for the following problem statement. Use comments to indicate the analysis and design for the program. Successfully submit this program to the automated testing system. Answer the questions on the back of this sheet.

Problem Statement

Write a program that calculates mileage reimbursement for a salesperson at a rate of 45 cents per mile. Your program should interact with the user in the following manner (user input shown in **bold**):

```
MILEAGE REIMBURSEMENT CALCULATOR
Enter the beginning odometer reading: 13505.2
Enter the ending odometer reading: 13810.6

The distance traveled is 305.4 miles.
At $0.45 per mile, the reimbursement is $137.43.
```

Analysis & Design

The analysis phase identifies the data needed or computed by the program. The design phase identifies the steps to compute the solution.

Implementation

After developing the analysis, constant and variable declarations are written. After developing the design, coding techniques necessary to complete the steps are written.

Submission

Make sure that your name is in a comment at the beginning of your program file. Reminder: the submission system requires that the output format (including spelling, capitalization, spacing, and punctuation) must **exactly** match the example given. If the computed parts appear to be correct, then check for errors in formatting, spelling, capitalization, and whitespace.

Detailed instructions on how to use the automated testing system can be found in the on-line document *Submission Instructions* on the course webpage. A link to the submission system (submission.evansville.edu) can be found on the course webpage.

When you have submitted this program successfully and answered the questions on the back, you are dismissed for today.

Name: _____

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(10 points) Answer the following questions regarding the program written for this class. Turn in this sheet after you have submitted your program successfully.

0.   Submit your completed program.

1. What is the type of the variables in this program?

2. What kind of values can these variables hold?

3. What is the input statement for reading in the beginning odometer reading?

4. What is the assignment statement that computes the distance traveled?

5. What is the output statement for displaying the distance traveled?

6. How are the number of places after the decimal point specified in the output statement for displaying the distance traveled?

7. What arithmetic operators are used in this program? What operations do they perform?