

CECS100

Hmw9

Use the previous assignments and lab work to develop a Java code that calculates the distance traveled each hour (the last homework assignment Hmw8)

The distance a vehicle travels can be calculated as follows: $\text{Distance} = \text{Speed} \times \text{Time}$. For example, if a train travels 40 miles per hour for three hours, the distance traveled is 120 miles.

Design a program that asks the user for the speed of vehicle (in miles per hour) and how many hours it has traveled. It should then use a loop to display the distance the vehicle has traveled for each hour of that time period. You should validate your entry for negative values (if the user will enter a negative value, the program should output an error message and keep asking for a correct value). After making sure that your code works perfectly, insert your code within a menu driven code that will allow you to choose to run the code again and again until you choose to exit.

Here is an example of the output:

Welcome to Distance Calculation Code Company.

Please select from the following:

- 1- Run the code
- 2- Exit

What do you want to do? 1 [enter]

What is the speed of the vehicle in MPH? 40 [enter]

How many hours has the vehicle traveled? 3 [enter]

Hour	Distance traveled
1	40
2	80
3	120

Welcome to Distance Calculation Code Company.

Please select from the following:

- 1- Run the code
- 2- Exit

What do you want to do? -1 [enter]

Invalid entry, please try again.

Welcome to Distance Calculation Code Company.

Please select from the following:

- 1- Run the code
- 2- Exit

What do you want to do? 2 [enter]

Thank you. Good bye.

Use methods (functions) this time. A minimum of these four functions:

menu will display the main menu. Takes no parameters and does not return back anything.

validate will validate the user's entry for speed and time. Will take one integer value and returns true if the value is greater than zero, false otherwise.

CalculatedD will calculate the distance. Takes two integer values (time, and speed) and returns the calculated distance

getVal will return a positive value from where it was called. Takes no parameter, and returns back an integer value.

You don't have to reinvent the wheel, just use your previous code from the homework assignment and the lab. Email me if you need help.