Credit Name:CSE3130
Assignment Name:Vehicles

How has your program changed from planning to coding to now? Please explain?

This is how my code has changed:

Step 1: Import Required Packages
- Import the necessary packages for the code, including java.text.NumberFormat, java.util.Random, and java.util.Scanner.

Step 2: Define the VehicleTest Class
- Declare the VehicleTest class, which contains the main method and additional helper methods.

Step 3: Implement the travelVehicle Method
- Define the travelVehicle method that takes a Vehicle object and a distance in kilometers (KM) as parameters.
- Inside the method, create a NumberFormat object named travelKM to format currency values.
- Declare a variable kmTravel to store the calculated cost of travel.
- Print the details of the vehicle using System.out.println(vec).
- Calculate the cost of travel for the given distance by calling the costOfTravel method on the vec object and passing KM as the argument.
- Print the cost of travel in a formatted manner using System.out.println(travelKM.format(kmTravel)).

Step 4: Implement the main Method
- Declare and initialize three vehicle objects: vec1 (Car), vec2 (Truck), and vec3 (Minivan) with specific attributes.
- Create a Scanner object named userinput to read user input.

Step 5: Define Variables
- Declare variables action (to store the user's chosen action), travel (to store the distance of travel), and carNum (to store the chosen car number).
- Initialize the vec variable with vec1 (the first car object).

Step 6: Start a Loop
- Start a do-while loop that continues until the user enters "Q" (quit).

Step 7: Prompt for User's Action
- Prompt the user to choose an action: "Car (C)", "Price to travel (P)", or "Quit (Q)".
- Read the user's input using userinput.next() and store it in the action variable.

Step 8: Handle User's Action
- If the user's action is not "Q" (quit), proceed with the following steps:
    - Prompt the user to enter a car number (1, 2, or 3) using System.out.println("Enter car number (1, 2, or 3)") and read the input using userinput.nextInt().
    - Use a switch statement to set the vec variable to the corresponding vehicle object based on the chosen car number:
        - If carNum is 1, set vec as vec1.

        - If carNum is 2, set vec as vec2.
        - If carNum is 3, set vec as vec3.

Step 9: Handle Chosen Action

- If the user's action is "C" (Car), print the details of the selected vehicle using System.out.println(vec).
- If the user's action is "P" (Price to travel), proceed with the following steps:
    - Prompt the user to enter the distance of travel in kilometers using System.out.println("How far are you travelling in km?") and read the input using userinput.nextDouble().
    - Invoke the travelVehicle method, passing vec and travel as arguments.

Step 10: Handle Additional Logic for Car 1 (Continued)

- If the selected vehicle is vec1, prompt the user with the question, "Want to play the lottery, on the way to work? (Y/N)" using System.out.println("Want to play the lottery, on the way to work? (Y/N)").
- Read the user's choice using userinput.next() and store it in the action variable.
- If the user's choice is "Y" (Yes), proceed with the following steps:
    - Create a Random object named random to generate random numbers.
    - Generate a random amount of money won using random.nextInt(1000), which generates a random integer from 0 to 999.
    - Print the amount won using System.out.println("You win: $" + Integer.toString(moneyWon)).

Step 11: Loop Continuation

- The loop will continue as long as the user's action is not "Q" (quit).
- If the user enters "Q", the loop will terminate, and the program will end.

Step 10: Loop Continuation (Continued)

- If the user enters "Q", the loop will terminate.
- After the loop, close the userInput scanner object using userInput.close().