12214994_SaurabhRana

Question No : 1 / 1

Problem Statement

You are tasked with developing a vehicle rental cost estimator program that calculates the estimated rental cost for different types of vehicles: cars, trucks, and bikes. The cost estimation depends on various factors such as the number of days, distance to be traveled, and whether insurance is included. Write the solution within the Program.cs file.

Requirements

1. VehicleRentalEstimator Class:

- Create a public class called **VehicleRentalEstimator**.

Methods:

- `double EstimateCost(int days, int distance)`
  Estimates the rental cost for a car based on the number of days and distance to be traveled.
  (Cost Estimation: `days * 50 + distance * 0.2`)
- `double EstimateCost(int days, int distance, bool withDriver)`
  Estimates the rental cost for a truck based on the number of days, distance to be traveled, and whether a driver is included.
  (Cost Estimation: `days * 100 + distance * 0.5 + (withDriver ? 200 : 0)`)
- `double EstimateCost(int days, bool includeInsurance)`
  Estimates the rental cost for a bike based on the number of days and whether insurance is included.
  - Cost Estimation if `includeInsurance` is true: `days * 20 + 50`
  - Cost Estimation if `includeInsurance` is false: `days * 20`

---

2. Program Class:

- In the **Main method**:
  - Prompt the user to input their choice of vehicle rental (1 for car, 2 for truck, 3 for bike).
  - Based on the choice, prompt the user to input the necessary details for the chosen rental.
  - Use the appropriate method of the **VehicleRentalEstimator** class to estimate the cost.

- Print the estimated rental cost for the chosen vehicle.

Input Format

The user inputs an integer choice (1, 2, or 3) representing the type of vehicle rental.

- **For a car (choice = 1):**
  - The user inputs two integers representing the **days** and **distance** of the car.
- **For a truck (choice = 2):**
  - The user inputs two integers representing the **days** and **distance** of the truck.
  - The user inputs a boolean value (**true** or **false**) indicating whether the driver is required or not.
- **For a bike (choice = 3):**
  - The user inputs one integer representing the **days** of the bike.
  - The user inputs a boolean value (**true** or **false**) indicating whether the insurance is required or not.

Output Format

Print the estimated cost for the chosen vehicle rental in the format:

The estimated rental cost of the [vehicle] is: $[estimatedCost]

Reference sample outputs:

Sample Input 1

```
1
2
200
```

Sample Output 1

```
The estimated rental cost of the car is: $140
```

Sample Input 2

```
2
3
2000
```

```
false
```

Sample Output 2

```
The estimated rental cost of the truck is: $1300
```

Sample Input 3

```
2
3
2000
true
```

Sample Output 3

```
The estimated rental cost of the truck is: $1500
```

Sample Input 4

```
3
5
false
```

Sample Output 4

```
The estimated rental cost of the bike is: $100
```

Sample Input 5

```
3
5
true
```

Sample Output 5

```
The estimated rental cost of the bike is: $150
```

Commands to Run the Project:

```
cd dotnetapp
dotnet run
dotnet build
dotnet clean
```

Note:

The project will not be submitted if **'Submit Project'** is not done at least once.

Answer:

```
class VehicleRentalEstimator
{
   public double EstimateCost(int days, int distance)
   {
      return days * 50 + distance * 0.2;
   }
   public double EstimateCost(int days, int distance, bool withDriver)
   {
      return days * 100 + distance * 0.5 + (withDriver ? 200 : 0);
   }
   public double EstimateCost(int days, bool includeInsurance)
   {
      return includeInsurance ? days* 20+ 50 : days * 20;
   }
}
class Program
{
   static void Main()
   {
      Console.Write("Enter 1 for car, 2 for truck, 3 for bike: ");
      int choice = Convert.ToInt32(Console.ReadLine());
```

```
int days,distance;
bool includeInsurance,withDriver;
VehicleRentalEstimator vre = new VehicleRentalEstimator();

switch (choice)
{
   case 1:
   Console.Write("Enter days: ");
   days = Convert.ToInt32(Console.ReadLine());
   Console.Write("Enter distance: ");
   distance = Convert.ToInt32(Console.ReadLine());
   Console.WriteLine("The estimated rental cost of the car is: $"+vre.EstimateCost(days,distance));
   break;

   case 2:
   Console.Write("Enter days: ");
   days = Convert.ToInt32(Console.ReadLine());
   Console.Write("Enter distance: ");
   distance = Convert.ToInt32(Console.ReadLine());
   Console.Write("Enter WithDriver: ");
   withDriver = Convert.ToBoolean(Console.ReadLine());
   Console.WriteLine("The estimated rental cost of the car is:
$"+vre.EstimateCost(days,distance,withDriver));
   break;

   case 3:
```

```
            Console.Write("Enter days: ");

            days = Convert.ToInt32(Console.ReadLine());

            Console.Write("Enter includeInsurance: ");

            includeInsurance = Convert.ToBoolean(Console.ReadLine());

            Console.WriteLine("The estimated rental cost of the car is:
$"+vre.EstimateCost(days,includeInsurance));

            break;



            default:

            Console.WriteLine("Invalid");

            break;



        }


    }

}
```