

Question:

Ride-Sharing System (Polymorphism): Define an interface Vehicle with a method calculateFare(distance). Implement Car and Bike classes that calculate fare differently (e.g., Car: ₹10/km, Bike: ₹5/km). Use polymorphism to calculate the fare based on user input.

Vehicle.java:

```
package Vehicle;

public interface Vehicle {

    double Fare(double distance);

}
```

Car.java:

```
package Vehicle;

public class Car implements Vehicle{

    private double KM = 10.0;

    @Override
    public double Fare(double distance) {
        return distance * KM;
    }

}
```

Bike.java:

```
package Vehicle;

public class Bike implements Vehicle{
    private double KM = 5.0;

    @Override
    public double Fare(double distance) {
        return distance * KM;
    }

}
```

Main.java:

```
package Vehicle;
import java.util.*;
public class Main {

    public static void main(String[] args) {
        Scanner s = new Scanner(System.in);

        Vehicle vehicle = null;

        while (true) {
            System.out.println("1. Car (10 km)");
            System.out.println("2. Bike (5 km)");
            System.out.println("3. Exit");
            System.out.print("Enter your choice: ");
            int choice = s.nextInt();
```

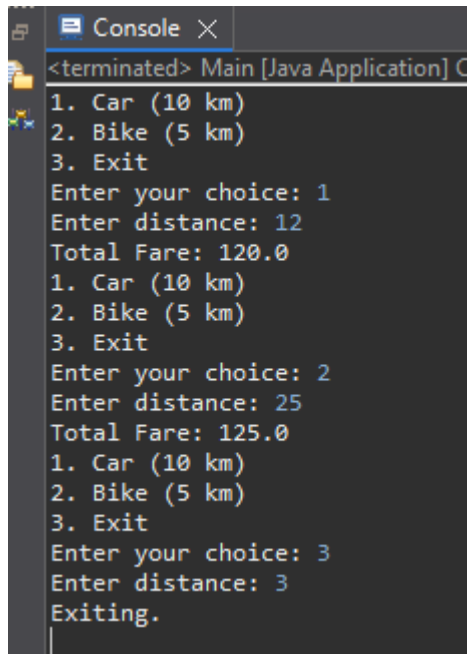
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        System.out.print("Enter distance: ");
        double distance = s.nextDouble();

        if (choice == 1) {
            vehicle = new Car();
        }
        else if (choice == 2) {
            vehicle = new Bike();
        }
        else if (choice == 3) {
            System.out.println("Exiting.");
            break;
        }
        double fare = vehicle.Fare(distance);
        System.out.println("Total Fare: " + fare);
    }
}

```

OUTPUT:



```

Console X
<terminated> Main [Java Application] C
1. Car (10 km)
2. Bike (5 km)
3. Exit
Enter your choice: 1
Enter distance: 12
Total Fare: 120.0
1. Car (10 km)
2. Bike (5 km)
3. Exit
Enter your choice: 2
Enter distance: 25
Total Fare: 125.0
1. Car (10 km)
2. Bike (5 km)
3. Exit
Enter your choice: 3
Enter distance: 3
Exiting.

```