**CAR RENTAL SYSTEM DOCUMENTATION**

Overview

the car rental system is a simple console-based application that allows users to rent cars from a rental agency it then keeps track of customers, cars, rented cars and rental transaction

it provides functionalities for adding a car to the agency displaying available cars, rent a car and returning a rented car

**Class Descriptions**

1. Customer

The customer class represents a customer who wants to rent a car

It has the following attributes; name-capturing his name, age-capturing his age and LnNumber-capturing his licence number.

It afterwards displays the customer's name, age, and licence number

2. Car

The Car class represents a car available for rent

Its attributes are brand- brand of the car, model- model of the car and DailyPrice- rental price of the car per day.

It initializes a new instance of a Car with the specified model, brand and daily rental price.

3. Rental

This class represents a rental transaction in progress,

Its attributes are customer- the customer renting a car, car- the car being rented, rentaldays -number of days the car is being rented and finally totalCost-total cost of the rental

It initializes a new instance with a specified customer, car, and rental duration, it calculates the total cost based on the daily price and rental days

4. RentalAgency

This class represents a car rental agency that manages a fleet of cars

It has the following attributes; car[] which is an array of cars available, Boolean[] which is an array to keep track of which cars are rented and finally numberOfCars – to show the current number of cars in the agency

It initializes a new instance with a specified size to hold the number of cars

5. CarRentalSystem

It contains the main method that runs the application

It initializes a scanner to read the user input, continues and creates an instance with a maximum of 3 cars

Afterwards, it instantiates the car objects and adds them to rental agency

It calls all the methods to display all available cars and prompts the user to enter customer details  
In summary, it asks the user to select a car to rent, prompts the user to enter the number of days he wants to rent and creates a rental transaction.

Finally, it displays the rental details including the total cost

**Usage Instructions**

Run the program by compiling and running the CarRentalSystem class.

It will thereby display a list of all the available cars within the agency

After that, the customer will be prompted to enter his details and continue to select the car he wants from the available list

After selecting the car, he’ll be prompted to enter the number of days he wants to spend with the car and also show how much he’ll be paying for it

**Conclusions**

The car rental system is a straightforward console application that demonstrates OOP principles and it efficiently manages customer and car data while providing essential functionalities for renting and returning cars to the agency.