Metropolitan University

Department of Software Engineering

Project Submission

Course Title: Object Oriented Programming

Course code: SWE - 224

Project Topic: Vehicle Rental System

Submitted to

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1.DESCRIPTION:

This Java project implements a vehicle rental system allowing users to rent vehicles. It comprises classes for vehicles (with details like ID, type, status, and cost), customers (with personal info and blood group), and rentals (linking vehicles and customers with rental dates). The system includes a GUI for browsing available vehicles, renting them by providing customer details, and updates the rental status accordingly. Serialization is used to store and retrieve vehicle data, ensuring persistence between sessions.

2.

```java
//Vehicle_Class
import java.io.Serializable;

enum VehicleType
{
    SEDAN, SUV, MINIBUS, AMBULANCE, MINIVAN, TRUCK
}

class Vehicle implements Serializable
{
    private String vehicleID;
    private VehicleType type;
    private String make;
    private String model;
    private RentalStatus status;
    private String cost;
    private String imagePath;

    public Vehicle(String vehicleID, VehicleType type, String make, String model,
RentalStatus status, String cost, String imagePath)
    {
        this.vehicleID = vehicleID;
        this.type = type;
        this.make = make;
        this.model = model;
        this.status = status;
        this.cost = cost;
        this.imagePath = imagePath;
    }
```

```java
public void setVehicleID(String vehicleID)
{
    this.vehicleID = vehicleID;
}

public String getVehicleID()
{
    return vehicleID;
}

public void setType(VehicleType type)
{
    this.type = type;
}

public VehicleType getType()
{
    return type;
}

public void setMake(String make)
{
    this.make = make;
}

public String getMake()
{
    return make;
}

public void setModel(String model)
{
    this.model = model;
}

public String getModel()
{
    return model;
```

```java
    }

    public void setStatus(RentalStatus status)
    {
        this.status = status;
    }

    public RentalStatus getStatus()
    {
        return status;
    }

    public void setCost(String cost)
    {
        this.cost = cost;
    }

    public String getCost()
    {
        return cost;
    }

    public void setImagePath(String imagePath)
    {
        this.imagePath = imagePath;
    }

    public String getImagePath()
    {
        return imagePath;
    }
}


//Customer_Class
import java.io.Serializable;

enum BloodGroup {
```

```java
    A_POSITIVE, A_NEGATIVE, B_POSITIVE, B_NEGATIVE, AB_POSITIVE, AB_NEGATIVE,
O_POSITIVE, O_NEGATIVE
}

public class Customer implements Serializable {
    private String customerLicenseID;
    private String name;
    private String phoneNumber;
    private BloodGroup bloodGroup;
    private Date dateOfBirth;

    public Customer(String customerLicenseID, String name, String phoneNumber,
BloodGroup bloodGroup, Date dateOfBirth) {
        this.customerLicenseID = customerLicenseID;
        this.name = name;
        this.phoneNumber = phoneNumber;
        this.bloodGroup = bloodGroup;
        this.dateOfBirth = dateOfBirth;
    }

    public void setCustomerLicenseID(String customerLicenseID) {
        this.customerLicenseID = customerLicenseID;
    }

    public String getCustomerLicenseID() {
        return customerLicenseID;
    }

    public void setName(String name) {
        this.name = name;
    }

    public String getName() {
        return name;
    }

    public void setPhoneNumber(String phoneNumber) {
        this.phoneNumber = phoneNumber;
    }
```

```java
    public String getPhoneNumber() {
        return phoneNumber;
    }

    public void setBloodGroup(BloodGroup bloodGroup) {
        this.bloodGroup = bloodGroup;
    }

    public BloodGroup getBloodGroup() {
        return bloodGroup;
    }

    public void setDateOfBirth(Date dateOfBirth) {
        this.dateOfBirth = dateOfBirth;
    }

    public Date getDateOfBirth() {
        return dateOfBirth;
    }
}
```