

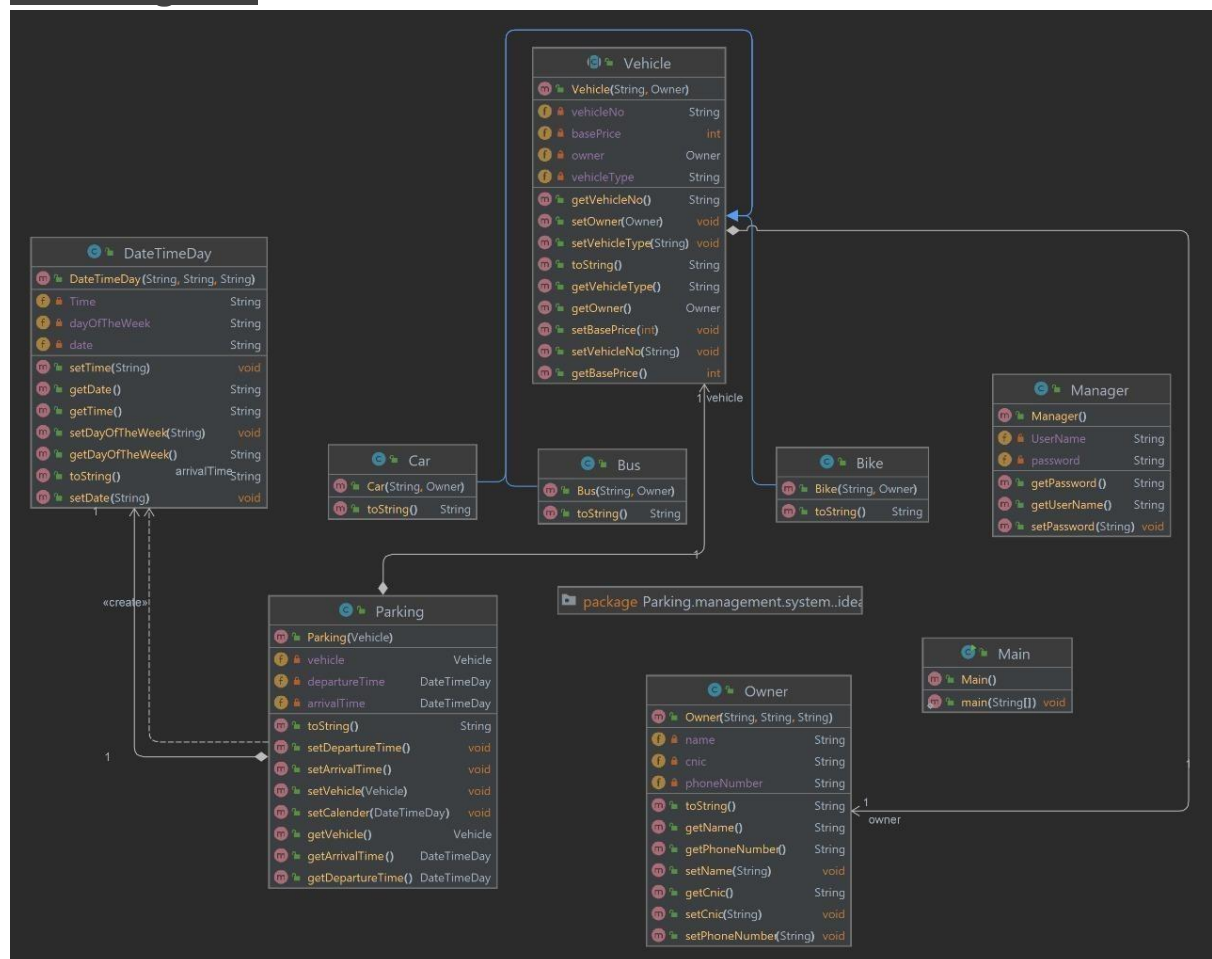


ASSIGNMENT 4

PARKING MANAGEMENT SYSTEM



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Coding:

//Exception Class:

```
package Parking.management.system;
public class InvalidUserInputException extends IllegalArgumentException {
    public InvalidUserInputException(String message) {
        super(message);
        System.out.println(message);
    }
}
```

//owner class:

```
package Parking.management.system;

import java.io.Serializable;

public class Owner implements Serializable {
    private String name;
    private String cnic;
    private String phoneNumber;
    public String getName() {
        return name;
    }

    public void setName(String name) {
        if(name.matches("[A-Za-z ]+"))
            this.name = name;
        else{
            throw new InvalidUserInputException("Invalid Name..");
        }
    }

    public String getCnic() {

        return cnic;
    }

    public void setCnic(String cnic) {
        if (cnic.matches("^([0-9]{5})-([0-9]{7})-([0-9]{1})$") || cnic.matches("^([0-9]{13})$"))
            this.cnic = cnic;
        else {
            throw new InvalidUserInputException("Invalid Cnic...");
        }
    }

    public String getPhoneNumber() {
        return phoneNumber;
    }

    public void setPhoneNumber(String phoneNumber) {
        if(phoneNumber.matches("^([0]{3}[0-4]{1}[0-9]{1})[-][0-9]{7}$") || phoneNumber.matches("^([0]{3}[0-4]{1}[0-9]{8})$"))
            this.phoneNumber = phoneNumber;
        else {
            throw new InvalidUserInputException("Invalid PAKISTAN Phone");
        }
    }
}
```

```

Number..");
    }

    }

    public Owner() {
    }

    public Owner(String name, String cnic, String phoneNumber) {
        setName(name);
        setCnic(cnic);
        setPhoneNumber(phoneNumber);
    }

    @Override
    public String toString() {
        return "OwnerName='" + name + '\'' +
            ", cnic='" + cnic + '\'' +
            ", phoneNumber='" + phoneNumber + '\'';
    }
}

```

//vehicle class:

```

package Parking.management.system;

import java.io.Serializable;

public abstract class Vehicle implements Serializable
{
    private String vehicleNo;
    private Owner owner;
    private String vehicleType;
    private int basePrice;
    public Vehicle(String vehicleNo, Owner owner) {
        this.vehicleNo=vehicleNo;
        this.owner = owner;
    }
    public String getVehicleNo() {
        return vehicleNo;
    }

    public void setVehicleNo(String vehicleNo) {
        this.vehicleNo = vehicleNo;
    }

    public String getVehicleType() {
        return vehicleType;
    }

    public void setVehicleType(String vehicleType) {
        this.vehicleType = vehicleType;
    }

    public Owner getOwner() {
        return owner;
    }

    public void setOwner(Owner owner) {
        this.owner = owner;
    }
}

```

```

    public int getBasePrice() {
        return basePrice;
    }

    public void setBasePrice(int basePrice) {
        this.basePrice = basePrice;
    }

    @Override
    public String toString() {
        return "vehicleNo=" + vehicleNo + '\'' +
            ", owner=" + owner +
            ", vehicleType=" + vehicleType + '\'' +
            ", basePrice=" + basePrice;
    }
}

```

//bike class:

```

package Parking.management.system;

import java.io.Serializable;

public class Bike extends Vehicle implements Serializable {
    public Bike(String vehicleNo, Owner owner) {
        super(vehicleNo, owner);
        super.setVehicleType("Bike");
        super.setBasePrice(100);
    }
    public String toString() {
        return super.toString();
    }
}

```

//car class:

```

package Parking.management.system;

import java.io.Serializable;

public class Car extends Vehicle implements Serializable {
    public Car(String vehicleNo, Owner owner) {
        super(vehicleNo, owner);
        super.setVehicleType("Car");
        super.setBasePrice(200);
    }
    public String toString() {
        return super.toString();
    }
}

```

//bus class:

```

package Parking.management.system;

import java.io.Serializable;

public class Bus extends Vehicle implements Serializable {
    public Bus(String vehicleNo, Owner owner) {
        super(vehicleNo, owner);
        super.setVehicleType("Bus");
        super.setBasePrice(300);
    }
}

```

```

    }

    @Override
    public String toString() {
        return super.toString();
    }
}

```

//DaytimeDate class:

```

package Parking.management.system;

import java.io.Serializable;

public abstract class Vehicle implements Serializable
{
    private String vehicleNo;
    private Owner owner;
    private String vehicleType;
    private int basePrice;
    public Vehicle(String vehicleNo, Owner owner) {
        this.vehicleNo=vehicleNo;
        this.owner = owner;
    }
    public String getVehicleNo() {
        return vehicleNo;
    }

    public void setVehicleNo(String vehicleNo) {
        this.vehicleNo = vehicleNo;
    }

    public String getVehicleType() {
        return vehicleType;
    }

    public void setVehicleType(String vehicleType) {
        this.vehicleType = vehicleType;
    }

    public Owner getOwner() {
        return owner;
    }

    public void setOwner(Owner owner) {
        this.owner = owner;
    }

    public int getBasePrice() {
        return basePrice;
    }

    public void setBasePrice(int basePrice) {
        this.basePrice = basePrice;
    }

    @Override
    public String toString() {
        return "vehicleNo='" + vehicleNo + '\'' +
            ", owner='" + owner +
            ", vehicleType='" + vehicleType + '\'' +

```

```
        ", basePrice=" + basePrice;  
    }  
}
```

//manager class:

```
package Parking.management.system;  
public class Manager {  
    private final String UserName="USMAN";  
    private String password="iusman7";  
    public String getUsername() {  
        return UserName;  
    }  
    public String getPassword() {  
        return password;  
    }  
}
```

//parking class:

```
package Parking.management.system;  
  
import java.io.Serializable;  
import java.text.SimpleDateFormat;  
import java.util.Date;  
  
public class Parking implements Serializable {  
    private Vehicle vehicle;  
    private DateTimeDay arrivalTime;  
    private DateTimeDay departureTime;  
    private String vehicleStatus;  
  
    public Parking() {  
    }  
  
    public Parking(Vehicle vehicle) {  
        this.vehicle = vehicle;  
        setArrivalTime();  
        this.vehicleStatus="PARKED";  
    }  
    public DateTimeDay setCalender() {  
        Date currentDate = new Date();  
        SimpleDateFormat timeFormat = new SimpleDateFormat("hh:mm a");  
        SimpleDateFormat dateFormat = new SimpleDateFormat("dd MMMM yyyy");  
        SimpleDateFormat dayOfTheWeekFormat = new SimpleDateFormat("EEEE");  
        String time = timeFormat.format(currentDate);  
        String date = dateFormat.format(currentDate);  
        String day = dayOfTheWeekFormat.format(currentDate);  
        return new DateTimeDay(date,time,day);  
    }  
  
    public String getVehicleStatus() {  
        return vehicleStatus;  
    }  
  
    public Vehicle getVehicle() {  
        return vehicle;  
    }  
  
    public void setVehicle(Vehicle vehicle) {  
        this.vehicle = vehicle;  
    }  
}
```

```

    public DateTimeDay getArrivalTime() {
        return arrivalTime;
    }

    public void setArrivalTime() {
        this.arrivalTime=setCalender();
    }

    public DateTimeDay getDepartureTime() {
        return departureTime;
    }

    public void setDepartureTime() {
        this.departureTime=setCalender();
        this.vehicleStatus="UN-PARKED";
    }

    @Override
    public String toString() {
        return "vehicle=" + vehicle +
            ", arrivalTime=" + arrivalTime +
            ", departureTime=" + departureTime;
    }
}

```

//main class:

```

package Parking.management.system;

import java.io.ObjectOutputStream;
import java.io.FileOutputStream;
import java.io.ObjectInputStream;
import java.io.File;
import java.io.FileInputStream;
import java.text.SimpleDateFormat;
import java.util.Date;
import java.util.Scanner;
import java.io.IOException;
import java.util.ArrayList;
import java.util.List;

public class Main {
    static Scanner input = new Scanner(System.in);
    public static void main(String[] args) {
        welcome();
        int choice;
        do {
            System.out.println("\t\t<----->
            <----->\n" +
                "\t\t |           Press 1 to see Rate List.
|\n" +
                "\t\t<----->
            <----->\n" +
                "\t\t |           Press 2 to add vehicle.
|\n" +
                "\t\t<----->
            <----->\n" +
                "\t\t |           Press 3 to search a vehicle.
|\n" +

```



```

----->\n" + "\t\t<-----"
|\n" + "\t\t | Press 4 to delete the vehicle.
----->\n" + "\t\t<-----"
Amount. |\n" + "\t\t | Press 5 to show total vehicles &
----->\n" + "\t\t<-----"
record. |\n" + "\t\t | Press 6 to show the Parked vehicles
----->\n" + "\t\t<-----"
|\n" + "\t\t | Press 7 to show Amount Earned.
----->\n" + "\t\t<-----"
|\n" + "\t\t | Press 8 to show Database Record.
----->\n" + "\t\t<-----"
|\n" + "\t\t | Press 9 to Exit.
----->\n" + "\t\t<-----"
----->");
String select;
do {
    System.out.print("\t\t\t| Enter Your choice >==>
");
    select = input.next();
} while (!select.matches("^[1-9]$"));
choice=Integer.parseInt(select);
switch (choice){
    case 1:
        rateList();
        break;
    case 2:
        addData();
        break;
    case 3:
        searchVehicle();
        break;
    case 4:
        deleteVehicle();
        break;
    case 5:
        todayDetails();
        break;
    case 6:
        showRecord();
        break;
    case 7:
        departureDetails();
        break;
    case 8:
        showDataBaseRecord();
        break;
    case 9:
        endUp();
        break;
}

```

```

    }
    }while (true);
}

//to show record of parked vehicles
public static void showRecord() {
    System.out.println();
    boolean check = false;
    int i = 1;
    try {
        ObjectInputStream in = new ObjectInputStream(new
FileInputStream("src\\Parking\\management\\Database\\PARKED-
VEHICLES.ser"));
        ArrayList<Parking> parkingList = (ArrayList<Parking>)
in.readObject();
        in.close();
        //parked vehicles data
        for (Parking parking : parkingList) {
            System.out.println();
            System.out.println("\t\t-----
-----");
            System.out.println("\t\t----- ( VEHICLE
" + i + " RECORD) -----");
            System.out.println("\t\t-----
-----");
            System.out.println("\t\t\t| Vehicle No           >==>
: " + parking.getVehicle().getVehicleNo());
            System.out.println("\t\t\t| Vehicle Type           >==>
: " + parking.getVehicle().getVehicleType());
            System.out.println("\t\t\t| Vehicle BasePrice       >==>
: " + parking.getVehicle().getBasePrice());
            System.out.println("\t\t\t| Owner Name             >==>
: " + parking.getVehicle().getOwner().getName());
            System.out.println("\t\t\t| Owner CNIC             >==>
: " + parking.getVehicle().getOwner().getCnic());
            System.out.println("\t\t\t| Owner Phone Number      >==>
: " + parking.getVehicle().getOwner().getPhoneNumber());
            System.out.println("\t\t\t| Arrival Time           >==>
: " + parking.getArrivalTime());
            System.out.println("\t\t\t| Departure Time          >==>
: " + parking.getDepartureTime());
            System.out.println("\t\t\t| Vehicle Status          >==>
: " + parking.getVehicleStatus());
            i++;
            check = true;
        }
    } catch (IOException | ClassNotFoundException e) {
        e.printStackTrace();
    }
    if (!check)
        System.out.println("\t\t\t| NO RECORD Found.....");
    System.out.println();
}

//to check record of departure vehicles of any date
public static void showDataBaseRecord() {
    System.out.println();
    boolean check = false;
    int i = 1;
    try {
        ObjectInputStream in = new ObjectInputStream(new
FileInputStream(dataBasePath()));

```

```

        ArrayList<Parking> parkingList = (ArrayList<Parking>)
in.readObject();
        in.close();
        //parked vehicles data
        for (Parking parking : parkingList) {
            System.out.println();
            System.out.println("\t\t-----
-----");
            System.out.println("\t\t----- (Departure
VEHICLE RECORD "+i+")-----");
            System.out.println("\t\t-----
-----");
            System.out.println("\t\t\t| Vehicle No                >==>
: " + parking.getVehicle().getVehicleNo());
            System.out.println("\t\t\t| Vehicle Type                >==>
: " + parking.getVehicle().getVehicleType());
            System.out.println("\t\t\t| Vehicle BasePrice          >==>
: " + parking.getVehicle().getBasePrice());
            System.out.println("\t\t\t| Owner Name                  >==>
: " + parking.getVehicle().getOwner().getName());
            System.out.println("\t\t\t| Owner CNIC                  >==>
: " + parking.getVehicle().getOwner().getCnic());
            System.out.println("\t\t\t| Owner Phone Number          >==>
: " + parking.getVehicle().getOwner().getPhoneNumber());
            System.out.println("\t\t\t| Arrival Time                >==>
: " + parking.getArrivalTime());
            System.out.println("\t\t\t| Departure Time              >==>
: " + parking.getDepartureTime());
            System.out.println("\t\t\t| Vehicle Status              >==>
: " + parking.getVehicleStatus());
            i++;
            check = true;
        }
    } catch (IOException | ClassNotFoundException e) {
        e.printStackTrace();
    }
    if (!check)
        System.out.println("\t\t\t| NO RECORD Found.....");
    System.out.println();
}

//to update vehicle details during departure time
public static void deleteVehicle() {
    System.out.println();
    String vehicleNo;
    while (true) {
        System.out.print("\t\t\t| Enter VehicleNO to Delete(ABC-1234):
");
        vehicleNo = input.next();
        if (vehicleNo.matches("[A-Za-z]{3}-[0-9]{4}$"))
            break;
        else {
            System.out.println("\t\t\t| Invalid Vehicle No...");
        }
    }
    boolean check = false;
    int index = 0;
    try {
        ObjectInputStream in = new ObjectInputStream(new
FileInputStream("src\\Parking\\management\\Database\\PARKED-
VEHICLES.ser"));

```

```

        List parkingList = (ArrayList<Parking>) in.readObject();
        in.close();
        //parked vehicles data
        for (Object temp : parkingList) {
            Parking parking = (Parking) temp;
            if (vehicleNo.equals(parking.getVehicle().getVehicleNo()))
            {
                parking.setDepartureTime();
                System.out.println("\t\t-----");
                System.out.println("\t\t----- (
VEHICLE RECORD Deleting... )-----");
                System.out.println("\t\t-----");
                System.out.println("\t\t\t| Vehicle No
>==> : " + parking.getVehicle().getVehicleNo());
                System.out.println("\t\t\t| Vehicle Type
>==> : " + parking.getVehicle().getVehicleType());
                System.out.println("\t\t\t| Vehicle BasePrice
>==> : " + parking.getVehicle().getBasePrice());
                System.out.println("\t\t\t| Owner Name
>==> : " + parking.getVehicle().getOwner().getName());
                System.out.println("\t\t\t| Owner CNIC
>==> : " + parking.getVehicle().getOwner().getCnic());
                System.out.println("\t\t\t| Owner Phone Number
>==> : " + parking.getVehicle().getOwner().getPhoneNumber());
                System.out.println("\t\t\t| Arrival Time
>==> : " + parking.getArrivalTime());
                System.out.println("\t\t\t| Departure Time
>==> : " + parking.getDepartureTime());
                System.out.println("\t\t\t| Vehicle Status
>==> : " + parking.getVehicleStatus());
                System.out.println();
                check = true;
                File file = new File(filePath());
                if (file.length() == 0) {
                    ObjectOutputStream dout = new
ObjectOutputStream(new FileOutputStream(file));
                    ArrayList<Parking> departureList = new
ArrayList<>();
                    departureList.add(parking);
                    dout.writeObject(departureList);
                    dout.close();
                } else {
                    ObjectInputStream din = new ObjectInputStream(new
FileInputStream(file));
                    ArrayList<Parking> departureList =
(ArrayList<Parking>) din.readObject();
                    din.close();
                    ObjectOutputStream dout = new
ObjectOutputStream(new FileOutputStream(file));
                    departureList.add(parking);
                    dout.writeObject(departureList);
                    dout.close();
                }
                index = parkingList.indexOf(temp);
            }
        }
        if (check) {
            parkingList.remove(index);
            ObjectOutputStream out = new ObjectOutputStream(new

```

```

FileOutputStream("src\\Parking\\management\\Database\\PARKED-
VEHICLES.ser"));
        out.writeObject(parkingList);
        out.close();
        System.out.println("\t\t\t| Vehicle Data has been
successfully deleted....");
    }
    if (!check) {
        System.out.println("\t\t\t| VEHICLE DATA NOT FOUND.....");
    }
} catch (IOException | ClassNotFoundException e) {
    e.printStackTrace();
}
System.out.println();
}
//to search a vehicle
public static void searchVehicle() {
    System.out.println();
    String vehicleNo;
    while (true) {
        System.out.print("\t\t\t| Enter VehicleNO to Search(ABC-1234):
");
        vehicleNo = input.next();
        if (vehicleNo.matches("[A-Za-z]{3}-[0-9]{4}$"))
            break;
        else {
            System.out.println("\t\t\t| Invalid Vehicle No...");
        }
    }
    boolean check = false;
    try {
        ObjectInputStream in = new ObjectInputStream(new
FileInputStream("src\\Parking\\management\\Database\\PARKED-
VEHICLES.ser"));
        ArrayList<Parking> parkingList = (ArrayList<Parking>)
in.readObject();
        in.close();
        //parked vehicles data
        for (Parking parking : parkingList) {
            if (vehicleNo.equals(parking.getVehicle().getVehicleNo()))
            {
                System.out.println("\t\t-----
-----");
                System.out.println("\t\t----- (
SEARCHED VEHICLE RECORD )-----");
                System.out.println("\t\t-----
-----");
                System.out.println("\t\t\t| Vehicle No
>==> : " + parking.getVehicle().getVehicleNo());
                System.out.println("\t\t\t| Vehicle Type
>==> : " + parking.getVehicle().getVehicleType());
                System.out.println("\t\t\t| Vehicle BasePrice
>==> : " + parking.getVehicle().getBasePrice());
                System.out.println("\t\t\t| Owner Name
>==> : " + parking.getVehicle().getOwner().getName());
                System.out.println("\t\t\t| Owner CNIC
>==> : " + parking.getVehicle().getOwner().getCnic());
                System.out.println("\t\t\t| Owner Phone Number
>==> : " + parking.getVehicle().getOwner().getPhoneNumber());
                System.out.println("\t\t\t| Arrival Time
>==> : " + parking.getArrivalTime());
            }
        }
    }
}

```

```

        System.out.println("\t\t\t|   Departure Time
>==> : " + parking.getDepartureTime());
        System.out.println("\t\t\t|   Vehicle Status
>==> : " + parking.getVehicleStatus());
        check = true;
    }
}
if (!check) {
    System.out.println("\t\t\t|   VEHICLE DATA NOT FOUND.....");
}
} catch (IOException | ClassNotFoundException e) {
    e.printStackTrace();
}
System.out.println();
}
//To add vehicles details
public static void addData() {
    System.out.println();
    System.out.println("\t\t-----
-----");
    System.out.println("\t\t----- ( ADD VEHICLE
DATA ) -----");
    System.out.println("\t\t-----
-----");
    String choice;
    do {
        System.out.print("\t\t\tEnter Vehicle Type( 1.BIKE 2.CAR 3.BUS)
>==> : ");
        choice = input.next();
    } while (!choice.equals("1") & !choice.equals("2") &
!choice.equals("3"));
    Owner owner = new Owner();
    String vehicleNo;
    while (true) {
        System.out.print("\t\t\tEnter Vehicle No (ABC-1234)
>==> : ");
        vehicleNo = input.next();
        if (vehicleNo.matches("[A-Za-z]{3}-[0-9]{4}$"))
            break;
        else {
            System.out.println("\t\t\t|   Invalid Vehicle No...");
        }
    }
    while (true) {
        try {
            System.out.print("\t\t\tEnter Owner Name
>==> : ");
            String first = input.next();
            owner.setName(first + input.nextLine());
            break;
        } catch (InvalidUserInputException ignored) {
        }
    }
    while (true) {
        try {
            System.out.print("\t\t\tEnter Owner CNIC (35123-1234567-1)
>==> : ");
            owner.setCnic(input.next());
            break;
        } catch (InvalidUserInputException ignored) {
        }
    }
}
}

```

```

    }
    while (true) {
        try {
            System.out.print("\t\t\tEnter Phone No. (0300-0000000)
>==> : ");
            owner.setPhoneNumber(input.next());
            break;
        } catch (InvalidUserInputException ignored) {
        }
    }
    System.out.println();
    Vehicle vehicle;
    if (choice.equals("1")) {
        vehicle = new Bike(vehicleNo, owner);
    } else if (choice.equals("2")) {
        vehicle = new Car(vehicleNo, owner);
    } else {
        vehicle = new Bus(vehicleNo, owner);
    }
    Parking parking = new Parking(vehicle);
    try {
        File file = new
File("src\\Parking\\management\\Database\\PARKED-VEHICLES.ser");
        if (file.length() == 0) {
            ObjectOutputStream out = new ObjectOutputStream(new
FileOutputStream(file));
            ArrayList<Parking> parkingList = new ArrayList<>();
            parkingList.add(parking);
            out.writeObject(parkingList);
            out.close();
        } else {
            ObjectInputStream in = new ObjectInputStream(new
FileInputStream(file));
            ArrayList<Parking> parkingList = (ArrayList<Parking>)
in.readObject();
            in.close();
            ObjectOutputStream out = new ObjectOutputStream(new
FileOutputStream(file));
            parkingList.add(parking);
            out.writeObject(parkingList);
            out.close();
        }
    } catch (IOException | ClassNotFoundException i) {
        i.printStackTrace();
    }
    System.out.println("\t\t\tVehicle Data Succesfully
Added.....");
    System.out.println();
}
//Welcome
public static void welcome() {
    System.out.println();
    System.out.println("

```

[illegible]


```

-----");
        System.out.println("\t\t |
|");
        System.out.println("\t\t |           Maximum Parking = 50
Vehicles. |");
        System.out.println("\t\t |
|");
        System.out.println("\t\t -----
-----");
        System.out.println();
    }
    //departure vehicles of the day and amount earned by them
    public static void departureDetails() {
        System.out.println();
        ArrayList<Parking> parkingList;
        int bikes = 0, buses = 0, cars = 0, earned = 0;
        String type;
        try {
            ObjectInputStream in = new ObjectInputStream(new
FileInputStream(filePath()));
            parkingList = (ArrayList<Parking>) in.readObject();
            in.close();
            for (Parking parking : parkingList) {
                type = parking.getVehicle().getVehicleType();
                if (type.equals("Bike")) bikes++;
                else if (type.equals("Car")) cars++;
                else if (type.equals("Bus")) buses++;
                earned += parking.getVehicle().getBasePrice();
            }
        } catch (IOException | ClassNotFoundException e) {
            System.out.println("NO Departure Vehicles Record Found....");
        }
        System.out.println("\t\t-----
-----");
        System.out.println("\t\t----- ( DEPARTURE
VEHICLES & AMOUNT )-----");
        System.out.println("\t\t-----
-----");
        System.out.println("\t\t -----
-----");
        System.out.println("\t\t | BIKES           >==> " + bikes);
        System.out.println("\t\t -----
-----");
        System.out.println("\t\t | Cars           >==> " + cars);
        System.out.println("\t\t -----
-----");
        System.out.println("\t\t | Buses           >==> " + buses);
        System.out.println("\t\t -----
-----");
        System.out.println("\t\t -----
-----");
        System.out.println("\t\t | Total Vehicles >==> " + (bikes +
cars + buses));
        System.out.println("\t\t -----
-----");
        System.out.println("\t\t -----
-----");
        System.out.println("\t\t |");
        System.out.println("\t\t | Amount Of Departure Vehicles >==> "
+ earned);
        System.out.println("\t\t |");
    }
}

```

```

        System.out.println("\t\t -----");
        System.out.println();
    }

    //parked vehicles and total of the base amount expected
    public static void todayDetails() {
        System.out.println();
        ArrayList<Parking> parkingList;
        int bikes = 0, buses = 0, cars = 0, earned = 0;
        String type;
        try {
            ObjectInputStream in = new ObjectInputStream(new
FileInputStream("src\\Parking\\management\\Database\\PARKED-
VEHICLES.ser"));
            parkingList = (ArrayList<Parking>) in.readObject();
            in.close();
            for (Parking parking : parkingList) {
                type = parking.getVehicle().getVehicleType();
                if (type.equals("Bike")) bikes++;
                else if (type.equals("Car")) cars++;
                else if (type.equals("Bus")) buses++;
                earned += parking.getVehicle().getBasePrice();
            }
        } catch (IOException | ClassNotFoundException e) {
            System.out.println("NO Parked Vehicles Record Found....");
        }
        System.out.println("\t\t -----");
        System.out.println("\t\t ----- ( PARKED VEHICLES
& AMOUNT ) -----");
        System.out.println("\t\t -----");
        System.out.println("\t\t -----");
        System.out.println("\t\t -----");
        System.out.println("\t\t | BIKES >==> " + bikes);
        System.out.println("\t\t -----");
        System.out.println("\t\t | Cars >==> " + cars);
        System.out.println("\t\t -----");
        System.out.println("\t\t | Buses >==> " + buses);
        System.out.println("\t\t -----");
        System.out.println("\t\t -----");
        System.out.println("\t\t | Total Vehicles >==> " + (bikes +
cars + buses));
        System.out.println("\t\t -----");
        System.out.println("\t\t -----");
        System.out.println("\t\t |");
        System.out.println("\t\t | Amount Of Parked Vehicles >==> " +
earned);
        System.out.println("\t\t |");
        System.out.println("\t\t -----");
        System.out.println();
    }
}

```

```

//path for the departure vehicles file list
public static String filePath() {
    SimpleDateFormat dateFormat = new SimpleDateFormat("dd-MM-yyyy");
    String date = dateFormat.format(new Date());
    return "src\\Parking\\management\\Database\\" + date + ".ser";
}

//to check history of the parking departure vehicles

public static String dataBasePath() {
    System.out.println();
    //Creating a File object for directory
    File file = new File("src\\Parking\\management\\Database");
    //List of all files and directories
    String[] contents = file.list();
    System.out.println("\t\t\t| List of files in the Database
directory:");
    for (int i = 1; i <= contents.length; i++) {
        System.out.print("\t\t\t" + contents[i - 1]);
        if (i % 3 == 0)
            System.out.println();
    }
    System.out.println();
    System.out.println("\t\t\t| Select the Date From above Database
directory whose record you want to see:");
    System.out.print("\t\t\t| Enter file name(e.g; 31-12-2022) :");
    String date = input.next();
    return "src\\Parking\\management\\Database\\" + date + ".ser";
}

}

/*
1.ratlist/
2.add vehicle/
3.search vehicle/
4.delete vehicle/
5.total vehicle & amount/
6.show record/
7.amount earned/
8.database/
9.exit/

cd parking\management\system
javac Bike.java Bus.java Car.java DateTimeDay.java
InvalidUserInputException.java Manager.java Owner.java Parking.java
Vehicle.java Main.java

        to rename file name;
        file=new File("src\\Parking\\management\\Database\\PARKED-
VEHICLES.ser");
        file.renameTo(new
File("src\\Parking\\management\\Database\\PARKED.ser"));
        to delete a file
        file.delete();

*/

```

```
C:\softwares\jdk19\bin\java.exe "-javaagent:C:\softwares\IntelliJ IDEA Community Edition
2022.3.1\lib\idea_rt.jar=58476:C:\softwares\IntelliJ IDEA Community Edition 2022.3.1\bin" -
Dfile.encoding=UTF-8 -Dsun.stdout.encoding=UTF-8 -Dsun.stderr.encoding=UTF-8 -classpath
"C:\Users\Ehsan Computers\Desktop\java workplace\PARKING-MANAGEMENT-
SYSTEM\out\production\PARKING-MANAGEMENT-SYSTEM" Parking.management.system.Main
```

Press Enter to go to the Menu

```

<----->
|      Press 1 to see Rate List.      |
<----->
|      Press 2 to add vehicle.        |
<----->
|      Press 3 to search a vehicle.   |
<----->
|      Press 4 to delete the vehicle. |
<----->
|      Press 5 to show total vehicles & Amount.  |
<----->
|      Press 6 to show the Parked vehicles record.  |
<----->
|      Press 7 to show Amount Earned.      |

```

<----->

| Press 8 to show Database Record. |

<----->

| Press 9 to Exit. |

<----->

| Enter Your choice >==> 1

\$\$\$\$\$\$\ \$\$\ \$\$\ \$\$\ \$\$\

\$\$ _\$\$\ \$\$ | \$\$ | _ | \$\$ |

\$\$ | \$\$ | \$\$\$\$\$\$\ \$\$\$\$\$\$\ \$\$\$\$\$\$\ \$\$ | \$\$\ \$\$\$\$\$\$\ \$\$\$\$\$\$\

\$\$\$\$\$\$ \$ _ \$\$\ _\$ \$ _\$ \$ \$ \$ | \$ \$ |\$ \$ _\$ | _ \$ \$ _ |

\$\$ _\$ \$< \$\$\$\$\$\$ | \$\$ | \$\$\$\$\$\$ | \$\$ | \$\$ |\$\$\$\$\$\$ \ \$\$ |

\$\$ | \$\$ |\$ \$ _\$ \$ |\$ \$ |\$ \$ _ \$ \$ _\$ | \$\$ | \$\$ | _ \$ \$ _ \$ \$ |\$ \$ \

\$\$ | \$\$ |\$\$\$\$\$\$ | _ \$ \$ _ \$\$\$\$\$\$ _ \$\$\$\$\$\$ _ \$ \$ |\$\$\$\$\$\$ | _ \$ \$ |

_ | _ | _ | _ / _ | _ | _ | _ / _ | _ /

| BIKE | CAR | BUS |

| 100 | 200 | 300 |

| |

| Maximum Parking = 50 Vehicles. |

| |

<----->

| Press 1 to see Rate List. |

<----->

| Press 2 to add vehicle. |

<----->

```
|   Press 3 to search a vehicle.   |
<----->
|   Press 4 to delete the vehicle.   |
<----->
|   Press 5 to show total vehicles & Amount.   |
<----->
|   Press 6 to show the Parked vehicles record. |
<----->
|   Press 7 to show Amount Earned.   |
<----->
|   Press 8 to show Database Record.   |
<----->
|   Press 9 to Exit.   |
<----->
| Enter Your choice   >==> 2
```

```
-----
----- ( ADD VEHICLE DATA ) -----
-----
```

```
Enter Vehicle Type( 1.BIKE 2.CAR 3.BUS)   >==> : 3
Enter Vehicle No (ABC-1234)                >==> : GUN-4747
Enter Owner Name                           >==> : AKforty seven
Enter Owner CNIC(35123-1234567-1)          >==> : 00000-000000-0

Invalid Cnic...

Enter Owner CNIC(35123-1234567-1)          >==> : 09090-0909090-0
Enter Phone No. (0300-0000000)             >==> : 0302-0000000
```

```
Vehicle Data Succesfully Added.....
```

```
<----->
|   Press 1 to see Rate List.   |
```

<----->

| Press 2 to add vehicle. |

<----->

| Press 3 to search a vehicle. |

<----->

| Press 4 to delete the vehicle. |

<----->

| Press 5 to show total vehicles & Amount. |

<----->

| Press 6 to show the Parked vehicles record. |

<----->

| Press 7 to show Amount Earned. |

<----->

| Press 8 to show Database Record. |

<----->

| Press 9 to Exit. |

<----->

| Enter Your choice >==> 3

| Enter VehicleNO to Search(ABC-1234): GUN-4747

------(SEARCHED VEHICLE RECORD)-----

| Vehicle No >==> : GUN-4747

| Vehicle Type >==> : Bus

| Vehicle BasePrice >==> : 300

| Owner Name >==> : AKforty seven

| Owner CNIC >==> : 09090-0909090-0

| Owner Phone Number >==> : 0302-0000000

| Arrival Time >==> : Friday, 06 January 2023 Time[09:46 PM]

| Departure Time >==> : null

| Vehicle Status >==> : PARKED

<----->

| Press 1 to see Rate List. |

<----->

| Press 2 to add vehicle. |

<----->

| Press 3 to search a vehicle. |

<----->

| Press 4 to delete the vehicle. |

<----->

| Press 5 to show total vehicles & Amount. |

<----->

| Press 6 to show the Parked vehicles record. |

<----->

| Press 7 to show Amount Earned. |

<----->

| Press 8 to show Database Record. |

<----->

| Press 9 to Exit. |

<----->

| Enter Your choice >==> 3

| Enter VehicleNO to Search(ABC-1234): GUN-4747

----- (SEARCHED VEHICLE RECORD) -----

| Vehicle No >==> : GUN-4747

| Vehicle Type >==> : Bus

| Vehicle BasePrice >==> : 300

| Owner Name >==> : AKforty seven

| Owner CNIC >==> : 09090-0909090-0
| Owner Phone Number >==> : 0302-0000000
| Arrival Time >==> : Friday, 06 January 2023 Time[09:46 PM]
| Departure Time >==> : null
| Vehicle Status >==> : PARKED

<----->

| Press 1 to see Rate List. |

<----->

| Press 2 to add vehicle. |

<----->

| Press 3 to search a vehicle. |

<----->

| Press 4 to delete the vehicle. |

<----->

| Press 5 to show total vehicles & Amount. |

<----->

| Press 6 to show the Parked vehicles record. |

<----->

| Press 7 to show Amount Earned. |

<----->

| Press 8 to show Database Record. |

<----->

| Press 9 to Exit. |

<----->

| Enter Your choice >==> 4

| Enter VehicleNO to Delete(ABC-1234): GUN-4747

------(VEHICLE RECORD Deleting...)-----

| Vehicle No >==> : GUN-4747
| Vehicle Type >==> : Bus
| Vehicle BasePrice >==> : 300
| Owner Name >==> : AKforty seven
| Owner CNIC >==> : 09090-0909090-0
| Owner Phone Number >==> : 0302-0000000
| Arrival Time >==> : Friday, 06 January 2023 Time[09:46 PM]
| Departure Time >==> : Friday, 06 January 2023 Time[09:46 PM]
| Vehicle Status >==> : UN-PARKED

| Vehicle Data has been successfully deleted....

<----->

| Press 1 to see Rate List. |

<----->

| Press 2 to add vehicle. |

<----->

| Press 3 to search a vehicle. |

<----->

| Press 4 to delete the vehicle. |

<----->

| Press 5 to show total vehicles & Amount. |

<----->

| Press 6 to show the Parked vehicles record. |

<----->

| Press 7 to show Amount Earned. |

<----->

| Press 8 to show Database Record. |

<----->

| Press 9 to Exit. |

<----->

| Enter Your choice >==> 5

----- (PARKED VEHICLES & AMOUNT) -----

BIKES >==> 0

Cars >==> 1

Buses >==> 2

Total Vehicles >==> 3

|
| Amount Of Parked Vehicles >==> 800
|

<----->

| Press 1 to see Rate List. |

<----->

| Press 2 to add vehicle. |

<----->

| Press 3 to search a vehicle. |

<----->

| Press 4 to delete the vehicle. |

<----->

| Press 5 to show total vehicles & Amount. |

<----->
| Press 6 to show the Parked vehicles record. |

<----->
| Press 7 to show Amount Earned. |

<----->
| Press 8 to show Database Record. |

<----->
| Press 9 to Exit. |

<----->
| Enter Your choice >==> 6

------(VEHICLE 1 RECORD)-----

Vehicle No	>==> : yyy-8888
Vehicle Type	>==> : Bus
Vehicle BasePrice	>==> : 300
Owner Name	>==> : jjjh hh
Owner CNIC	>==> : 00000-0000000-0
Owner Phone Number	>==> : 0343-0000000
Arrival Time	>==> : Tuesday, January , 03 2023 Time[10:00 AM]
Departure Time	>==> : null
Vehicle Status	>==> : PARKED

------(VEHICLE 2 RECORD)-----

Vehicle No	>==> : bbb-1234
Vehicle Type	>==> : Bus
Vehicle BasePrice	>==> : 300

| Owner Name >==> : izhar ahmad
| Owner CNIC >==> : 00000-0000000-0
| Owner Phone Number >==> : 0300-0000000
| Arrival Time >==> : Friday, 06 January 2023 Time[08:00 AM]
| Departure Time >==> : null
| Vehicle Status >==> : PARKED

------(VEHICLE 3 RECORD)-----

| Vehicle No >==> : mua-2252
| Vehicle Type >==> : Car
| Vehicle BasePrice >==> : 200
| Owner Name >==> : muaaz ahmad
| Owner CNIC >==> : 00000-0000000-0
| Owner Phone Number >==> : 0300-0000000
| Arrival Time >==> : Friday, 06 January 2023 Time[08:02 AM]
| Departure Time >==> : null
| Vehicle Status >==> : PARKED

<----->
| Press 1 to see Rate List. |
<----->
| Press 2 to add vehicle. |
<----->
| Press 3 to search a vehicle. |
<----->
| Press 4 to delete the vehicle. |
<----->
| Press 5 to show total vehicles & Amount. |
<----->

| Press 6 to show the Parked vehicles record. |

<----->

| Press 7 to show Amount Earned. |

<----->

| Press 8 to show Database Record. |

<----->

| Press 9 to Exit. |

<----->

| Enter Your choice >==> 7

------(DEPARTURE VEHICLES & AMOUNT)-----

| BIKES >==> 1

| Cars >==> 0

| Buses >==> 1

| Total Vehicles >==> 2

|

| Amount Of Departure Vehicles >==> 400

|

<----->

| Press 1 to see Rate List. |

```
<----->
|   Press 2 to add vehicle.   |
<----->
|   Press 3 to search a vehicle.   |
<----->
|   Press 4 to delete the vehicle.   |
<----->
|   Press 5 to show total vehicles & Amount.   |
<----->
|   Press 6 to show the Parked vehicles record. |
<----->
|   Press 7 to show Amount Earned.   |
<----->
|   Press 8 to show Database Record.   |
<----->
|   Press 9 to Exit.   |
<----->
| Enter Your choice   >==> 8
```

```
| List of files in the Database directory:
01-02-2023.ser           01-03-2023.ser           06-01-
2023.ser

PARKED-VEHICLES.ser

| Select the Date From above Database directory whose record you want to
see:

| Enter file name(e.g; 31-12-2022) :PARKED-VEHICLES
```

```
-----
------(Departure VEHICLE RECORD 1)-----
-----

| Vehicle No           >==> : yyy-8888
```

| Vehicle Type >==> : Bus
| Vehicle BasePrice >==> : 300
| Owner Name >==> : jjjh hh
| Owner CNIC >==> : 00000-0000000-0
| Owner Phone Number >==> : 0343-0000000
| Arrival Time >==> : Tuesday, January , 03 2023 Time[10:00 AM]
| Departure Time >==> : null
| Vehicle Status >==> : PARKED

------(Departure VEHICLE RECORD 2)-----

| Vehicle No >==> : bbb-1234
| Vehicle Type >==> : Bus
| Vehicle BasePrice >==> : 300
| Owner Name >==> : izhar ahmad
| Owner CNIC >==> : 00000-0000000-0
| Owner Phone Number >==> : 0300-0000000
| Arrival Time >==> : Friday, 06 January 2023 Time[08:00 AM]
| Departure Time >==> : null
| Vehicle Status >==> : PARKED

------(Departure VEHICLE RECORD 3)-----

| Vehicle No >==> : mua-2252
| Vehicle Type >==> : Car
| Vehicle BasePrice >==> : 200
| Owner Name >==> : muaaz ahmad
| Owner CNIC >==> : 00000-0000000-0
| Owner Phone Number >==> : 0300-0000000

| Arrival Time >==> : Friday, 06 January 2023 Time[08:02 AM]
| Departure Time >==> : null
| Vehicle Status >==> : PARKED

<----->

| Press 1 to see Rate List. |

<----->

| Press 2 to add vehicle. |

<----->

| Press 3 to search a vehicle. |

<----->

| Press 4 to delete the vehicle. |

<----->

| Press 5 to show total vehicles & Amount. |

<----->

| Press 6 to show the Parked vehicles record. |

<----->

| Press 7 to show Amount Earned. |

<----->

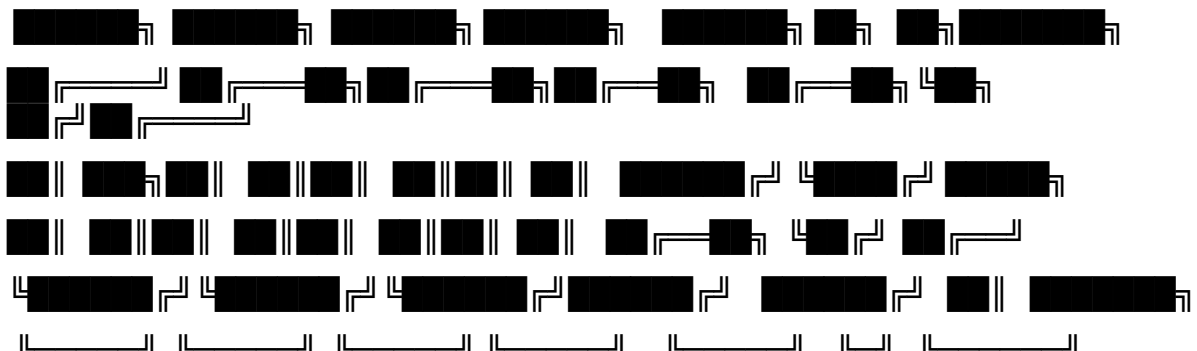
| Press 8 to show Database Record. |

<----->

| Press 9 to Exit. |

<----->

| Enter Your choice >==> 9



Process finished with exit code 0