ده الباكدج الاساسي بتاع الكود /salma

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cars.txt

📄 1. Car.java

يمثل كائن السيارة.

```java
package salma;


public class Car {
    private String model;
    private double pricePerDay;
    private boolean available;
    private String location;
    private String customerName;
    private String bookingDate;
    private int rentalDays;
    private double totalPrice;

    public Car(String model, double pricePerDay, boolean available, String location,
            String customerName, String bookingDate, int rentalDays, double totalPrice) {
        this.model = model;
        this.pricePerDay = pricePerDay;
```

```java
        this.available = available;

        this.location = location;

        this.customerName = customerName;

        this.bookingDate = bookingDate;

        this.rentalDays = rentalDays;

        this.totalPrice = totalPrice;

    }


    public Car(String model, double pricePerDay, boolean available, String location) {

        this(model, pricePerDay, available, location, "", "", 0, 0.0);

    }


    public String getModel() { return model; }

    public double getPricePerDay() { return pricePerDay; }

    public boolean isAvailable() { return available; }

    public String getLocation() { return location; }

    public String getCustomerName() { return customerName; }

    public String getBookingDate() { return bookingDate; }

    public int getRentalDays() { return rentalDays; }

    public double getTotalPrice() { return totalPrice; }


    public void setAvailable(boolean available) { this.available = available; }

    public void setCustomerName(String customerName) { this.customerName = customerName;

}

    public void setBookingDate(String bookingDate) { this.bookingDate = bookingDate; }

    public void setRentalDays(int rentalDays) { this.rentalDays = rentalDays; }
```

```java
public void setTotalPrice(double totalPrice) { this.totalPrice = totalPrice; }


@Override
public String toString() {
    return "Model: " + model +
        " | Price/Day: $" + pricePerDay +
        " | Status: " + (available ? "Available" : "Booked") +
        " | Location: " + location +
        (!available ? " | Customer: " + customerName +
                " | Date: " + bookingDate +
                " | Days: " + rentalDays +
                " | Total: $" + totalPrice : "");
    }
}
```

📄 2. CarStorage.java

مسؤول عن حفظ واسترجاع السيارات من ملف cars.txt.

```java
package salma;


import java.io.*;
import java.util.ArrayList;
import java.util.List;


public class CarStorage {
    private static final String FILE_PATH = "cars.txt";


    public static List<Car> loadCars() {
```

```java
        List<Car> cars = new ArrayList<>();
        try (BufferedReader reader = new BufferedReader(new FileReader(FILE_PATH))) {
            String line;
            while ((line = reader.readLine()) != null) {
                String[] parts = line.split("\\|");
                if (parts.length >= 4) {
                    String model = parts[0];
                    double price = Double.parseDouble(parts[1]);
                    boolean available = Boolean.parseBoolean(parts[2]);
                    String location = parts[3];
                    String customer = parts.length > 4 ? parts[4] : "";
                    String date = parts.length > 5 ? parts[5] : "";
                    int days = parts.length > 6 ? Integer.parseInt(parts[6]) : 0;
                    double total = parts.length > 7 ? Double.parseDouble(parts[7]) : 0.0;
                    cars.add(new Car(model, price, available, location, customer, date, days, total));
                }
            }
        } catch (IOException e) {
            System.out.println("Error loading cars: " + e.getMessage());
        }
        return cars;
    }

    public static void saveCars(List<Car> cars) {
        try (BufferedWriter writer = new BufferedWriter(new FileWriter(FILE_PATH))) {
            for (Car car : cars) {
```

```java
        writer.write(car.getModel() + "|" +

                car.getPricePerDay() + "|" +

                car.isAvailable() + "|" +

                car.getLocation() + "|" +

                (car.getCustomerName() == null ? "" : car.getCustomerName()) + "|" +

                (car.getBookingDate() == null ? "" : car.getBookingDate()) + "|" +

                car.getRentalDays() + "|" +

                car.getTotalPrice());

        writer.newLine();

      }

    } catch (IOException e) {

      System.out.println("Error saving cars: " + e.getMessage());

    }

  }

}
```

📄 3. CarRentalService.java

الخدمة التي تعرض السيارات وتتعامل مع الحجز.

```java
package salma;


import java.util.InputMismatchException;

import java.util.List;

import java.util.Scanner;


public class CarRentalService {

    private List<Car> cars;
```

```java
    public CarRentalService() {

        this.cars = CarStorage.loadCars();

        if (cars.isEmpty()) {

            cars.add(new Car("Toyota Corolla", 45.0, true, "Riyadh"));

            cars.add(new Car("Honda Civic", 50.0, true, "Jeddah"));

            cars.add(new Car("BMW X3", 120.0, false, "Dammam", "Fatma", "2025-04-23", 2,
240.0));

            cars.add(new Car("Hyundai Sonata", 55.0, true, "Mecca"));

            CarStorage.saveCars(cars);

        }

    }


    public void displayAvailableCars() {

        System.out.println("\n=== السيارات المتاحة ===");

        int index = 1;

        for (Car car : cars) {

            if (car.isAvailable()) {

                System.out.println(index + ". " + car);

            }

            index++;

        }

    }


    public void displayAllCars() {

        System.out.println("\n=== جميع السيارات ===");

        int index = 1;
```

```java
        for (Car car : cars) {

            System.out.println(index + ". " + car);

            index++;

        }

    }


    public void bookCar() {

        Scanner scanner = new Scanner(System.in);

        displayAvailableCars();


        try {

            System.out.print("أدخل رقم السيارة التي تريد حجزها\n:");

            int choice = scanner.nextInt();

            scanner.nextLine(); // Consume newline


            if (choice < 1 || choice > cars.size() || !cars.get(choice - 1).isAvailable()) {

                System.out.println("🚫 اختيار غير صالح أو السيارة غير متاحة.");

                return;

            }


            Car selectedCar = cars.get(choice - 1);

            System.out.print("أدخل اسمك :");

            String name = scanner.nextLine();


            System.out.print("كم يومًا ترغب في الاستئجار؟");

            int days = scanner.nextInt();
```

```java
        String today = java.time.LocalDate.now().toString();

        selectedCar.setAvailable(false);

        selectedCar.setCustomerName(name);

        selectedCar.setBookingDate(today);

        selectedCar.setRentalDays(days);

        selectedCar.setTotalPrice(selectedCar.getPricePerDay() * days);


        CarStorage.saveCars(cars);

        System.out.println("✅ لـ تم الحجز بنجاح: " + selectedCar.getModel());
    } catch (InputMismatchException e) {

        System.out.println("🚫 الرجاء إدخال أرقام صحيحة.");

    }

}


public void cancelBooking() {

    Scanner scanner = new Scanner(System.in);

    displayAllCars();


    try {

        System.out.print("\nأدخل رقم السيارة التي تريد إلغاء حجزها: ");

        int choice = scanner.nextInt();

        if (choice >= 1 && choice <= cars.size()) {

            Car car = cars.get(choice - 1);

            if (!car.isAvailable()) {

                car.setAvailable(true);
```

```java
                car.setCustomerName("");
                car.setBookingDate("");
                car.setRentalDays(0);
                car.setTotalPrice(0.0);
                CarStorage.saveCars(cars);
                System.out.println("✅ تم إلغاء الحجز بنجاح.");
            } else {
                System.out.println("🚫 هذه السيارة غير محجوزة.");
            }
        } else {
            System.out.println("🚫 اختيار غير صالح.");
        }
    } catch (InputMismatchException e) {
        System.out.println("🚫 إدخال غير صحيح.");
    }
}


public void showStats() {
    int availableCount = 0;
    int bookedCount = 0;
    for (Car car : cars) {
        if (car.isAvailable()) availableCount++;
        else bookedCount++;
    }
    System.out.println("\n📊 الإحصائيات:");
    System.out.println("عدد السيارات المتاحة: " + availableCount);
```

```java
        System.out.println("عدد السيارات المحجوزة: " + bookedCount);
    }


    public void startService() {
        Scanner scanner = new Scanner(System.in);
        while (true) {
            System.out.println("\n--- قائمة تأجير السيارات ---");
            System.out.println("1. عرض السيارات المتاحة");
            System.out.println("2. حجز سيارة");
            System.out.println("3. إلغاء حجز");
            System.out.println("4. عرض جميع السيارات");
            System.out.println("5. عرض الإحصائيات");
            System.out.println("6. خروج");


            System.out.print("اختر خيارًا: ");
            int option = scanner.nextInt();


            switch (option) {
                case 1:
                    displayAvailableCars();
                    break;
                case 2:
                    bookCar();
                    break;
                case 3:
                    cancelBooking();
```

```java
            break;

          case 4:

            displayAllCars();

            break;

          case 5:

            showStats();

            break;

          case 6:

            System.out.println(" 👋 شكرًا لاستخدامك خدمة تأجير السيارات.");

            return;

          default:

            System.out.println(" 🚫 خيار غير صحيح، حاول مجددًا.");

        }

      }

    }

}
```

📄 4. Main.java

لتشغيل الخدمة.

```java
package salma;

public class Main {
  public static void main(String[] args) {
    CarRentalService rentalService = new CarRentalService();
    rentalService.startService();
  }
}
```

5. 📄 ملف البيانات cars.txt (يوضع بجانب الكود)

Toyota Corolla|45.0|false|Riyadh|Ahmed Ali|2025-04-24|3|135.0

Honda Civic|50.0|true|Jeddah||||

BMW X3|120.0|false|Dammam|Fatma|2025-04-23|2|240.0

Hyundai Sonata|55.0|true|Mecca||||

لو السيارة مش محجوزة، هنخلي الخانات الأخيرة فاضية.