

Sourcecode:

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package endproject;

import java.util.ArrayList;
import java.util.List;
import java.util.Scanner;

import rentalapp.Camera;
import rentalapp.MyCamera;

class Camera {
    private int id;
    private String brand;
    private String model;
    private double pricePerDay;
    private boolean available;

    public Camera(int id, String brand, String model, double pricePerDay, boolean
available) {
        this.id = id;
        this.brand = brand;
        this.model = model;
        this.pricePerDay = pricePerDay;
        this.available = available;
    }

    public int getId() {
        return id;
    }

    public String getBrand() {
        return brand;
    }

    public String getModel() {
        return model;
    }

    public double getPricePerDay() {
        return pricePerDay;
    }

    public boolean isAvailable() {
        return available;
    }

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

class User {
    private String username;
    private String password;
    private double walletBalance;

    public User(String username, String password, double walletBalance) {
        this.username = username;
    }
}
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        this.password = password;
        this.walletBalance = walletBalance;
    }

    public String getUsername() {
        return username;
    }

    public String getPassword() {
        return password;
    }

    public double getWalletBalance() {
        return walletBalance;
    }

    public void depositToWallet(double amount) {
        walletBalance += amount;
    }

    public void deductFromWallet(double amount) {
        walletBalance -= amount;
    }
}

class CameraRentalApp {
    private User currentUser;
    private List<Camera> cameraList;

    public CameraRentalApp() {
        currentUser = null;
        cameraList = new ArrayList<>();

        // Add predefined cameras
        Camera camera1 = new Camera(12, "some", "another", 100.0, true);
        Camera camera2 = new Camera(17, "Samsung", "SM123", 200.0, true);
        Camera camera3 = new Camera(3, "Sony", "Alpha A7 III", 55.0, true);
        Camera camera4 = new Camera(11, "something", "some", 200.0, true);
        Camera camera5 = new Camera(14, "NIKON", "DSLR-D7500", 500.0, true);
        Camera camera6 = new Camera(2, "Nikon", "D850", 60.0, true);

        cameraList.add(camera1);
        cameraList.add(camera2);
        cameraList.add(camera3);
        cameraList.add(camera4);
        cameraList.add(camera5);
        cameraList.add(camera6);
    }

    public void run() {
        Scanner scanner = new Scanner(System.in);

        System.out.println("WELCOME TO CAMERA RENTAL APP\n");
        System.out.println("PLEASE LOGIN TO CONTINUE:");

        while (true) {
            System.out.print("USERNAME - ");
            String username = scanner.nextLine();

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        System.out.print("PASSWORD - ");
        String password = scanner.nextLine();
        if (login(username, password)) {
            break;
        } else {
            System.out.println("Invalid username or password. Please try
again.");
        }

    }

    showMainMenu();
}

private boolean login(String username, String password) {
    // Check if the username and password are valid
    // For simplicity, we assume the usernames and passwords are stored in a
list
    List<User> userList = new ArrayList<>();
    userList.add(new User("thomas", "abcdef", 100.0));
    userList.add(new User("esther", "asha1993", 0.0));
    userList.add(new User("john", "johnabc", 0.0));
    userList.add(new User("cena", "cenaabc", 200.0));
    // Add more users as needed

    for (User user : userList) {
        if (user.getUsername().equals(username) &&
user.getPassword().equals(password)) {
            currentUser = user;
            return true;
        }
    }

    return false;
}

private void showMainMenu() {
    Scanner scanner = new Scanner(System.in);

    while (true) {
        System.out.println("\nMAIN MENU:");
        System.out.println("1. MY CAMERA");
        System.out.println("2. RENT A CAMERA");
        System.out.println("3. VIEW ALL CAMERAS");
        System.out.println("4. MY WALLET");
        System.out.println("5. EXIT");

        System.out.print("Enter your choice: ");
        int choice = scanner.nextInt();
        scanner.nextLine(); // Consume the newline character

        switch (choice) {
            case 1:
                showMyCameraMenu();
                break;
            case 2:

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        rentCamera();
        break;
    case 3:
        viewAllCameras();
        break;
    case 4:
        showMyWalletMenu();
        break;
    case 5:
        System.out.println("Thank you for using the Camera Rental App.
");
        System.exit(0);
        break;
    default:
        System.out.println("Invalid choice. Please try again.");
        break;
    }
}
}

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private void showMyCameraMenu() {
    Scanner scanner = new Scanner(System.in);

    while (true) {
        System.out.println("\nMY CAMERA MENU:");
        System.out.println("1. ADD");
        System.out.println("2. REMOVE");
        System.out.println("3. VIEW MY CAMERAS");
        System.out.println("4. GO TO PREVIOUS MENU");

        System.out.print("Enter your choice(CameraMenu): ");
        int choice = scanner.nextInt();
        scanner.nextLine(); // Consume the newline character

        switch (choice) {
            case 1:
                addCamera();
                break;
            case 2:
                removeCamera();
                break;
            case 3:
                viewMyCameras();
                break;
            case 4:
                return;
            default:
                System.out.println("Invalid choice. Please try again.");
                break;
        }
    }
}

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private void addCamera() {
    Scanner scanner = new Scanner(System.in);

    System.out.print("ENTER THE CAMERA BRAND: ");
    String brand = scanner.nextLine();
}

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        System.out.print("ENTER THE MODEL: ");
        String model = scanner.nextLine();

        System.out.print("ENTER THE PER DAY PRICE (INR): ");
        double pricePerDay = scanner.nextDouble();
        scanner.nextLine(); // Consume the newline character

        int nextCameraId = cameraList.size() + 1;
        Camera newCamera = new Camera(nextCameraId, brand, model, pricePerDay,
true);
        cameraList.add(newCamera);

        System.out.println("YOUR CAMERA HAS BEEN SUCCESSFULLY ADDED TO THE
LIST.");
    }

    private void removeCamera() {
        Scanner scanner = new Scanner(System.in);

        System.out.println("\nMY CAMERAS:");
        printCameraTableHeader();
        for (Camera camera : cameraList) {
            System.out.printf("%-10d%-15s%-15s%-15.2f%s\n",
                camera.getId(),
                camera.getBrand(),
                camera.getModel(),
                camera.getPricePerDay(),
                camera.isAvailable() ? "Available" : "Rented");
        }

        System.out.print("ENTER THE CAMERA ID TO REMOVE: ");
        int cameraId = scanner.nextInt();
        scanner.nextLine(); // Consume the newline character

        boolean cameraRemoved = false;
        for (Camera camera : cameraList) {
            if (camera.getId() == cameraId) {
                cameraList.remove(camera);
                cameraRemoved = true;
                break;
            }
        }

        if (cameraRemoved) {
            System.out.println("CAMERA SUCCESSFULLY REMOVED FROM THE LIST.");
        } else {
            System.out.println("Invalid camera ID.");
        }
    }

    private void viewMyCameras() {
        System.out.println("\nMY CAMERAS:");
        printCameraTableHeader();
        for (Camera camera : cameraList) {
            System.out.printf("%-10d%-15s%-15s%-15.2f%s\n",
                camera.getId(),
                camera.getBrand(),
                camera.getModel(),
                camera.getPricePerDay(),

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        camera.isAvailable() ? "Available" : "Rented");
    }
}

private void rentCamera() {
    Scanner scanner = new Scanner(System.in);

    System.out.println("\nFOLLOWING IS THE LIST OF AVAILABLE CAMERA(S):");
    printCameraTableHeader();
    for (Camera camera : cameraList) {
        if (camera.isAvailable()) {
            System.out.printf("%-10d%-15s%-15s%-15.2f%s%n",
                camera.getId(),
                camera.getBrand(),
                camera.getModel(),
                camera.getPricePerDay(),
                "Available");
        }
    }

    System.out.print("ENTER THE CAMERA ID TO RENT: ");
    int cameraId = scanner.nextInt();
    scanner.nextLine(); // Consume the newline character

    boolean cameraRented = false;
    for (Camera camera : cameraList) {
        if (camera.getId() == cameraId && camera.isAvailable()) {
            System.out.print("ENTER THE NUMBER OF DAYS TO RENT: ");
            int numOfDay = scanner.nextInt();
            scanner.nextLine(); // Consume the newline character

            double rentalAmount = camera.getPricePerDay() * numOfDay;
            if (rentalAmount <= currentUser.getWalletBalance()) {
                currentUser.deductFromWallet(rentalAmount);
                camera.setAvailable(false);
                cameraRented = true;
                System.out.printf("CAMERA SUCCESSFULLY RENTED FOR %d DAYS.
Rental Amount: %.2f INR%n", numOfDay, rentalAmount);
                System.out.println("Updated Wallet Balance: " +
currentUser.getWalletBalance() + " INR");
            } else {
                System.out.println("Insufficient balance in your wallet.
Unable to rent the camera.");
            }
            break;
        }
    }

    if (!cameraRented) {
        System.out.println("Invalid camera ID or camera is already rented.");
    }
}

private void viewAllCameras() {
    System.out.println("\nALL CAMERAS:");
    printCameraTableHeader();
    for (Camera camera : cameraList) {
        System.out.printf("%-10d%-15s%-15s%-15.2f%s%n",

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        camera.getId(),
        camera.getBrand(),
        camera.getModel(),
        camera.getPricePerDay(),
        camera.isAvailable() ? "Available" : "Rented");
    }
}

private void showMyWalletMenu() {
    Scanner scanner = new Scanner(System.in);

    while (true) {
        System.out.println("\nMY WALLET MENU:");
        System.out.println("1. DEPOSIT");
        System.out.println("2. CHECK BALANCE");
        System.out.println("3. GO TO PREVIOUS MENU");

        System.out.print("Enter your choice: ");
        int choice = scanner.nextInt();
        scanner.nextLine(); // Consume the newline character

        switch (choice) {
            case 1:
                depositToWallet();
                break;
            case 2:
                checkWalletBalance();
                break;
            case 3:
                return;
            default:
                System.out.println("Invalid choice. Please try again.");
                break;
        }
    }
}

private void depositToWallet() {
    Scanner scanner = new Scanner(System.in);

    System.out.print("ENTER THE AMOUNT TO DEPOSIT: ");
    double amount = scanner.nextDouble();
    scanner.nextLine(); // Consume the newline character

    currentUser.depositToWallet(amount);

    System.out.println("AMOUNT DEPOSITED SUCCESSFULLY.");

    while (true) {
        System.out.print("Do you want to deposit more money? (yes/no): ");
        String choice = scanner.nextLine();

        if (choice.equalsIgnoreCase("yes")) {
            System.out.print("ENTER THE AMOUNT TO DEPOSIT: ");
            amount = scanner.nextDouble();
            scanner.nextLine(); // Consume the newline character

            currentUser.depositToWallet(amount);
        }
    }
}

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        System.out.println("AMOUNT DEPOSITED SUCCESSFULLY.");
    } else if (choice.equalsIgnoreCase("no")) {
        return; // Return to the wallet menu
    } else {
        System.out.println("Invalid choice. Please enter 'yes' or 'no'.");
    }
}

}

private void checkWalletBalance() {
    System.out.println("WALLET BALANCE: " + currentUser.getWalletBalance() + "
    INR");
}

private void printCameraTableHeader() {
    System.out.println("-----");
    System.out.println("-----");
    System.out.printf("%-10s%-15s%-15s%-15s\n",
        "ID", "Brand", "Model", "Price/Day", "Availability");
    System.out.println("-----");
    System.out.println("-----");
}

}

package endproject;

public class Main {
    public static void main(String[] args) {
        CameraRentalApp app = new CameraRentalApp();
        app.run();
    }
}

```