**package** project;

**import** java.util.ArrayList;

**import** java.util.List;

**import** java.util.Scanner;

**class** User {

**private** String username;

**private** String password;

**private** **double** walletBalance;

**public** User(String username, String password) {

**this**.username = username;

**this**.password = password;

**this**.walletBalance = 50000;

}

**public** String getUsername() {

**return** username;

}

**public** String getPassword() {

**return** password;

}

**public** **double** getWalletBalance() {

**return** walletBalance;

}

**public** **void** depositToWallet(**double** amount) {

walletBalance += amount;

System.***out***.println("Amount deposited successfully. Current wallet balance: " + walletBalance);

}

}

**class** Camera {

**private** **int** cameraId;

**private** String brand;

**private** String model;

**private** **double** rentalPricePerDay;

**private** **boolean** rented;

**public** Camera(**int** cameraId, String brand, String model, **double** rentalPricePerDay) {

**this**.cameraId = cameraId;

**this**.brand = brand;

**this**.model = model;

**this**.rentalPricePerDay = rentalPricePerDay;

**this**.rented = **false**;

}

**public** **int** getCameraId() {

**return** cameraId;

}

**public** String getBrand() {

**return** brand;

}

**public** String getModel() {

**return** model;

}

**public** **double** getRentalPricePerDay() {

**return** rentalPricePerDay;

}

**public** **boolean** isRented() {

**return** rented;

}

**public** **void** setRented(**boolean** rented) {

**this**.rented = rented;

}

}

**public** **class** cameraRent{

**private** **static** Scanner *scanner* = **new** Scanner(System.***in***);

**private** **static** List<Camera> *cameraList* = **new** ArrayList<>();

**private** **static** User *currentUser*;

**public** **static** **void** main(String[] args) {

*populateCameraList*(); // Populate some initial camera data

**boolean** running = **true**;

**while** (running) {

System.***out***.println("+---------------+------------------- +");

System.***out***.println("|Welcome to the Camera Rental App!|");

System.***out***.println("+---------------+-----------------+");

**if** (*currentUser* == **null**) {

*displayLoginMenu*();

**int** choice = *scanner*.nextInt();

*scanner*.nextLine(); // Consume the newline character

**switch** (choice) {

**case** 1:

*registerUser*();

**break**;

**case** 2:

*loginUser*();

**break**;

**case** 3:

running = **false**;

**break**;

**default**:

System.***out***.println("Invalid choice. Please try again.");

}

} **else** {

*displayUserMenu*();

**int** choice = *scanner*.nextInt();

*scanner*.nextLine(); // Consume the newline character

**switch** (choice) {

**case** 1:

*displayCameras*();

**break**;

**case** 2:

*rentCamera*();

**break**;

**case** 3:

*listCameras*();

**break**;

**case** 4:

*displayWalletBalance*();

**break**;

**case** 5:

*logoutUser*();

**break**;

**default**:

System.***out***.println("Invalid choice. Please try again."); }

}

}

}

**private** **static** **void** displayLoginMenu() {

System.***out***.println("---------------------------");

System.***out***.println("1. Register");

System.***out***.println("2. Login");

System.***out***.println("3. Exit");

System.***out***.println("---------------------------");

System.***out***.print("Enter your choice: ");

}

**private** **static** **void** displayUserMenu() {

System.***out***.println("Welcome, " + *currentUser*.getUsername() + "!");

System.***out***.println("---------------------------");

System.***out***.println("1. My Cameras");

System.***out***.println("2. Rent a Camera");

System.***out***.println("3. View All Cameras");

System.***out***.println("4. Manage Wallet");

System.***out***.println("5. Exit");

System.***out***.println("---------------------------");

System.***out***.print("Enter your choice: ");

}

**private** **static** **void** displayCameras() {

**while** (**true**) {

System.***out***.println("---------------------------");

System.***out***.println("1. Add a Camera");

System.***out***.println("2. Remove a Camera");

System.***out***.println("3. Go back to Previous Menu");

System.***out***.println("---------------------------");

System.***out***.print("Enter your choice: ");

**int** choice = *scanner*.nextInt();

*scanner*.nextLine(); // Consume the newline character

**switch** (choice) {

**case** 1:

*addCamera*();

**break**;

**case** 2:

*removeCamera*();

**break**;

**case** 3:

**return**; // Go back to the previous menu

**default**:

System.***out***.println("Invalid choice. Please try again.");

}

}

}

**private** **static** **void** registerUser() {

System.***out***.print("Enter username: ");

String username = *scanner*.nextLine();

System.***out***.print("Enter password: ");

String password = *scanner*.nextLine();

*currentUser* = **new** User(username, password);

System.***out***.println("Registration successful! You can now login with your credentials.");

}

**private** **static** **void** loginUser() {

System.***out***.print("Enter username: ");

String username = *scanner*.nextLine();

System.***out***.print("Enter password: ");

String password = *scanner*.nextLine();

**if** (*currentUser* != **null** && *currentUser*.getUsername().equals(username) && *currentUser*.getPassword().equals(password)) {

System.***out***.println("Login successful! Welcome, " + *currentUser*.getUsername() + "!");

} **else** {

System.***out***.println("Invalid username or password. Please try again.");

*currentUser* = **null**;

}

}

**private** **static** **void** logoutUser() {

*currentUser* = **null**;

System.***out***.println("Logout successful!");

System.***out***.println("+-------------------------------------------------+");

System.***out***.println("| Thank you for using the Camera Rental App! |");

System.***out***.println("+-------------------------------------------------+");

}

**private** **static** **void** populateCameraList() {

*cameraList*.add(**new** Camera(1, "Canon", "EOS R", 500.0));

*cameraList*.add(**new** Camera(2, "Nikon", "D850", 600.0));

*cameraList*.add(**new** Camera(3, "Sony", "Alpha A7 III", 700.0));

*cameraList*.add(**new** Camera(4, "Apple", "Camera1", 20000.0));

*cameraList*.add(**new** Camera(5, "Samsung","Cmera2", 700.0));

}

**private** **static** **void** listCameras() {

**if** (*cameraList*.isEmpty()) {

System.***out***.println("No Data Present at This Moment.");

} **else** {

System.***out***.println("======Available cameras:======");

// for (Camera camera : cameraList) {

System.***out***.println("============================================================");

System.***out***.println("cameraId Brand Model Rent per Day status");

System.***out***.println("============================================================");

**for** (Camera camera : *cameraList*) {

System.***out***.printf("%-5s %-7s %-13s $%-12.2f %-10s \n",

camera.getCameraId(),camera.getBrand(), camera.getModel(), camera.getRentalPricePerDay(),(camera.isRented() ? "Rented" : "Available"));

}

System.***out***.println("=============================================================");

}

}

**private** **static** **void** addCamera() {

System.***out***.print("Enter camera ID: ");

**int** cameraId = *scanner*.nextInt();

*scanner*.nextLine(); // Consume the newline character

System.***out***.print("Enter camera brand: ");

String brand = *scanner*.nextLine();

System.***out***.print("Enter camera model: ");

String model = *scanner*.nextLine();

System.***out***.print("Enter rental price per day: ");

**double** rentalPricePerDay = *scanner*.nextDouble();

*scanner*.nextLine(); // Consume the newline character

Camera camera = **new** Camera(cameraId, brand, model, rentalPricePerDay);

*cameraList*.add(camera);

System.***out***.println("Camera added to the main display.");

}

**private** **static** **void** removeCamera() {

System.***out***.print("Enter camera ID to remove: ");

**int** cameraId = *scanner*.nextInt();

*scanner*.nextLine(); // Consume the newline character

**boolean** found = **false**;

**for** (Camera camera : *cameraList*) {

**if** (camera.getCameraId() == cameraId) {

*cameraList*.remove(camera);

found = **true**;

System.***out***.println("Camera removed successfully.");

**break**;

}

}

**if** (!found) {

System.***out***.println("Camera not found.");

}

}

**private** **static** **void** rentCamera() {

System.***out***.print("Enter camera ID to rent: ");

**int** cameraId = *scanner*.nextInt();

*scanner*.nextLine(); // Consume the newline character

Camera selectedCamera = **null**;

**for** (Camera camera : *cameraList*) {

**if** (camera.getCameraId() == cameraId) {

selectedCamera = camera;

**break**;

}

}

**if** (selectedCamera != **null**) {

**if** (selectedCamera.isRented()) {

System.***out***.println("Camera is already rented.");

} **else** {

**if** (*currentUser*.getWalletBalance() >= selectedCamera.getRentalPricePerDay()) {

*currentUser*.depositToWallet(-selectedCamera.getRentalPricePerDay());

selectedCamera.setRented(**true**);

System.***out***.println("Camera rented successfully!");

} **else** {

System.***out***.println("+----------------------------------------------------------------+");

System.***out***.println("| Insufficient balance in your wallet to rent this camera. |");

System.***out***.println("+----------------------------------------------------------------+");

}

}

} **else** {

System.***out***.println("Camera not found.");

}

}

**private** **static** **void** displayWalletBalance() {

**while** (**true**) {

System.***out***.println("---------------------------");

System.***out***.println("1. Deposit Money");

System.***out***.println("2. Show Available Balance");

System.***out***.println("3. Go back to Previous Menu");

System.***out***.println("---------------------------");

System.***out***.print("Enter your choice: ");

**int** choice = *scanner*.nextInt();

*scanner*.nextLine(); // Consume the newline character

**switch** (choice) {

**case** 1:

*depositToWallet*();

**break**;

**case** 2:

*showAvailableBalance*();

**break**;

**case** 3:

**return**; // Go back to the previous menu

**default**:

System.***out***.println("Invalid choice. Please try again.");

}

}

}

**private** **static** **void** depositToWallet() {

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!");

// Ask if the user wants to deposit more money

System.***out***.print("Do you want to deposit more? (y/N): ");

String choice = *scanner*.nextLine().toLowerCase();

**if** (choice.equals("y")) {

*depositToWallet*(); // Recursively call the depositToWallet() method

}

}

**private** **static** **void** showAvailableBalance() {

**double** balance = *currentUser*.getWalletBalance();

System.***out***.println("Available Balance: $" + balance);

}

}

