**SOURCE CODE: Camera Rental Application**

**Camera object Class:**

**package** camerRental;

**public** **class** Data {

**private** **int** camera\_id;

**private** String brand;

**private** String model;

**private** **double** price;

**private** **boolean** status;

Data(**int** camera\_id, String brand, String model, **double** price, **boolean** Available) {

**this**.camera\_id = camera\_id;

**this**.brand = brand;

**this**.model = model;

**this**.price = price;

**this**.status = Available;

}

**public** **int** getId() {

**return** camera\_id;

}

**public** String getBrand() {

**return** brand;

}

**public** String getModel() {

**return** model;

}

**public** **double** getPrice() {

**return** price;

}

**public** **boolean** isAvailable() {

**return** status;

}

**public** **void** setAvailable(**boolean** Available) {

**this**.status = Available;

}

}

//////////////////////////////////////////////////////////////////////////////////////////////////////////

Main Code:

package cameraRental;

import java.util.Scanner;

import java.util.ArrayList;

import java.util.InputMismatchException;

public class rentalCamera {

static Scanner sc = new Scanner(System.in);

public static boolean validate() {

//Scanner sc = new Scanner(System.in);

int k=1;

boolean b=false;

String username, password;

while(true) {

if(k<=3) {

System.out.print("Enter username:");// username:shivu(Case Insensitive)

username = sc.nextLine();

System.out.print("Enter password:");// password:shivu123(Case Sensitive)

password = sc.nextLine();

if(username.toLowerCase().equals("shivu") &&password.equals("shivu123")){

b=true;

break;

}

else {

if(k<3) {

System.out.format("\nInvalid credentials. Please Try %dth attempt!\n",(k+1));

}else {

System.out.println("Invalid Authentication Found!\nTry again later!");

System.exit(0);

}

k++;

}

}

}

//sc.close();

return b;

}

public static double Walletinfo(ArrayList<Data> list,double INR) {

Scanner sc=new Scanner(System.in);

System.out.println("Your current wallet balance is :" + INR);

System.out.println("Do you want to deposit more amount to your wallet?(1.Yes 2.No)- ");

int m = sc.nextInt();

if (m == 1) {

System.out.println("ENTER THE AMOUNT(INR) TO DEPOSIT -> ");

double addAmount = sc.nextDouble();

INR = INR + addAmount;

System.out.println("Your Wallet balance is updated successfully...");

}

System.out.println("Current wallet balance -> " + INR);

return INR;

}

public static void DisplayCamera(ArrayList<Data> list) {

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

System.out.println("cameraID\t Brand\t Model\t Price\t Status");

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

for (int i = 0; i<list.size(); i++) {

Data data = list.get(i);

String status = data.isAvailable() ? "Available" :"Rented";

System.out.println(data.getId() + "\t\t" + data.getBrand() + "\t" + data.getModel() + "\t"

+ data.getPrice() + "\t" + status);

}

//System.out.println();

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

}

public static double rentCamera(ArrayList<Data> list,double INR) {

// Scanner sc=new Scanner(System.in);

DisplayCamera(list);

int index = -1;

System.out.println("Enter camera Id of the product you want to rent ");

int cameraId = sc.nextInt();

for (int i = 0; i<list.size(); i++) {

Data camera = list.get(i);

if (camera.getId() == cameraId && camera.isAvailable()==true) {

index = i;

break; // Found the camera, exit the loop

}

}

if (index != -1) {

Data a = list.get(index);

if (a.getPrice() <= INR) {

a.setAvailable(false);

INR = INR - a.getPrice();

System.out.println();

System.out.format("YOURTRANSACTION FOR CAMERA-%s %s WITH RENT %f HAS SUCCESSFULLY COMPLETED!\n",

a.getBrand(),a.getModel(),a.getPrice());

System.out.println("Current wallet balance -> " + INR);

} else {

System.out.println("You don't have Sufficient Balance in your wallet");

}

} else {

System.out.println("Camera with ID " + cameraId + " is not found in the list.");

}

return INR;

}

public static ArrayList<Data> cameraInfo(ArrayList<Data> list) throws InputMismatchException{

boolean backToMenu = false;

while (!backToMenu){

try {

int choose;

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

System.out.println("MY CAMERA MENU");

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

System.out.println("1.ADD");

System.out.println("2.REMOVE");

System.out.println("3.VIEW MY CAMERA");

System.out.println("4.GO TO PREVIOUS MENU");

System.out.println("Enter your choice : ");

choose = sc.nextInt();

switch (choose) {

case 1:

list=addCamera(list);

break;

case 2:

DisplayCamera(list);

list=removeCamera(list);

break;

case 3:

DisplayCamera(list);

break;

case 4:

backToMenu=true;

break;

default:

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

}

} catch (InputMismatchException e) {

System.out.println("\nPlease enter valid number from 1 to 4\n");

break;

}

}

return(list);

}

public static void main(String[] args) {

double INR = 1000;

// inserting camera details(data type is Data) values in to arrayList

ArrayList<Data> list = new ArrayList<>();

list.add(new Data(1, "Canon", "DSLR", 1000, true));

list.add(new Data(2, "Sony", "Ds123", 500, true));

list.add(new Data(3, "LG", "5050", 280, true));

list.add(new Data(4, "Lenova", "XPL", 300, true));

list.add(new Data(5, "Nikon", "SRL", 350, true));

list.add(new Data(6, "Sony", "2130", 260, true));

list.add(new Data(7, "Samsung", "DL", 550, true));

list.add(new Data(8, "LG", "Digital", 120, true));

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

System.out.println("|\tWELCOME TO CAMERA RENTAL APP\t|");

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

System.out.println("Please Login to Continue -");

// if (true) {

if (validate()) {

System.out.println("\nLogin Successful!!!\n");

while(true){

int option;

Scanner sc = new Scanner(System.in);

// public void main\_option()

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

System.out.println("1.MY CAMERA");

System.out.println("2.RENT A CAMERA");

System.out.println("3.VIEW ALL CAMERA");

System.out.println("4.MY WALLET");

System.out.println("5:Close APP");

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

System.out.println("\nSelect your option : ");

option = sc.nextInt();

switch (option) {

case 1:

list=cameraInfo(list);

break;

case 2:

INR=rentCamera(list,INR);

break;

case 3:

DisplayCamera(list);

break;

case 4:

INR=Walletinfo(list,INR);

break;

case 5:

System.out.println("Thank you for visiting camera rental application\nVisit Again!!!");

System.exit(0);

}

}

}

}

public static ArrayList<Data> removeCamera(ArrayList<Data> list)

{

System.out.println( "Entre camera Id of the product you want to remove: ");

int cameraId = sc.nextInt();

System.out.println("Confirm YES to delete Camera of \'ID: "+ cameraId+"\'\nElse Press NO to go to Prevous Menu\n1.YES\t 2.NO");

int a=sc.nextInt();

if(a==1) {

for (int i = 0; i<list.size(); i++) {

Data camera = list.get(i);

if (camera.getId() == cameraId) {

list.remove(i);

System.out.println("Camera Removed Successfully!!!");

break;

}

}

}else {

cameraInfo(list);

}

return list;

}

public static ArrayList<Data> addCamera(ArrayList<Data> list)

{

System.out.println("Enter Camera ID: ");

int camera\_id = sc.nextInt();

System.out.println("Enter Camera Brand: ");

String brand = sc.next();

System.out.println("Enter Camera Model: ");

String model = sc.next();

System.out.println("Enter Camera Price per day: ");

double price = sc.nextFloat();

boolean Available = true;

list.add(new Data(camera\_id, brand, model, price, Available));

System.out.println("Successfully Added");

System.out.println("If you want to view camera List enter '1' else '0': ");

int m = sc.nextInt();

if (m == 1) {

DisplayCamera(list);

}

return list;

}//addCamera end

}//class end