Gebze Technical University
Computer Engineering

CSE 222 - 2018 Spring

HOMEWORK 1 REPORT

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1   INTRODUCTION

1.1   Problem Definition

. The system provides the information regarding the different rooms that
they are available and their status(reserved,check-in,empty), is specific to availability. The
guests can visit the system and they can book a room or cansel booking.Also the system
provides receptionist login with privacy.A receptionist can book a room ,cansel booking,
check-in and checkout for guests.There are two types of rooms: single or double so
receptionist or guests can choose one of them.If a guest wants to go out from the hotel,It
must pay its room price that is determined

1.2   System Requirements

There are two ways to use this system.When the program runned user has to choose type
of user which is guest or receptionist.If user don't choose a valid user type(G/R) program
wants true user type until user enters right one.

1.2.1   Guest Login:
After the user chose guest to login the system,system asks process name that guest can.
Guest has to choose booking or cansel booking(B/C) and when system wants to enter
guest's personal information for recording.These informations have to enter
correctly.Which mean phone number has to have 10 digits,in and out date has to 10 digits
and right format(yyyy/mm/dd).Also out date has to bigger or equal to in date to hotel.If
user's inputs are not the right form system asks again for the recording.The system require
a csv file for database of records.That file has all information of hotel's rooms and room's
guest informationAfter the chosen process end system asks user to new process or
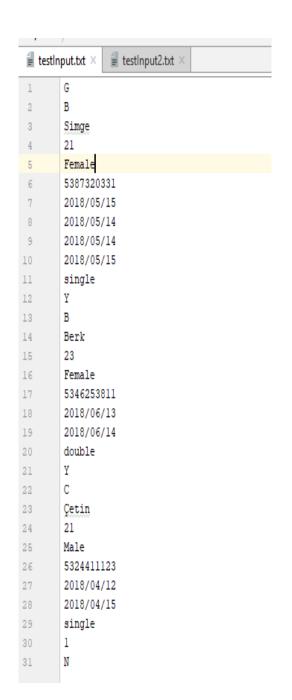ending..

1.2.2   Receptionist Login:
İf user chose receptionist to login,system wants a password(1) because guest must not to
login by receptionist.There is a confidentiality.After the right password entered(system ask
again until the input right like the other inputs in the system) , the system ask a process
seleciton from the user like guest login.With the difference of receptionist login there are
two different process : check-in and check-out.If user chose check-out for process after all
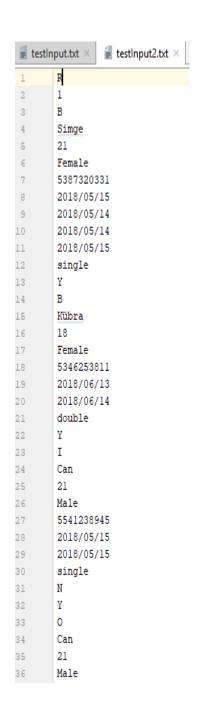information system asks additionally room id because same person can book or check-in

different rooms.Room ID avoids wrong room's guest check-out.When check-out came true there has to a payment.

```java
package HotelSystem;

import java.io.FileInputStream;
import java.io.IOException;
import java.text.ParseException;
import java.text.SimpleDateFormat;
import java.util.Date;
import java.util.Scanner;

public class main {
    public static void main(String[] args) throws IOException {

        FileInputStream is = new FileInputStream( s: "testInput.txt");
        System.setIn(is);

        Hotel myHotel = new Hotel( name: "myHotel", receptNum: 2);
        Guest guestt = new Guest();
        guestt.readData(myHotel, filename: "otel.csv");
        //myHotel.writeCsvFile("otel.csv");

        System.out.print("Welcome to ");
        System.out.print(myHotel.getHotelName());
        System.out.print(".Please enter one of them G/R(Guest or Receptionist): ")
        Scanner scanner = new Scanner(System.in);
        String login = scanner.next();
```
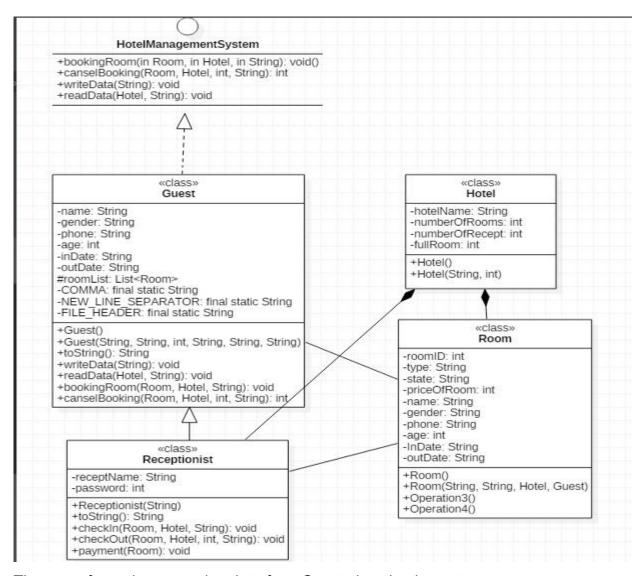
For Project testing text files are used.Guest class and its methods testing "testInput.txt" and Receptionist classes methods testing "testInput2.txt" files must used.For testing file name has to change like photo shown above.

testInput.txt

```
1   G
2   B
3   Simge
4   21
5   Female
6   5387320331
7   2018/05/15
8   2018/05/14
9   2018/05/14
10  2018/05/15
11  single
12  Y
13  B
14  Berk
15  23
16  Female
17  5346253811
18  2018/06/13
19  2018/06/14
20  double
21  Y
22  C
23  Çetin
24  21
25  Male
26  5324411123
27  2018/04/12
28  2018/04/15
29  single
30  1
31  N
```

testInput2.txt

```
1   R
2   1
3   B
4   Simge
5   21
6   Female
7   5387320331
8   2018/05/15
9   2018/05/14
10  2018/05/14
11  2018/05/15
12  single
13  Y
14  B
15  Kübra
16  18
17  Female
18  5346253811
19  2018/06/13
20  2018/06/14
21  double
22  Y
23  I
24  Can
25  21
26  Male
27  5541238945
28  2018/05/15
29  2018/05/15
30  single
31  N
32  Y
33  O
34  Can
35  21
36  Male
```
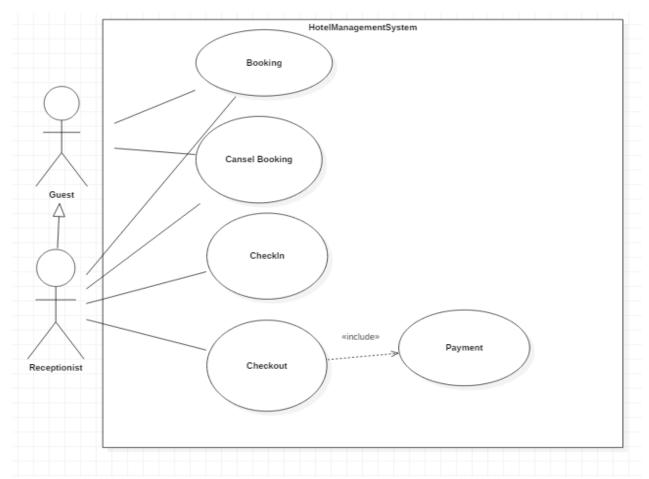
2 METHOD

2.1 Class Diagrams

There are four classes and an interface.Guest class implements HotelManagementSystem interface.Receptionist class extend from Guest class , which has additionaly methods.Receptinost class can do more process according to Guest.These two classes use Room and Hotel class to hold rooms and hotels informations.In the interface writeData and readData methods which aren't implemented yet.They implemented in the Guest class.These two methods are used for updating records in the csv file that is database for hotel system.

2.2 Use Case Diagrams

Guest can booking with Booking method and cansel booking with CanselBooking method.Receptionist can additionally check-in and check-out.When receptionist check-out , It has to use Payment method.

2.3 Other Diagrams (optional)

2.4 Problem Solution Approach

In order to solve the problem, first the situation was determined. Class structures were determined according to the processes and tasks that can be done. The scenario was determined in order for the hierarchy to be in object oriented design.Classes which has the same tasks are used for inheritance.For extended class needs to add to süper method it has overrided. The approach to problem solving is also one of the most important things, and error situations and controls

3 RESULT

3.1 Test Cases

3.1.1 Guest booking then cansel booking

According to "testInput.txt" file first guest Simge has entered a wrong in and out date(out date is smaller than in date) because of that system wants the right input.

If there is no suitable room for guest's wanted system gives error.
If there is no record for person who is canceling book,system gives error.


```
otel.csv ×
1    ID,State,Type,Price,In Date,Out Date,Gender,Name,Age,Phone
2    1,Reserved,single,50,2018/04/12,2018/04/15,Male,Çetin,21,5324411123
3    2,Reserved,single,50,2018/05/15,2018/05/15,Male,Can,21,5541238945
4    3,Empty,single,50,null,null,null,null,0,null
5    4,Empty,single,50,null,null,null,null,0,null
6    5,Empty,single,50,null,null,null,null,0,null
7    6,Empty,single,50,null,null,null,null,0,null
8    7,Empty,single,50,null,null,null,null,0,null
9    8,Empty,single,50,null,null,null,null,0,null
10   9,Reserved,double,100,2018/06/8,2018/06/10,Female,Fatma,18,5346789745
11   10,Empty,double,100,null,null,null,null,0,null
12   11,Empty,double,100,null,null,null,null,0,null
13   12,Empty,double,100,null,null,null,null,0,null
14   13,Empty,double,100,null,null,null,null,0,null
15   14,Empty,double,100,null,null,null,null,0,null
16   15,Empty,double,100,null,null,null,null,0,null
```
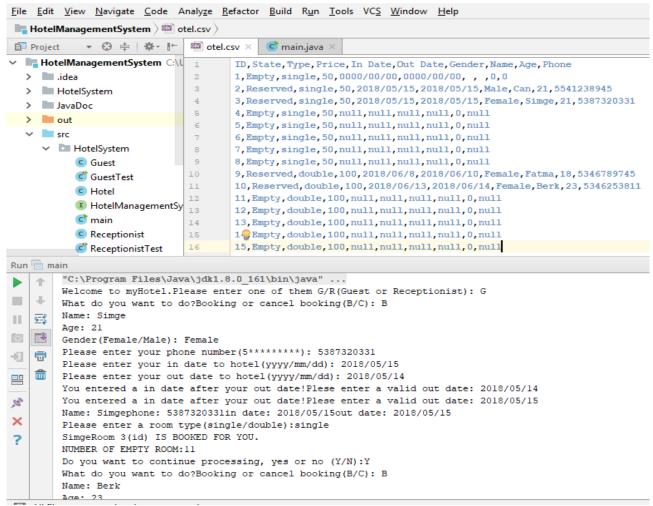
CSV file before methods calling

3.1.2 Receptionist check-in and after check-out

Receptionist checks room ID for checkout the right room.If there is no record of the room ID and guest's information system gives error.

Receptionist check guest's in and out date to hotel.If dates are not the right format system gives error and asks for new inputs.
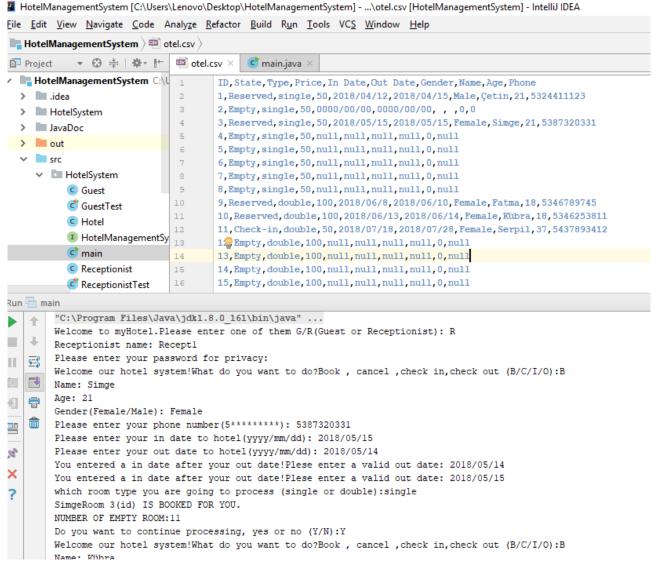
3.2 Running Results

After guests booking and cansel booking methods are called.

According to otel.csv file's first records room 1 was reserved but after cansel method called by guest Çetin room 1 is empty and room 10 is reserved by Berk with double room.

According to 1.2 System Requirements section input files reading from the main method , shows us first guest Simge entered wrong dates and system wanted the right version of dates.

After receptionist booking , cansel booking , check-in and check-out methods are called.

According to inputs after user chose receptionist login , system asks password.

After process selection receptionist takes input for guest's record.Receptionist checks dates format and truth.After the process system Shows empty rooms number on the screen.

Guest Can in the csv records was have reserved room but now he has not a recor in the database because he check-in by receptionist then check-out and there is no recor for him.Also there are new guest records in the file.

Unit Tests