

**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 cancel booking.Also the system provides receptionist login with privacy.A receptionist can book a room ,cancel 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 cancel 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:

If 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 selection 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.



```
1 package HotelSystem;
2
3 import java.io.FileInputSteam;
4 import java.io.IOException;
5 import java.text.ParseException;
6 import java.text.SimpleDateFormat;
7 import java.util.Date;
8 import java.util.Scanner;
9
10 public class main {
11     public static void main(String[] args) throws IOException {
12
13         FileInputSteam is = new FileInputSteam( s: "testInput.txt");
14         System.setIn(is);
15
16         Hotel myHotel = new Hotel( name: "myHotel", receptNum: 2);
17         Guest guestt = new Guest();
18         guestt.readData(myHotel, filename: "otel.csv");
19         //myHotel.writeCsvFile("otel.csv");
20
21         System.out.print("Welcome to ");
22         System.out.print(myHotel.getHotelName());
23         System.out.print(".Please enter one of them G/R(Guest or Receptionist): ")
24         Scanner scanner = new Scanner(System.in);
25         String login = scanner.next();
```

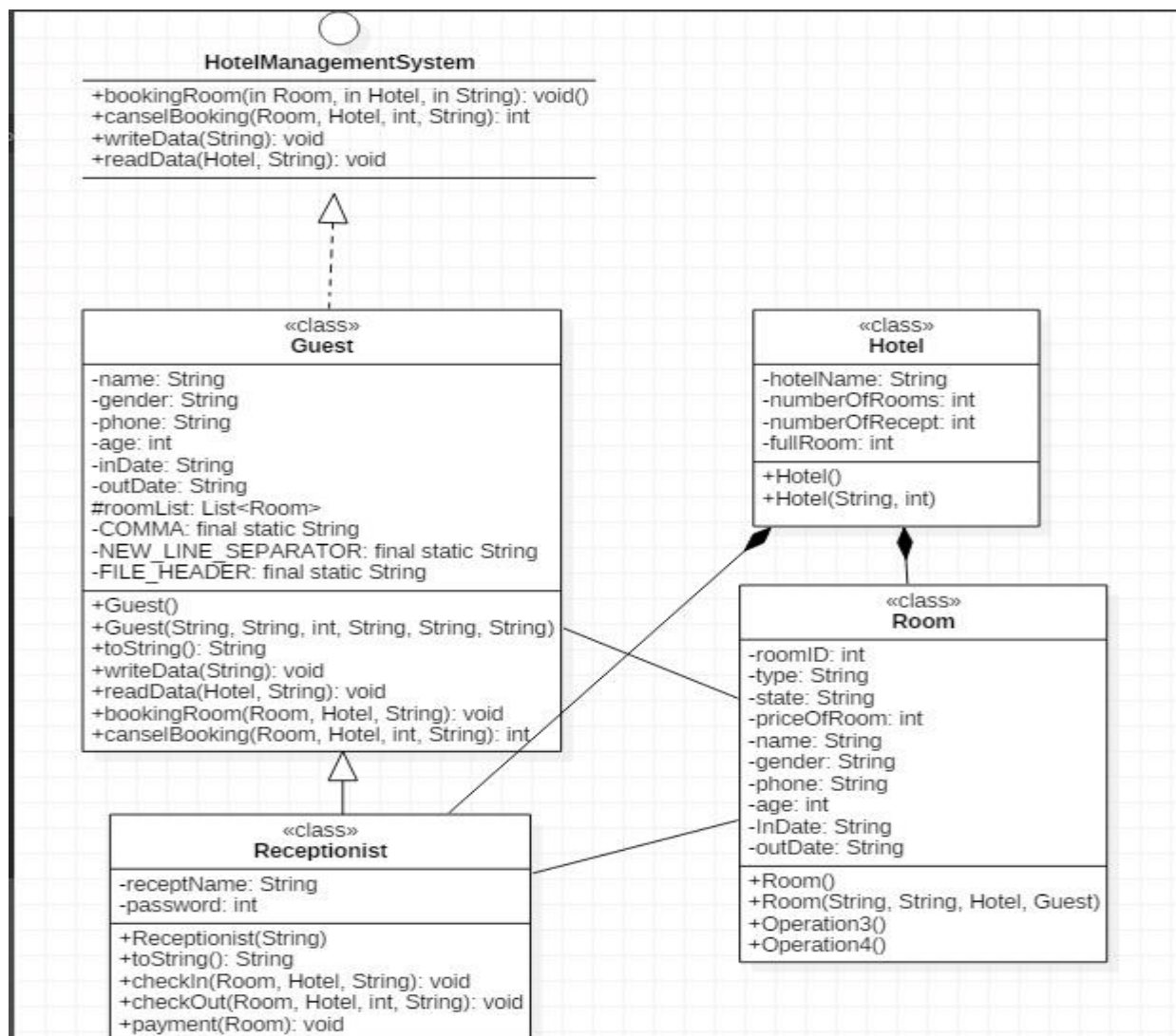
For Project testing text files are used. Guest class and its methods testing “testInput.txt” and Receptionist classes methods testing “testInput2.txt” files must used. For testing file name has to change like photo shown above.

	testInput.txt	testInput2.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	

	testInput.txt	testInput2.txt
1	B	
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	

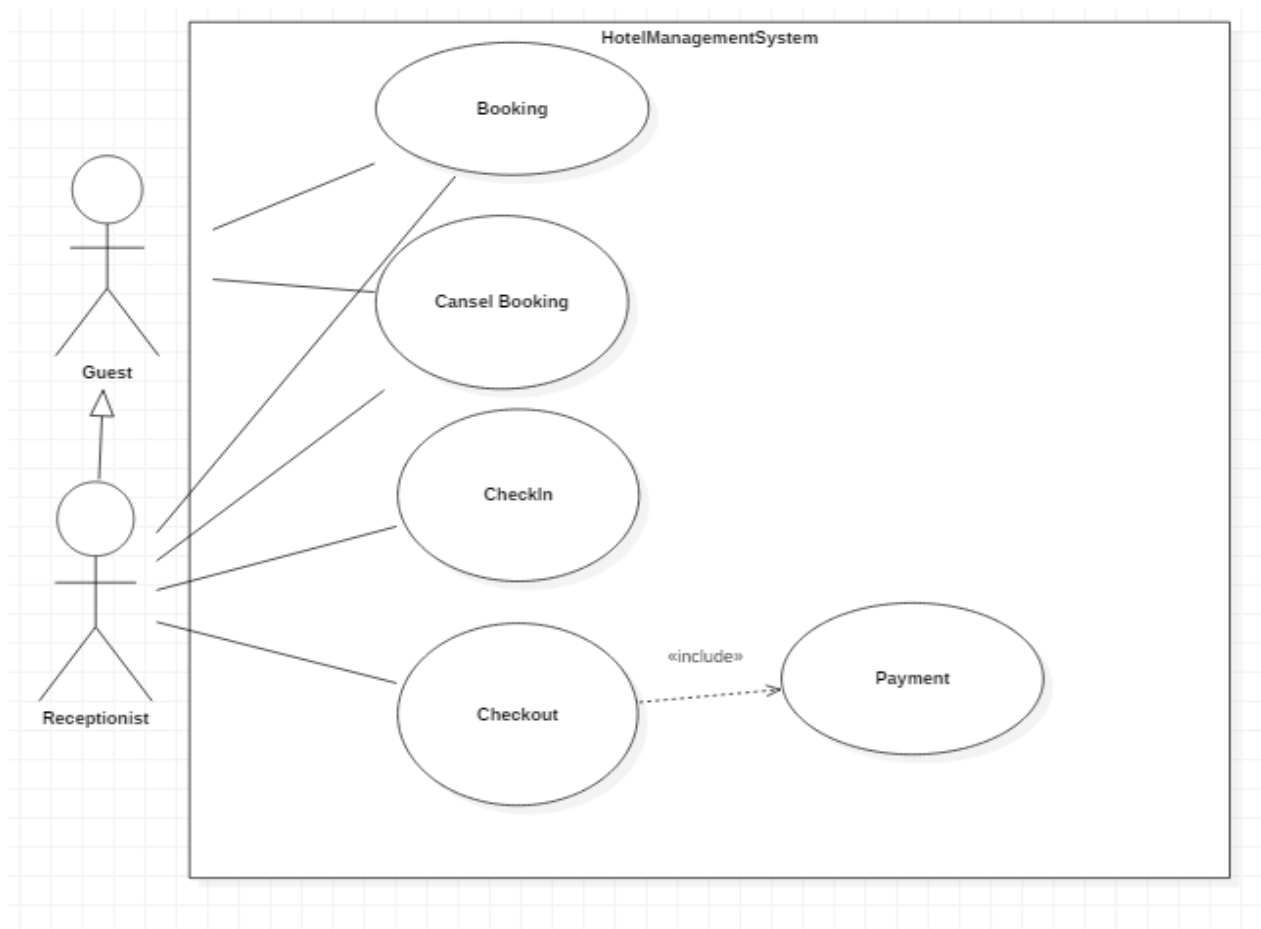
2 METHOD

2.1 Class Diagrams



There are four classes and an interface. Guest class implements HotelManagementSystem interface. Receptionist class extend from Guest class, which has additional methods. Receptionist 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

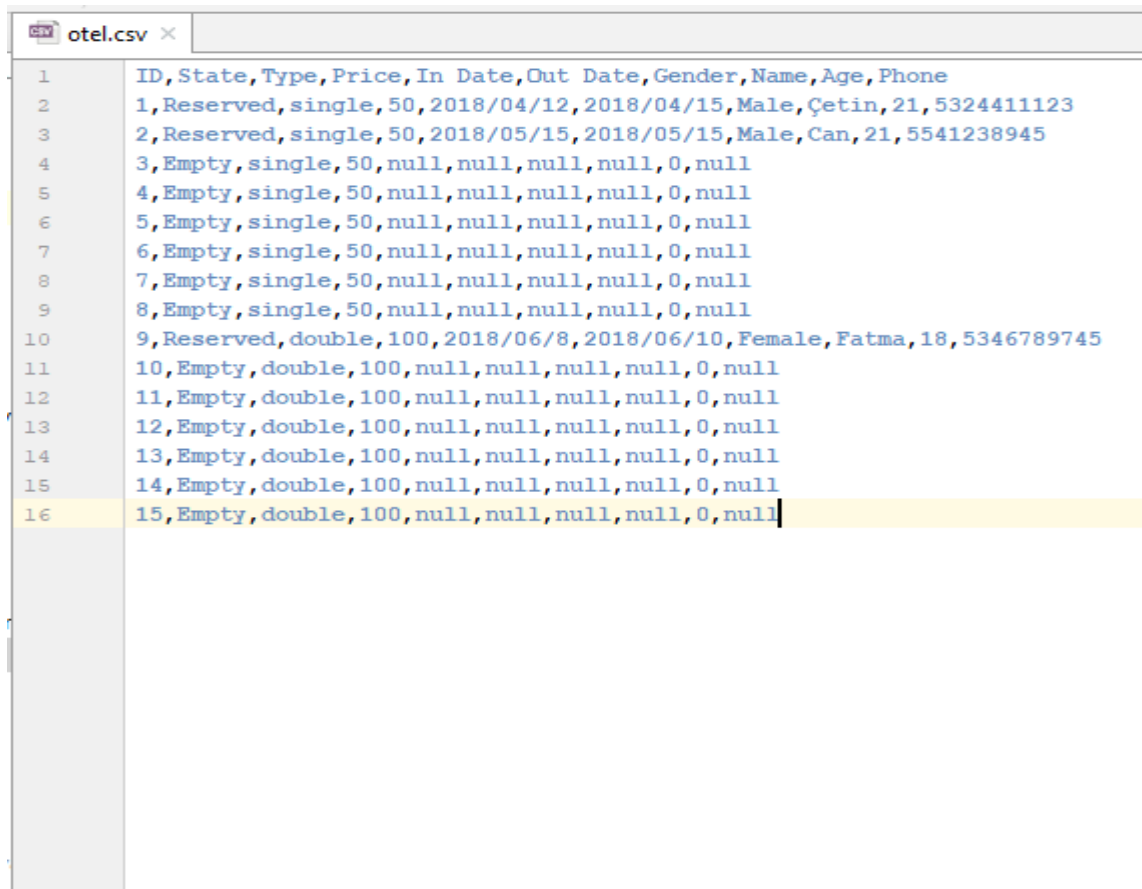
3.1 Test Cases

3.1.1 Guest booking then cancel 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.



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

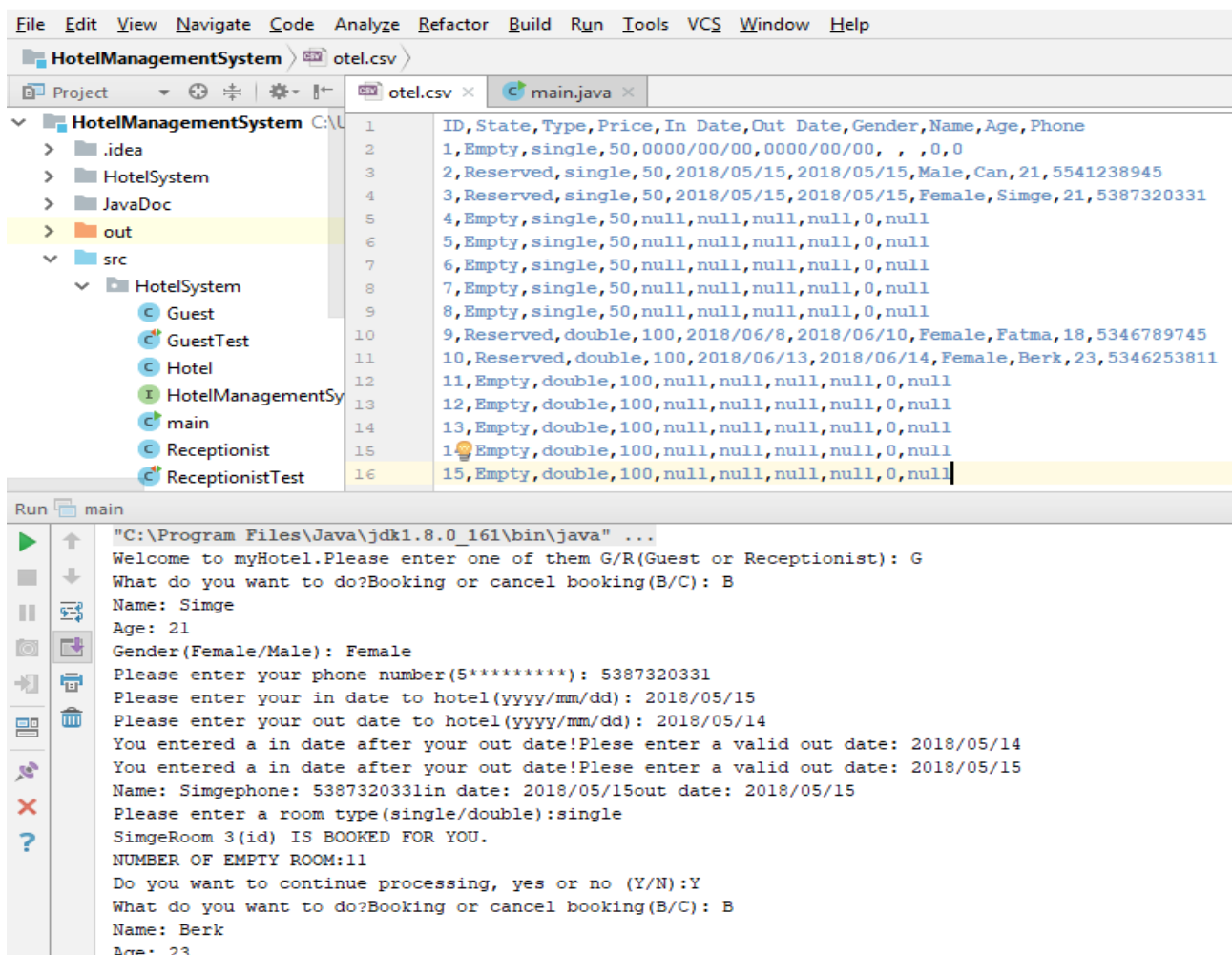
CSV file before methods calling

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



```
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
HotelManagementSystem > otel.csv >
Project > otel.csv x main.java x
HotelManagementSystem C:\U
> .idea
> HotelSystem
> JavaDoc
> out
> src
  HotelSystem
    Guest
    GuestTest
    Hotel
    HotelManagementSy
    main
    Receptionist
    ReceptionistTest
1 ID,State,Type,Price,In Date,Out Date,Gender,Name,Age,Phone
2 1,Empty,single,50,0000/00/00,0000/00/00,,0,0
3 2,Reserved,single,50,2018/05/15,2018/05/15,Male,Can,21,5541238945
4 3,Reserved,single,50,2018/05/15,2018/05/15,Female,Simge,21,5387320331
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,Reserved,double,100,2018/06/13,2018/06/14,Female,Berk,23,5346253811
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
Run main
"C:\Program Files\Java\jdk1.8.0_161\bin\java" ...
Welcome to myHotel.Please enter one of them G/R(Guest or Receptionist): G
What do you want to do?Booking or cancel booking(B/C): B
Name: Simge
Age: 21
Gender(Female/Male): Female
Please enter your phone number(5*****): 5387320331
Please enter your in date to hotel(yyyy/mm/dd): 2018/05/15
Please enter your out date to hotel(yyyy/mm/dd): 2018/05/14
You entered a in date after your out date!Plese enter a valid out date: 2018/05/14
You entered a in date after your out date!Plese enter a valid out date: 2018/05/15
Name: Simgephone: 5387320331in date: 2018/05/15out date: 2018/05/15
Please enter a room type(single/double):single
SimgeRoom 3(id) IS BOOKED FOR YOU.
NUMBER OF EMPTY ROOM:11
Do you want to continue processing, yes or no (Y/N):Y
What do you want to do?Booking or cancel booking(B/C): B
Name: Berk
Age: 23
```

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.

HotelManagementSystem [C:\Users\Lenovo\Desktop\HotelManagementSystem] - ...otel.csv [HotelManagementSystem] - IntelliJ IDEA

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

HotelManagementSystem > otel.csv

Project > otel.csv x main.java x

ID	State	Type	Price	In Date	Out Date	Gender	Name	Age	Phone
1	Reserved	single	50	2018/04/12	2018/04/15	Male	Çetin	21	5324411123
2	Empty	single	50	0000/00/00	0000/00/00			0	0
3	Reserved	single	50	2018/05/15	2018/05/15	Female	Simge	21	5387320331
4	Empty	single	50	null	null	null	null	0	null
5	Empty	single	50	null	null	null	null	0	null
6	Empty	single	50	null	null	null	null	0	null
7	Empty	single	50	null	null	null	null	0	null
8	Empty	single	50	null	null	null	null	0	null
9	Reserved	double	100	2018/06/8	2018/06/10	Female	Fatma	18	5346789745
10	Reserved	double	100	2018/06/13	2018/06/14	Female	Kübra	18	5346253811
11	Check-in	double	50	2018/07/18	2018/07/28	Female	Serpil	37	5437893412
12	Empty	double	100	null	null	null	null	0	null
13	Empty	double	100	null	null	null	null	0	null
14	Empty	double	100	null	null	null	null	0	null
15	Empty	double	100	null	null	null	null	0	null
16	Empty	double	100	null	null	null	null	0	null

Run main

```
"C:\Program Files\Java\jdk1.8.0_161\bin\java" ...
Welcome to myHotel.Please enter one of them G/R(Guest or Receptionist): R
Receptionist name: Receptl
Please enter your password for privacy:
Welcome our hotel system!What do you want to do?Book , cancel ,check in,check out (B/C/I/O):B
Name: Simge
Age: 21
Gender(Female/Male): Female
Please enter your phone number(5*****): 5387320331
Please enter your in date to hotel(yyyy/mm/dd): 2018/05/15
Please enter your out date to hotel(yyyy/mm/dd): 2018/05/14
You entered a in date after your out date!Plese enter a valid out date: 2018/05/14
You entered a in date after your out date!Plese enter a valid out date: 2018/05/15
which room type you are going to process (single or double):single
SimgeRoom 3(id) IS BOOKED FOR YOU.
NUMBER OF EMPTY ROOM:11
Do you want to continue processing, yes or no (Y/N):Y
Welcome our hotel system!What do you want to do?Book , cancel ,check in,check out (B/C/I/O):B
Name: Kübra
```

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

HotelManagementSystem [C:\Users\Lenovo\Desktop\HotelManagementSystem] - ...Unit_test.csv [HotelManagementSystem] - IntelliJ IDEA

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

HotelManagementSystem Unit_test.csv

Project

- HotelManagementSystem
 - idea
 - HotelSystem
 - JavaDoc
 - out
 - src
 - HotelSystem
 - Guest
 - GuestTest
 - Hotel
 - HotelManagementSystem
 - main
 - Receptionist
 - ReceptionistTest
 - Room
 - RoomTest

Unit_test.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 Sarıçayır,21,5324411123
3 2,Reserved,single,50,2018/05/15,2018/05/15,Male,Can,21,5541238945
4 3,Reserved,single,50,2018/06/10,2018/06/12,Female,Ayşe,30,5350653944
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,100,2018/06/13,2018/06/14,Female,Kübra,18,5346253811
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
17
```

Run GuestTest

All 4 tests passed - 76ms

GuestTest (HotelSystem) 76ms

- cancelBooking 44ms
- writeData 13ms
- readData 11ms
- bookingRoom 8ms

Process finished with exit code 0

Tests Passed: 4 passed (moments ago)

9:45 LF: UTF-8: 22:33

HotelManagementSystem [C:\Users\Lenovo\Desktop\HotelManagementSystem] - ...Unit_test.csv [HotelManagementSystem] - IntelliJ IDEA

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

HotelManagementSystem

Project

- HotelManagementSystem
 - idea
 - HotelSystem
 - JavaDoc
 - out
 - src
 - HotelSystem
 - Guest
 - GuestTest
 - Hotel
 - HotelManagementSystem
 - main
 - Receptionist
 - ReceptionistTest
 - Room
 - RoomTest

Unit_test.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 Sarıçayır,21,5324411123
3 2,Reserved,single,50,2018/05/15,2018/05/15,Male,Can,21,5541238945
4 3,Empty,single,50,0000/00/00,0000/00/00,,0,0
5 4,Reserved,single,50,2018/06/10,2018/06/12,Female,Ayşe,30,5350653944
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,100,2018/06/13,2018/06/14,Female,Kübra,18,5346253811
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
17
```

Run ReceptionistTest

All 6 tests passed - 127ms

ReceptionistTest (HotelSystem) 127ms

- cancelBooking 46ms
- writeData 18ms
- readData 8ms
- bookingRoom 9ms
- checkin 11ms
- checkout 35ms

Process finished with exit code 0

Tests Passed: 6 passed (moments ago)

9:45 LF: UTF-8: 22:36