Gebze Technical University
Computer Engineering

CSE 222 - 2018 Spring

HOMEWORK 1 REPORT

FERHAT ŞİRİN
161044080

Course Assistant:

1 INTRODUCTION

1.1 Problem Definition

Hotel management is a problem for the hotel that has lots of guests. Hotel Management System helps receptionist to control check in and check out more easily and even guest can make their own reservation without receptionist.
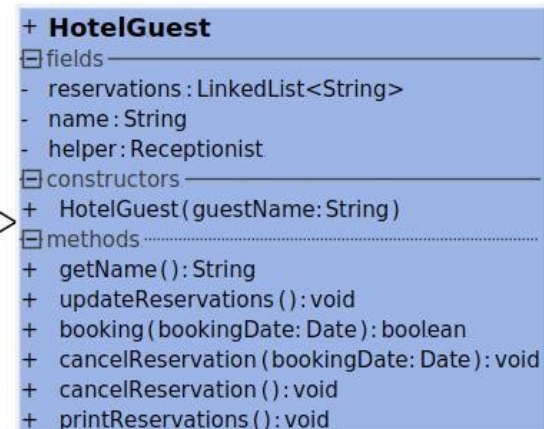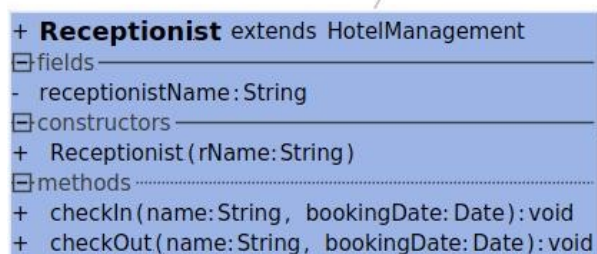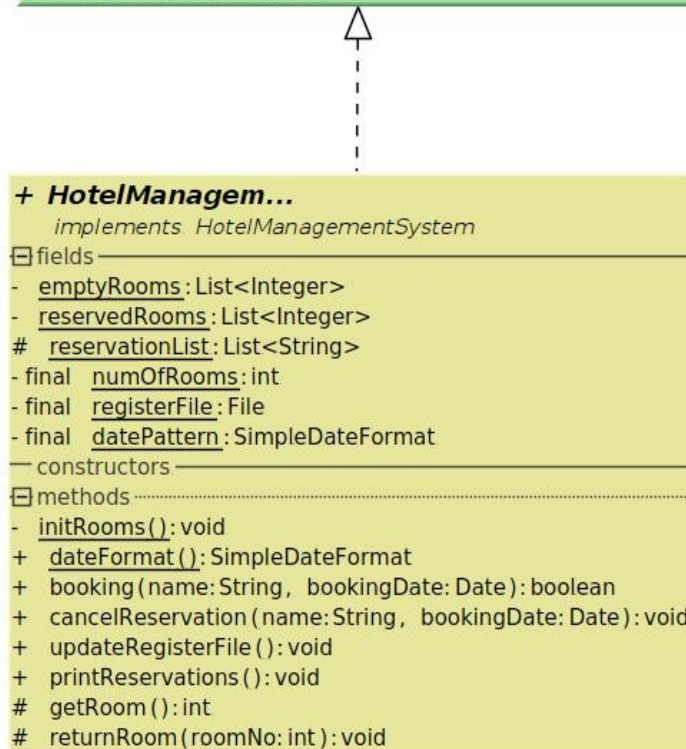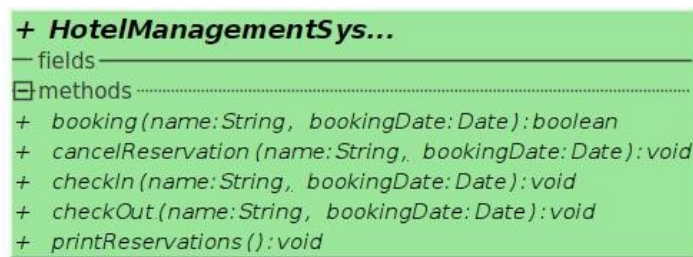
1.2 System Requirements

```
boolean booking(String name,Date bookingDate);
void cancelReservation(String name,Date bookingDate);
void checkIn(String name, Date bookingDate);
void checkOut(String name, Date bookingDate);
```

These method's Date parameter should be used with HotelManagement.dateFormat() public static method. This method returns a SimpleDateFormat object. With this object user can use Date parse(String) or String format(Date) to give the methods their booking date.
Pattern should be `dd.MM.yyyy HH:mm`

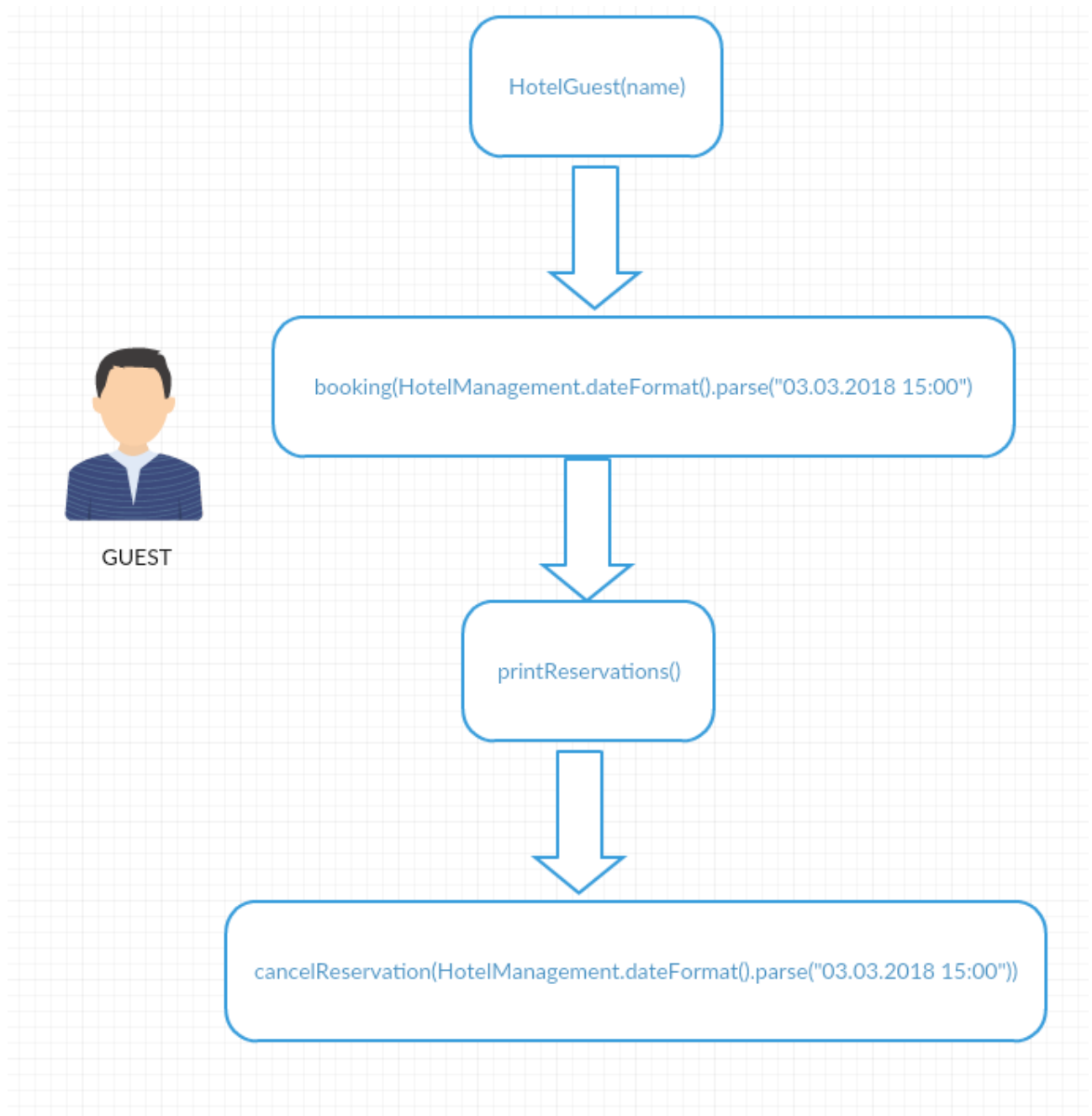HotelGuest classs's `public void cancelReservation()` method take input from user. Ask user which reservation he wants to cancel.
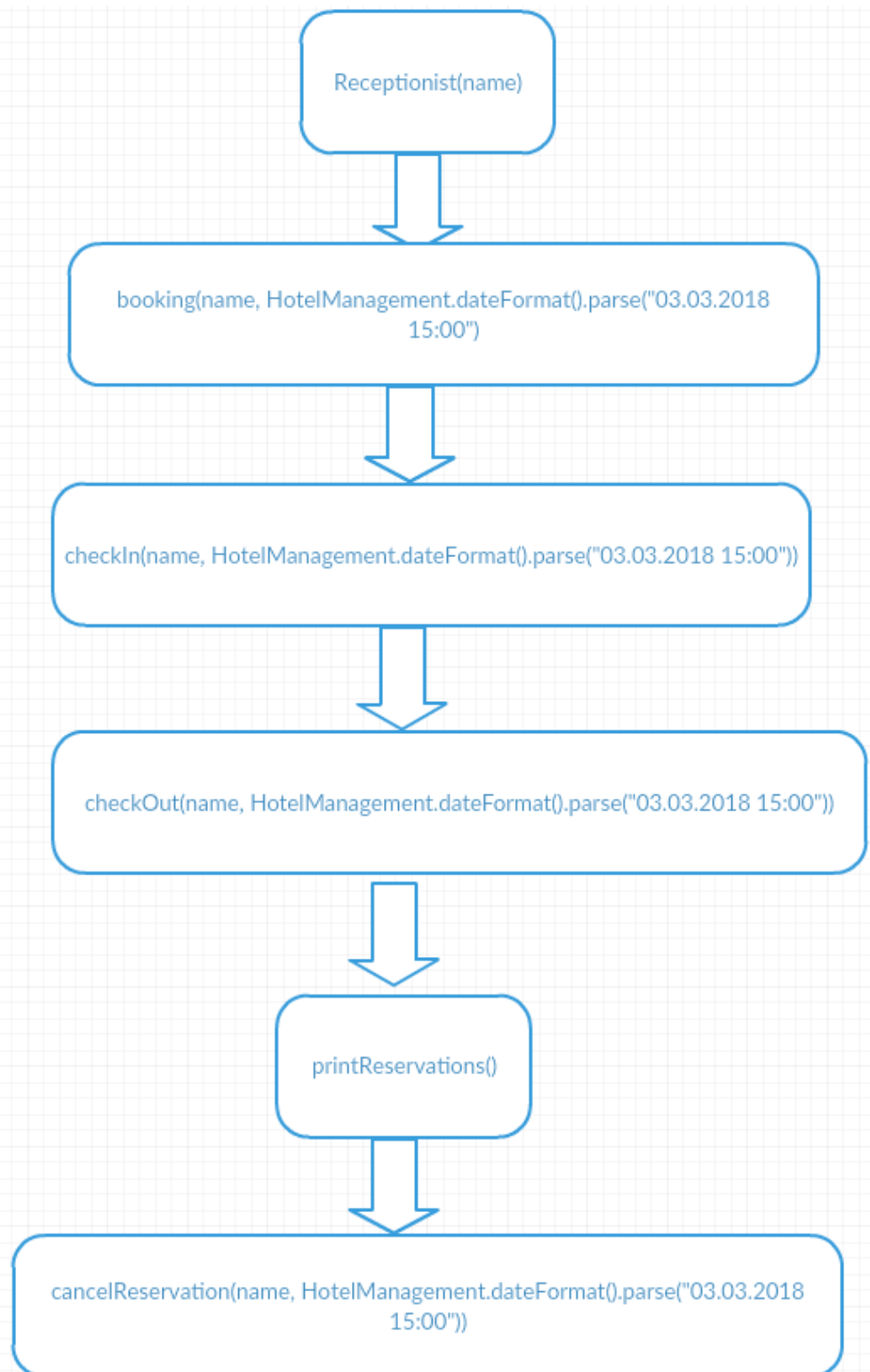
2 METHOD

2.1 Class Diagrams

+ HotelManagementSys...
- fields
- methods
  - + booking (name:String, bookingDate:Date):boolean
  - + cancelReservation (name:String, bookingDate:Date):void
  - + checkIn (name:String, bookingDate:Date):void
  - + checkOut (name:String, bookingDate:Date):void
  - + printReservations ():void

+ HotelManagem...
implements HotelManagementSystem
- fields
  - - emptyRooms : List<Integer>
  - - reservedRooms : List<Integer>
  - # reservationList : List<String>
  - - final numOfRooms : int
  - - final registerFile : File
  - - final datePattern : SimpleDateFormat
- constructors
- methods
  - - initRooms ():void
  - + dateFormat ():SimpleDateFormat
  - + booking (name:String, bookingDate:Date):boolean
  - + cancelReservation (name:String, bookingDate:Date):void
  - + updateRegisterFile ():void
  - + printReservations ():void
  - # getRoom ():int
  - # returnRoom (roomNo:int):void

+ Receptionist extends HotelManagement
- fields
  - - receptionistName:String
- constructors
  - + Receptionist (rName:String)
- methods
  - + checkIn (name:String, bookingDate:Date):void
  - + checkOut (name:String, bookingDate:Date):void

+ HotelGuest
- fields
  - - reservations : LinkedList<String>
  - - name : String
  - - helper : Receptionist
- constructors
  - + HotelGuest (guestName:String)
- methods
  - + getName ():String
  - + updateReservations ():void
  - + booking (bookingDate:Date):boolean
  - + cancelReservation (bookingDate:Date):void
  - + cancelReservation ():void
  - + printReservations ():void

2.2 UseUse Case Diagrams

```
Receptionist(name)
```

```
booking(name, HotelManagement.dateFormat().parse("03.03.2018
15:00")
```

```
checkIn(name, HotelManagement.dateFormat().parse("03.03.2018 15:00"))
```

```
checkOut(name, HotelManagement.dateFormat().parse("03.03.2018 15:00"))
```

```
printReservations()
```

```
cancelReservation(name, HotelManagement.dateFormat().parse("03.03.2018
15:00"))
```

Receptionist

2.3 Problem Solution Approach

Receptionist can transfer reservation data into the program and control check in and check out via program.
Hotel Management System keeps data in a file so that even if program shuts down. When receptionist opens the program again. It will reload all reservation data to the system again.
Guest itself can make their own reservation without a receptionist.

3 RESULT

3.1 Test Cases
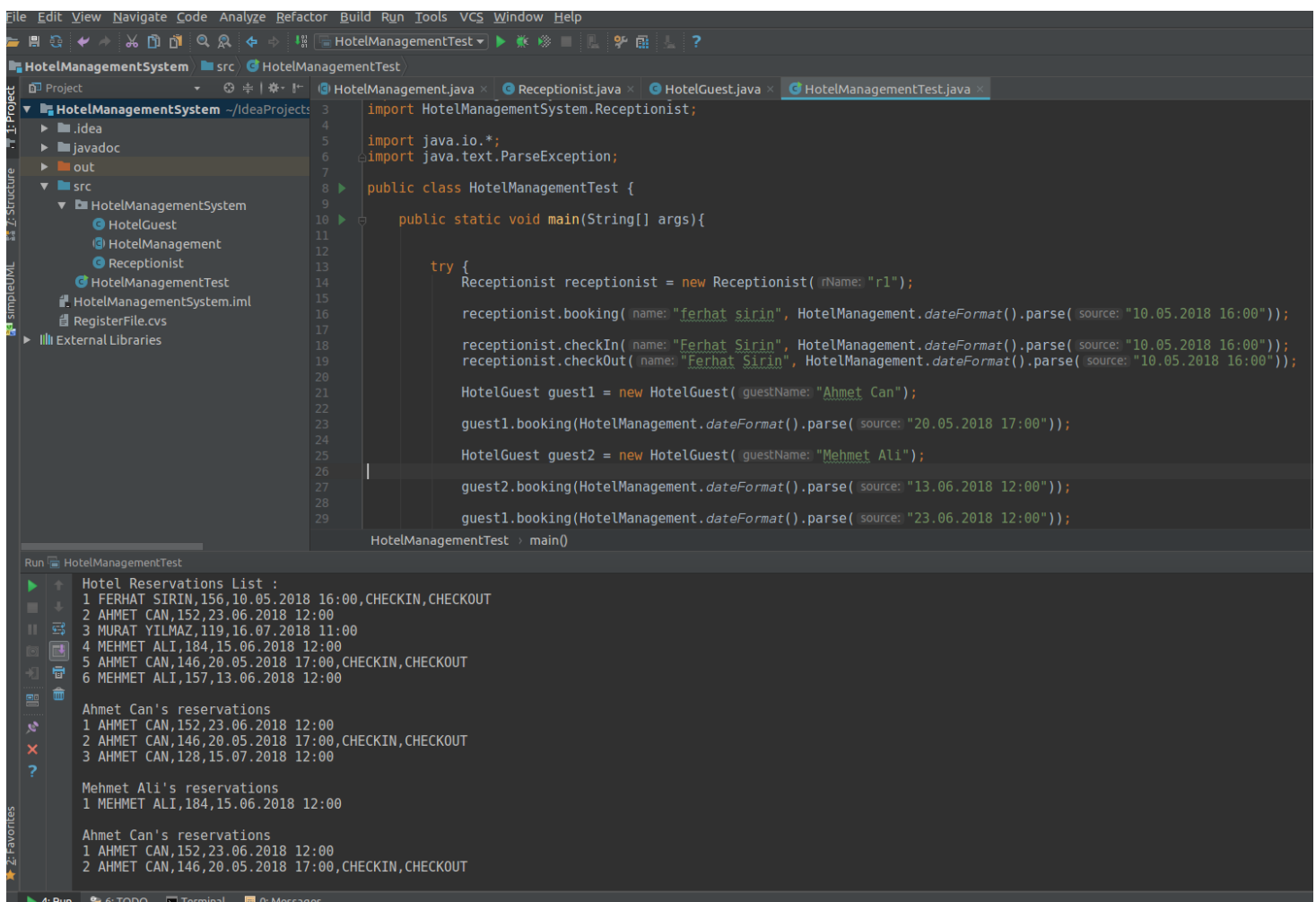
All test case is written to these classes.

HotelManagementTest

ReceptionistTest

HotelGuestTest

3.2 Running Results

HotelManagementSystem › src › HotelManagementTest

Project
HotelManagementSystem ~/IdeaProjects
  .idea
  javadoc
  out
  src
    HotelManagementSystem
      HotelGuest
      HotelManagement
      Receptionist
    HotelManagementTest
  HotelManagementSystem.iml
  RegisterFile.cvs
External Libraries

HotelManagement.java   Receptionist.java   HotelGuest.java   HotelManagementTest.java

```java
39
40
41          receptionist.cancelReservation(guest2.getName(), HotelManagement.dateFormat().parse( source: "13.06.2018 12:00"));
42          receptionist.booking(guest2.getName(), HotelManagement.dateFormat().parse( source: "15.06.2018 12:00"));
43
44          guest2.printReservations();
45          guest1.cancelReservation(HotelManagement.dateFormat().parse( source: "15.07.2018 12:00"));
46          receptionist.checkOut(guest1.getName(), HotelManagement.dateFormat().parse( source: "20.05.2018 17:00"));
47          guest1.printReservations();
48
49      }
50      catch(IOException e){
51          System.err.println("File error!!! ");
52      }
53      catch(ParseException e){
54
55          System.err.println(e.getMessage() + " Invalid date!!! Date should be " +HotelManagement.dateFormat().toPattern());
56      }
57
58      }
59  }
60
```

HotelManagementTest › main()

Run HotelManagementTest

Hotel Reservations List :
1 FERHAT SIRIN,156,10.05.2018 16:00,CHECKIN,CHECKOUT
2 AHMET CAN,152,23.06.2018 12:00
3 MURAT YILMAZ,119,16.07.2018 11:00
4 MEHMET ALI,184,15.06.2018 12:00
5 AHMET CAN,146,20.05.2018 17:00,CHECKIN,CHECKOUT
6 MEHMET ALI,157,13.06.2018 12:00

Ahmet Can's reservations
1 AHMET CAN,152,23.06.2018 12:00
2 AHMET CAN,146,20.05.2018 17:00,CHECKIN,CHECKOUT
3 AHMET CAN,128,15.07.2018 12:00

Mehmet Ali's reservations
1 MEHMET ALI,184,15.06.2018 12:00

Ahmet Can's reservations
1 AHMET CAN,152,23.06.2018 12:00
2 AHMET CAN,146,20.05.2018 17:00,CHECKIN,CHECKOUT

4: Run   6: TODO   Terminal   0: Messages

RegisterFile.cvs (~/IdeaProjects/HotelManagementSystem) - gedit

Open   Save

```
1 Guest Name,Room No,Date
2 FERHAT SIRIN,156,10.05.2018 16:00,CHECKIN,CHECKOUT
3 AHMET CAN,152,23.06.2018 12:00
4 MURAT YILMAZ,119,16.07.2018 11:00
5 MEHMET ALI,184,15.06.2018 12:00
6 AHMET CAN,146,20.05.2018 17:00,CHECKIN,CHECKOUT
```