ASSIGNMENT 4

SUBJECT：ITC205

SUBJECT NAME : PROFFESSIONAL PROGRAMMING PRACTICE

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Test Name	Test Case 1 – All service charges are reported as 0.00 when checking out
Use Case Tested:	addServiceCharge and serviceDetailsEntered
Test Description:	The following test is conducted trying to add a service to a booking.
Pre-conditions	1. Selected a room 2. Selected stay dates 3. Availability test of room 4. Room available 5. Room booked 6. Checked in 7. Added service

Post-conditions	Amount is not shown while checking out. D: Check Out Q: Quit Selection : d Checking out Enter room number: 101 Charges for room: 101, booking: 12112018101 Arrival date: 12-12-2018, Staylength: 1 Guest: David, Address: 123 ds, Phone: 3123124 Charges: Restaurant : $0.00 Total: $0.00 Accept charges(Y/N) : Fig 1.0 Compiled Code showing balance service charge showing 0.00
Notes:	**Identify whether correct amount for services is added to booking or not.**
Result (Pass/Fail/Warning/Incomplete)	**Fail**

1.	2. **TEST STEP**	**EXPECTED TEST RESULTS**	**P**	**F**
3.	4. if (state != State.SERVICE) { 5. String mesg = String.format("PayForServiceCTL: serviceDetailsEntered : bad state : %s", state); 6. throw new RuntimeException(mesg); 7. } 8. hotel.addServiceCharge(roomNumber, serviceType, cost);	Enter Room Id: 101 B: Bar Fridge R: Restaurant S: Room Service Enter service typer Enter cost: 100	**P**	

	9. 10. recordServiceUI.displayServiceChargeMessage(roomNumber, cost, serviceType.getDescription()); 11. state = State.COMPLETED; 12. recordServiceUI.setState(RecordServiceUI.State.COMPLETED); 13. System.out.println("Cost added: " + cost); 14. }	Room 101 charged $100.00 for Restaurant Cost added: 100.0		

Test Class 1 Output:

```
Selection : r

Recording service

Enter Room Id: 101
B:      Bar Fridge
R:      Restaurant
S:      Room Service
Enter service typer
Enter cost: 100

Room 101 charged $100.00 for Restaurant

Cost added: 100.0
```

Debug Log for Test Case 1:

```
Room : 101, SINGLE
Room : 201, DOUBLE
Room : 301, TWIN_SHARE

Hotel Management System

Please select:

   B:    Book a Room
   C:    Check In
   R:    Record Service
   D:    Check Out

   Q:   Quit


Selection : b

Booking Room

Enter phone number: 213123
Enter guest name: dasda
Enter guest address: wqewq

Name: dasda, Address: wqewq, Phone: 213123

S:          Single room, 1
D:          Double room, 2
T:          Twin share, 3
Enter room type selection: s
Enter number of occupants: 1
Enter arrival date
Enter day (dd): 12
Enter month (mm): 12
Enter year (): 2018
Arrival Date: 12-12-2018
Enter length of stay: 5

The cost of booking a Single room from 12-12-2018 for 5 nights is $500.00
```

Enter credit card details
V: Visa
M: MasterCard
Enter credit card type selection: v
Enter credit card number: 1
Enter CCV: 213

Single room 101 is booked from 12-12-2018 for 5 nights by dasda.
Visa Credit card number 1 has been debited $500.00
Confirmation Number : 12112018101
Hit <enter> to continue
Booking completed

Hotel Management System

Please select:

B: Book a Room
C: Check In
R: Record Service
D: Check Out

Q: Quit

Selection : c

Checking in

Enter confirmation number: 12112018101

Single room 101 is booked from 12-12-2018 for 1 nights by dasda.
Visa Credit card number: 1
Confirmation Number : 12112018101
Confirm checkin? (Y/N) : y
Check in confirmed
Hit <enter> to continue
Checking in completed

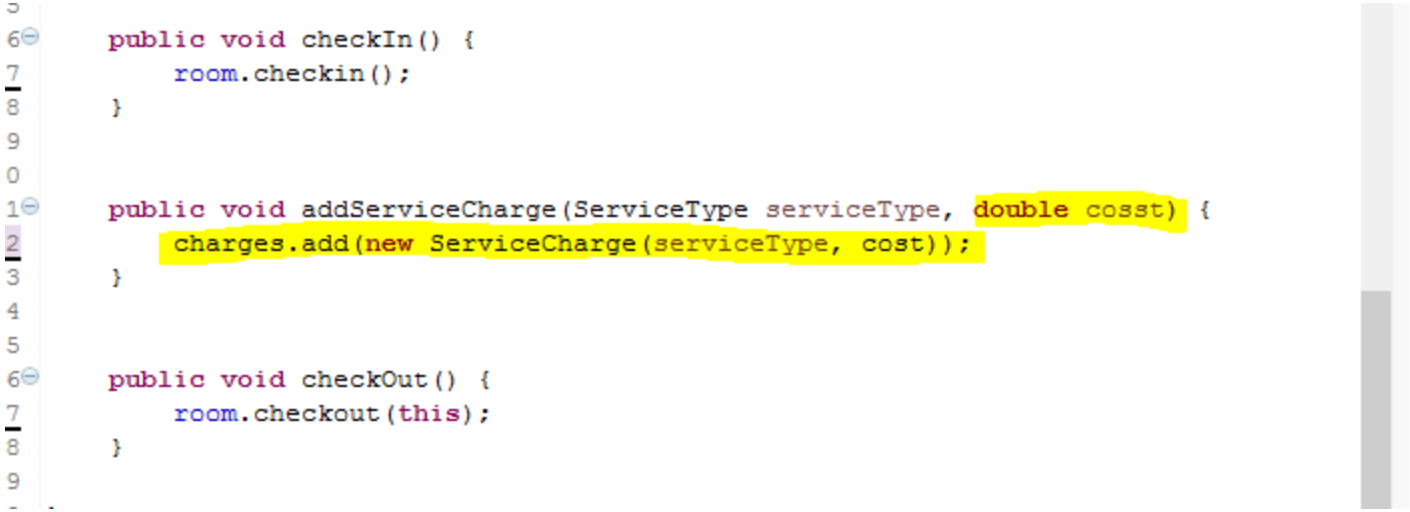
Hotel Management System

Please select:

B: Book a Room
C: Check In
R: Record Service
D: Check Out

```
  Q:  Quit


Selection : r

Recording service

Enter Room Id: 101
B:          Bar Fridge
R:          Restaurant
S:          Room Service
Enter service typer
Enter cost: 100

Room 101 charged $100.00 for Restaurant

Cost added: 100.0
Hit <enter> to continue
Pay for service completed
```

We can see the service charges charged by customer against a booked room is added to list of services of bookings, the charge is being correctly send to Booking class by serviceDetailsEntered method in class RecordServiceCTL. So the issue must be in Booking class while adding a new ServiceCharge to a Booking.



```
    public void checkIn() {
        room.checkin();
    }


    public void addServiceCharge(ServiceType serviceType, double cosst) {
        charges.add(new ServiceCharge(serviceType, cost));
    }


    public void checkOut() {
        room.checkout(this);
    }
```

The bug is in line no 2 of method addServiceCharge.

Resolution:

The cost of the new ServiceCharge being added is being assigned as cost but it should be cosst.

Output after Resolution:

```
Hotel Management System

Please select:

    B:    Book a Room
    C:    Check In
    R:    Record Service
    D:    Check Out

    Q:   Quit

Selection : d

Checking out

Enter room number: 101
Charges for room: 101, booking: 12112018101
Arrival date: 12-12-2018, Staylength: 1
Guest: dsadsa, Address: hhh, Phone: 132131
Charges:
    Restaurant  :   $100.00
Total: $100.00

Accept charges(Y/N) :
```

Turn 40 and 42 demonstrates the code working accurately since the balance is now increasing with the bet amount won.

Test Name	Test Case 2 – It is possible to charge a room for service after the guest has checked out
Use Case Tested:	checkIn, checkout and addServiceCharge
Test Description:	The following test is conducted to check if the service can still be charged for a room after the guest has checked out.
Pre-conditions	Guest has checked out Add a service Charge
Post-conditions	Service charge should not be added
Notes:	
Result	**Fail**

(Pass/Fail/Warning/Incomplete)				
15.	16. **TEST STEP**	**EXPECTED TEST RESULTS**	**P**	**F**

17.	public void checkIn() {
	room.checkin();
	}
	
	public void addServiceCharge(ServiceType serviceType, double cosst) {
	charges.add(new ServiceCharge(serviceType, cost));
	}
	
	public void checkOut() {
	room.checkout(this);
	}
				F

Test Class 2 Output:

```
Hotel Management System

Please select:

   B:   Book a Room
   C:   Check In
   R:   Record Service
   D:   Check Out

   Q:   Quit


Selection : d

Checking out

Enter room number: 101
Charges for room: 101, booking: 12112018101
Arrival date: 12-12-2018, Staylength: 1
Guest: dsadsa, Address: hhh, Phone: 132131
Charges:
   Restaurant :   $100.00
Total: $100.00

Accept charges(Y/N) : y
Charges accepted

Enter credit card details
V:          Visa
M:          MasterCard
Enter credit card type selection: v
Enter credit card number: 1
Enter CCV: 211
Visa credit card number 1 was debited $100.00
Hit <enter> to continue
Checking out completed

Hotel Management System

Please select:

   B:   Book a Room
   C:   Check In
```

```
   R:   Record Service
   D:   Check Out

   Q:   Quit


Selection : r

Recording service

Enter Room Id: 101
B:          Bar Fridge
R:          Restaurant
S:          Room Service
Enter service type r
Enter cost: 100

Room 101 charged $100.00 for Restaurant
```

Debug Log for Test Case 2:

```
public void checkIn() {
	room.checkin();
}

public void addServiceCharge(ServiceType serviceType, double cosst) {
	charges.add(new ServiceCharge(serviceType, cost));
}

public void checkOut() {
	room.checkout(this);
```

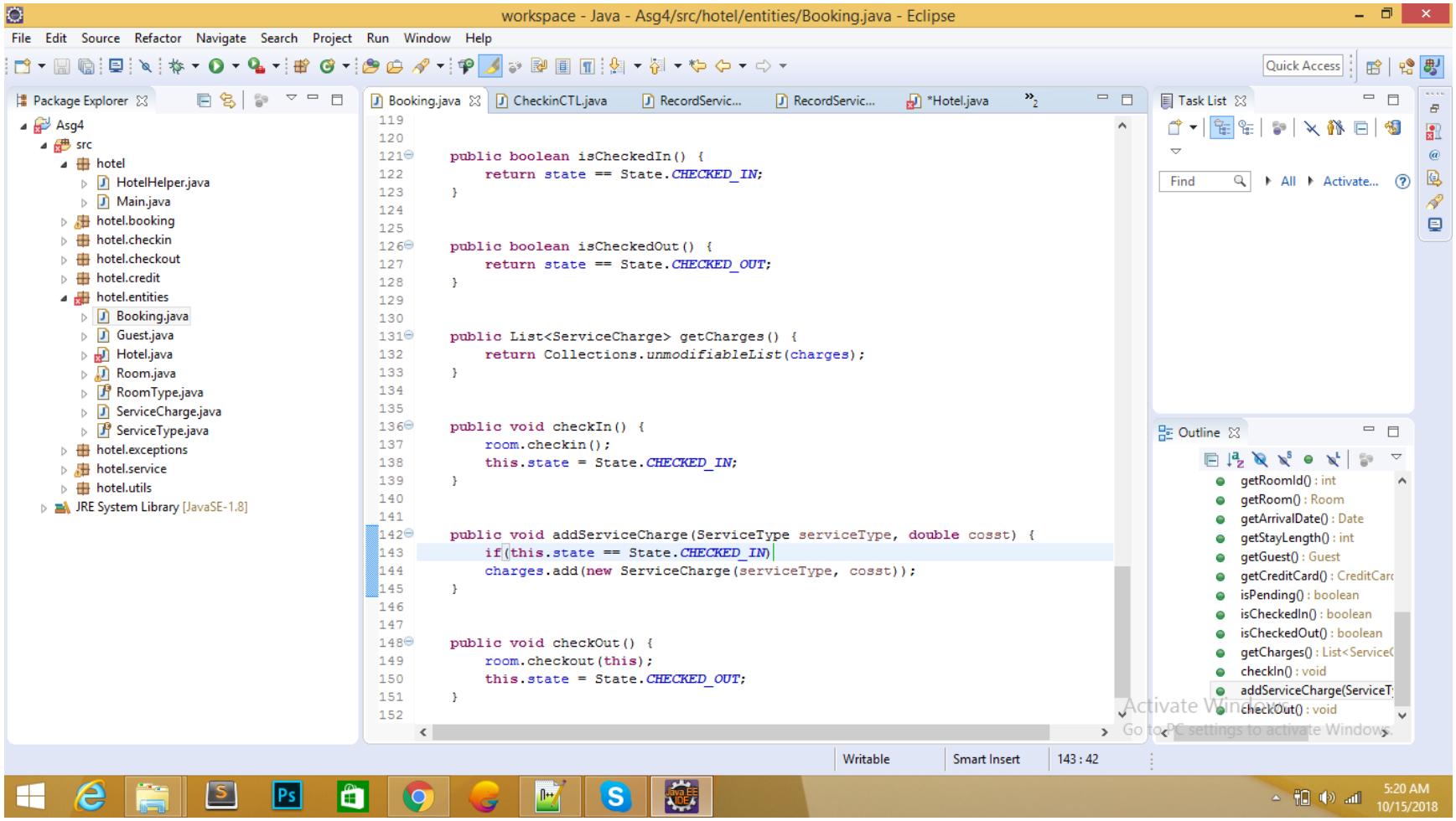
The above methods are the origin of the problem as state of the room is not changed while checking in and checking out and while adding service charge to a booking its status is not verified beforehand.

Resolution for Test Case 2:

```
public void checkIn() {
    room.checkin();
    this.state = State.CHECKED_IN;
}


public void addServiceCharge(ServiceType serviceType, double cosst)
    if(this.state == State.CHECKED_IN)
    charges.add(new ServiceCharge(serviceType, cosst));
}


public void checkOut() {
    room.checkout(this);
    this.state = State.CHECKED_OUT;
}
```

As long as we change the status of a booking to keep it updated it wont be possible to charge a room for service after the guest has checked out.

While checking in we change it to State.CHECKED_IN, while checking out we can set the status to CHECKED_OUT. So we can check whether the status of booking before charging for a service.


workspace - Java - Asg4/src/hotel/entities/Booking.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access
Package Explorer
Asg4
src
hotel
HotelHelper.java
Main.java
hotel.booking
hotel.checkin
hotel.checkout
hotel.credit
hotel.entities
Booking.java
Guest.java
Hotel.java
Room.java
RoomType.java
ServiceCharge.java
ServiceType.java
hotel.exceptions
hotel.service
hotel.utils
JRE System Library [JavaSE-1.8]
Booking.java
CheckinCTL.java
RecordServic...
RecordServic...
*Hotel.java
119
120
121 public boolean isCheckedIn() {
122 return state == State.CHECKED_IN;
123 }
124
125
126 public boolean isCheckedOut() {
127 return state == State.CHECKED_OUT;
128 }
129
130
131 public List<ServiceCharge> getCharges() {
132 return Collections.unmodifiableList(charges);
133 }
134
135
136 public void checkIn() {
137 room.checkin();
138 this.state = State.CHECKED_IN;
139 }
140
141
142 public void addServiceCharge(ServiceType serviceType, double cosst) {
143 if(this.state == State.CHECKED_IN)
144 charges.add(new ServiceCharge(serviceType, cosst));
145 }
146
147
148 public void checkOut() {
149 room.checkout(this);
150 this.state = State.CHECKED_OUT;
151 }
152
Task List
Find
All
Activate...
Outline
getRoomId() : int
getRoom() : Room
getArrivalDate() : Date
getStayLength() : int
getGuest() : Guest
getCreditCard() : CreditCard
isPending() : boolean
isCheckedIn() : boolean
isCheckedOut() : boolean
getCharges() : List<ServiceC
checkIn() : void
addServiceCharge(ServiceT
checkOut() : void
Activate Windows
Go to PC settings to activate Windows.
Writable
Smart Insert
143 : 42
5:20 AM
10/15/2018

- URL for the repository

https://github.com/codetesters1/Assignment4

- URL for my individual branch

https://github.com/codetesters1/Assignment4/tree/Bhanuka