

Please review all the feedback discussed earlier, learn from the feedback, and avoid making the same mistake (some of you are committing the exact same mistakes highlighted in your individualized feedback earlier)

Q1

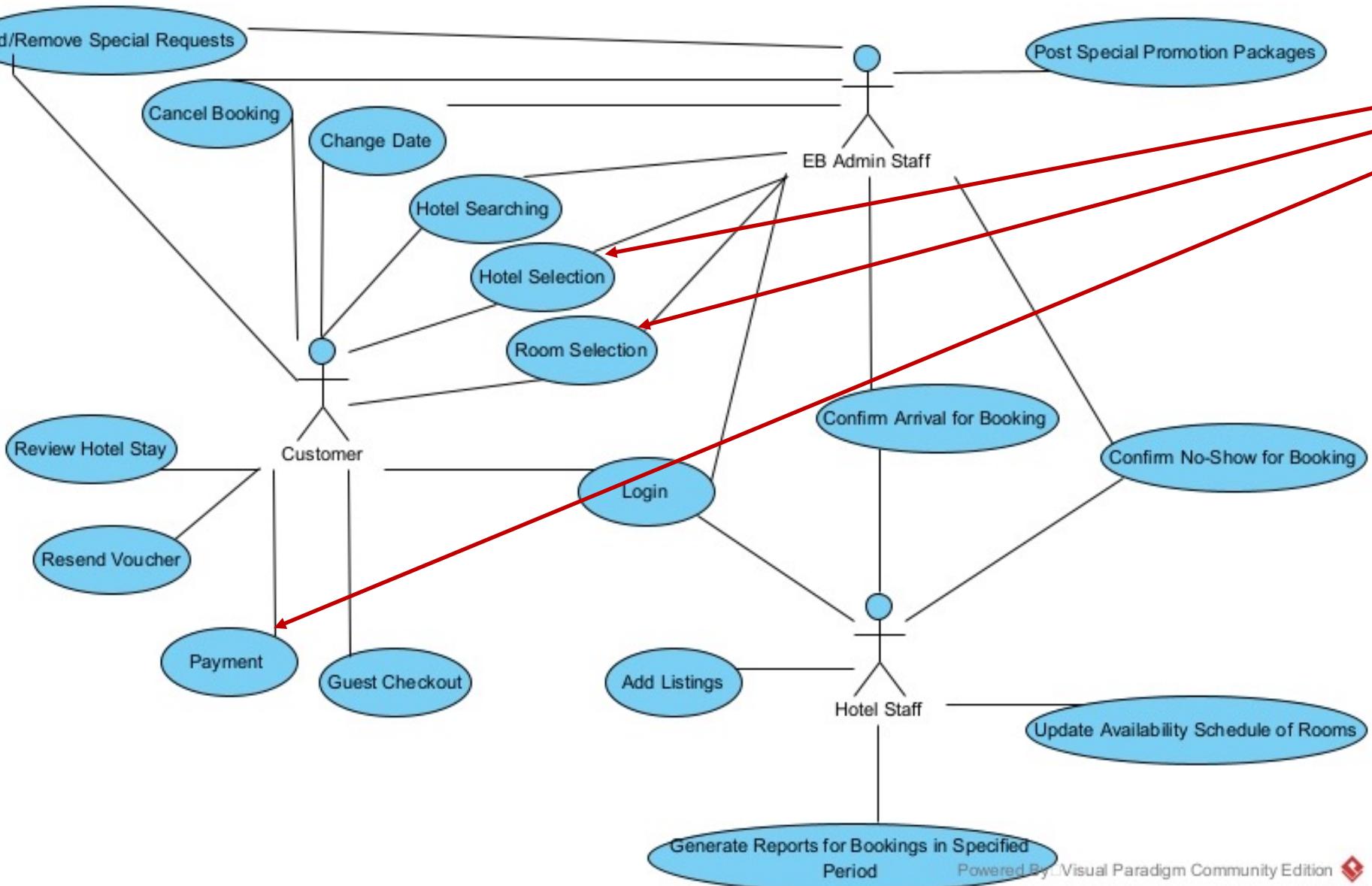
What is a use case?

1. It should be a system function/interaction
2. It should fulfil a business objective
3. If something is a use case, it should make sense if we were to go to the system and do that and that only (no other actions)
 - Need to know how to differentiate between a use case vs a step of a use case
4. Use cases are not just what the system does
 - E.g. “check password during login”, “send email confirmation”, “add to database”, “calculate amount”, etc are not use cases
5. Use cases are seen from the perspective of a user rather than from the perspective of the system
 - i.e. “get a list of chat messages” rather than “receive a chat message”

Most common mistake: treating
every interaction as if they were
use cases

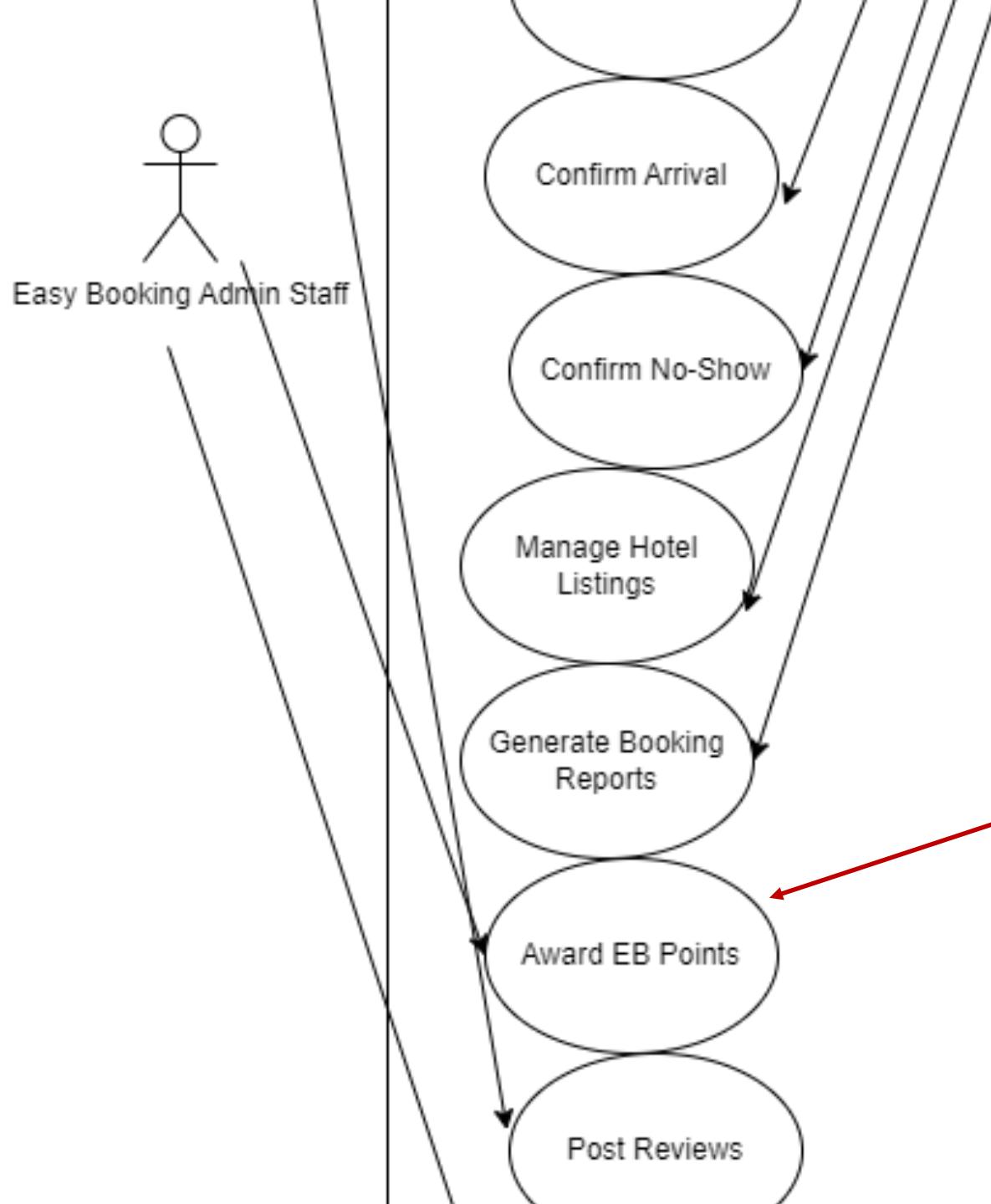
What are not use cases for this tutorial?

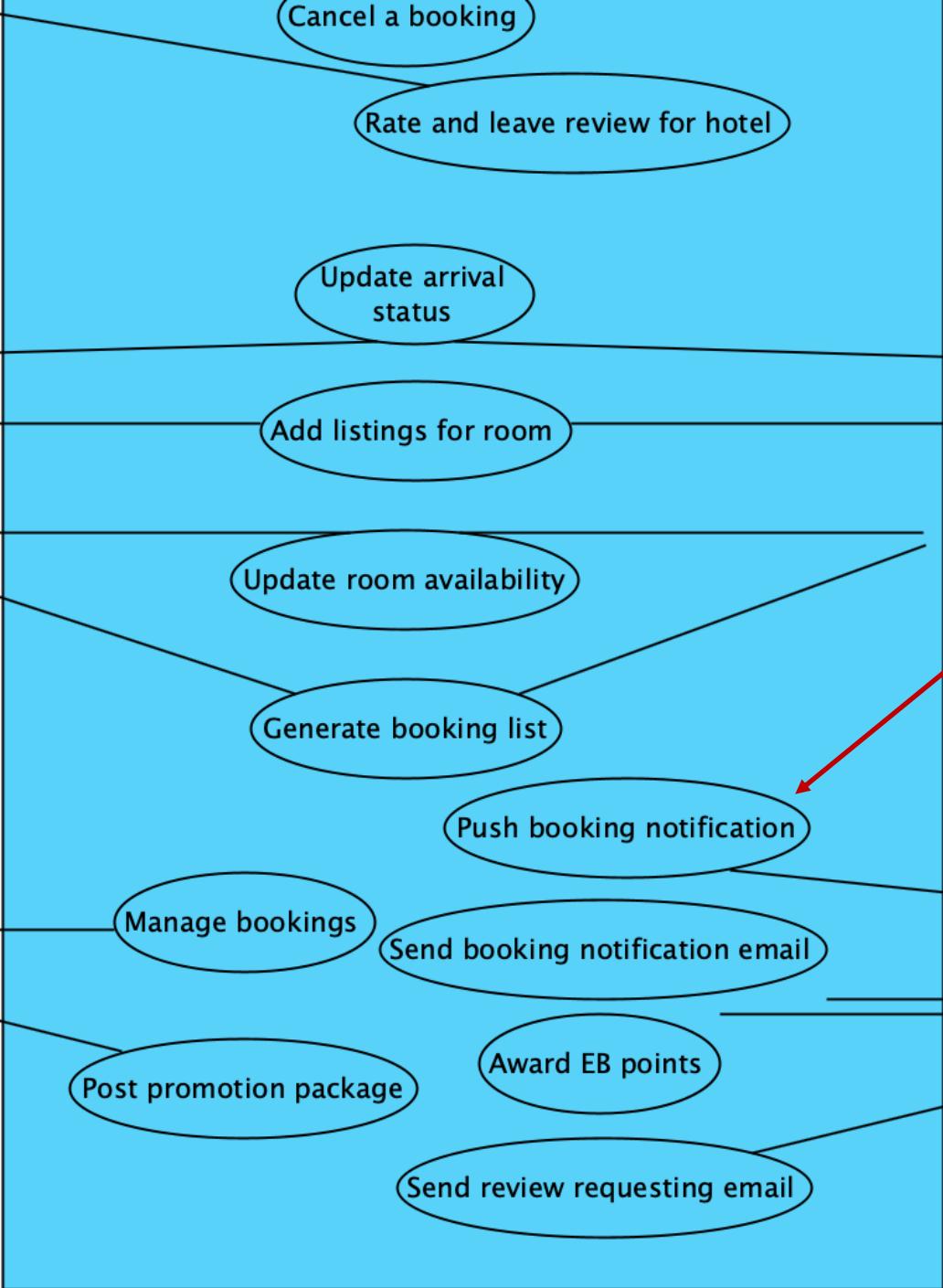
1. Select hotel / Hotel Selection
2. Select Room / Choose room type / Room Selection
3. Convert EB points
4. Make payment
5. Type in
6. etc



Step of a use case
rather than a use case
itself

There can also be time-based events
(but usually we don't represent in
the use case diagram – alternatively,
you could create an “actor” called
TIME

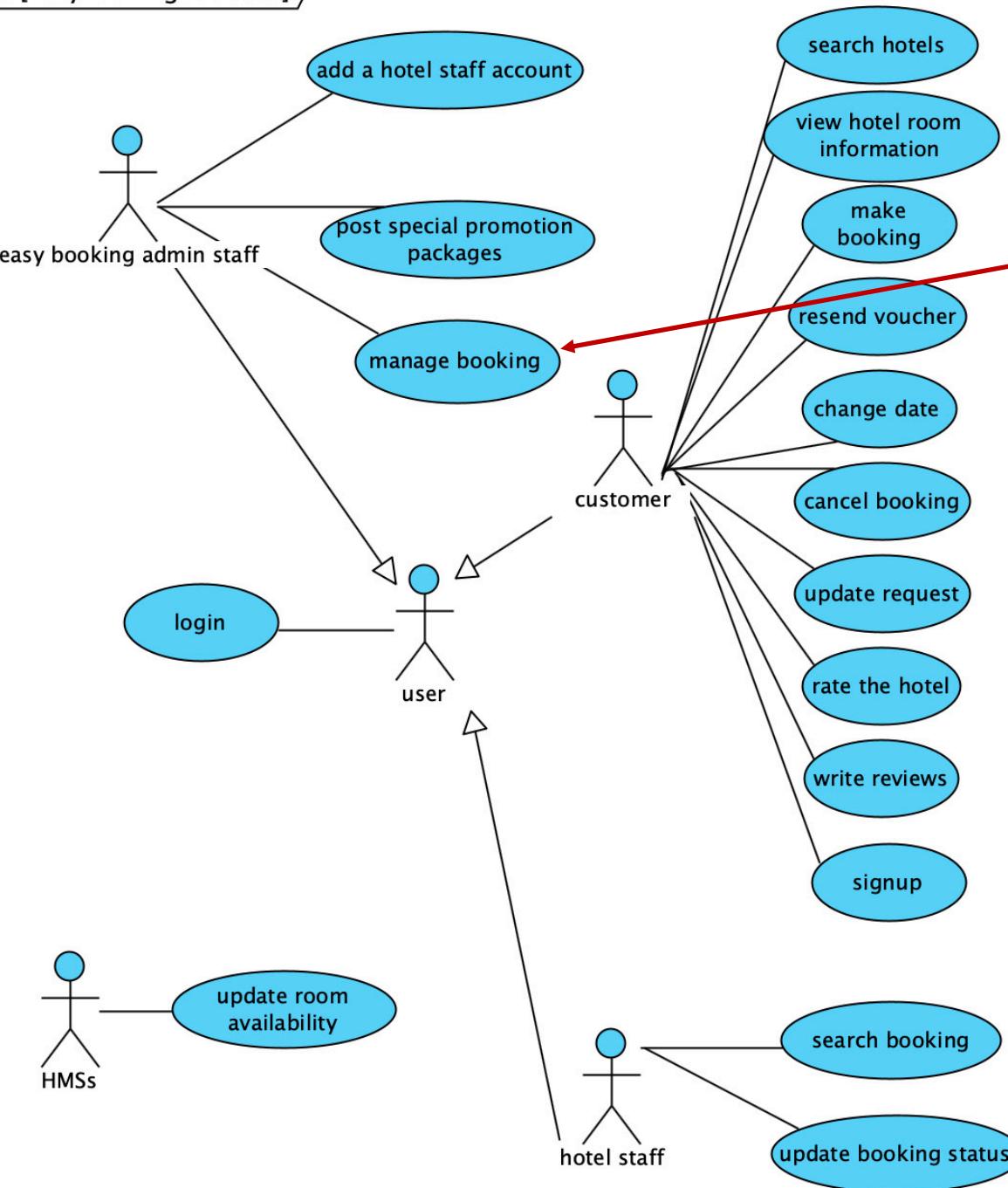




But we should still look in terms of use cases rather than something that the system just does. Push notification is as a result of a step in “Add a booking”

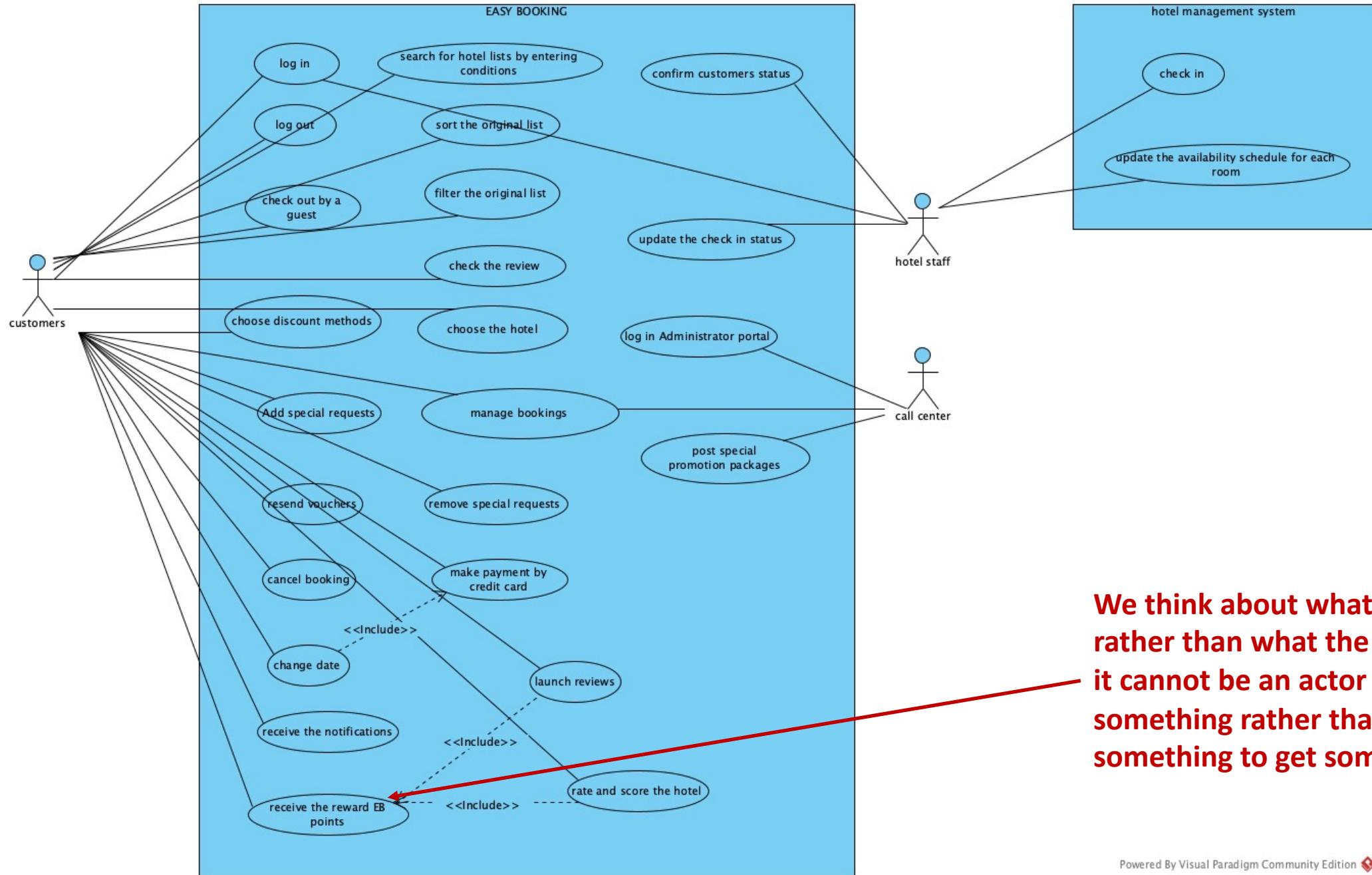
Instead of “Manage XXX”, should separate into the individual use cases

uc [EasyBookingUseCase]



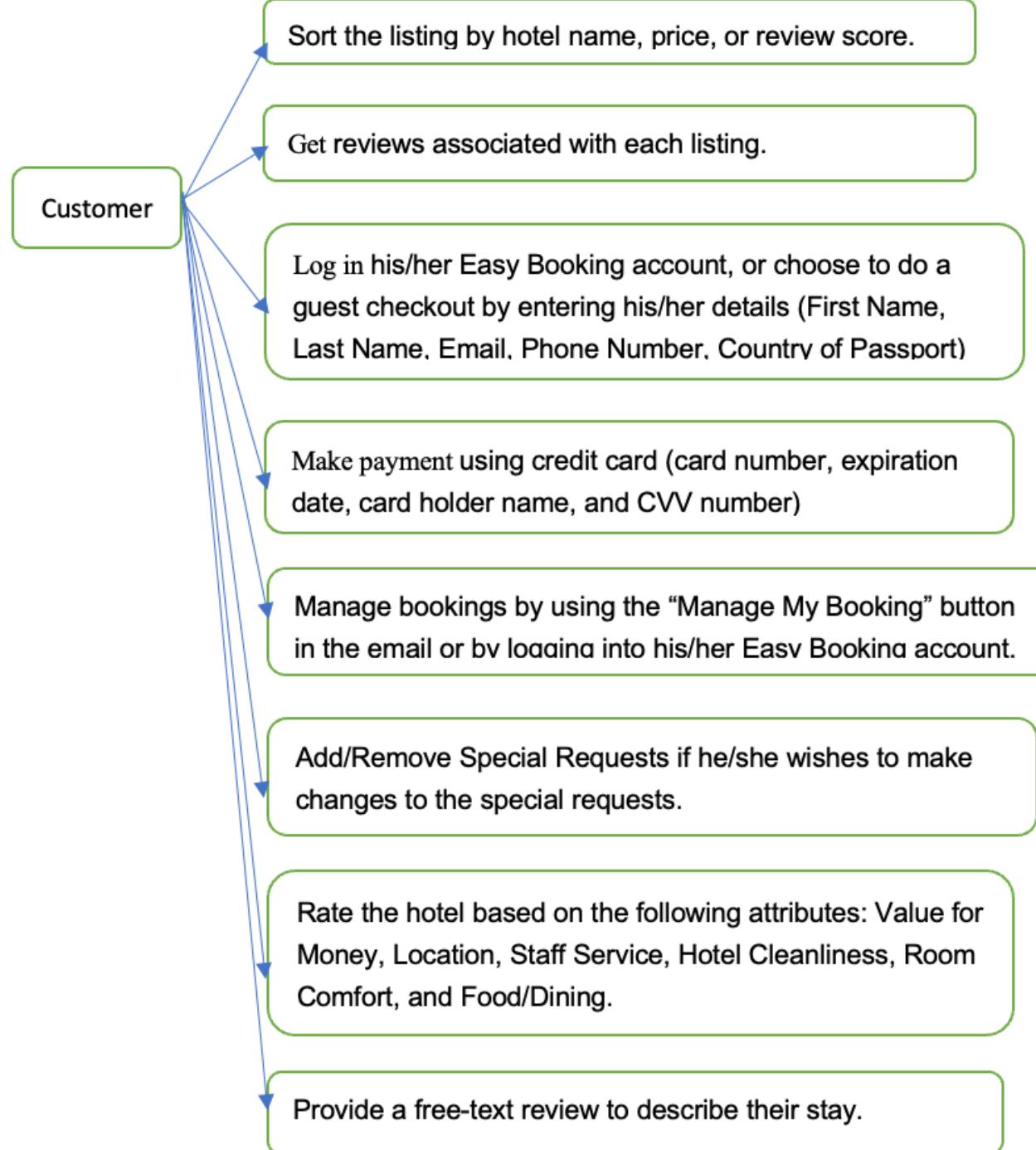
Break into individual use cases because we will implement each use case. 1 use case 1 implementation. It also makes the flow of event for each use case simpler

Use cases are not just what the system do. You should see things from the actor's point of view and something that is done by the actor rather than something that involves the actor

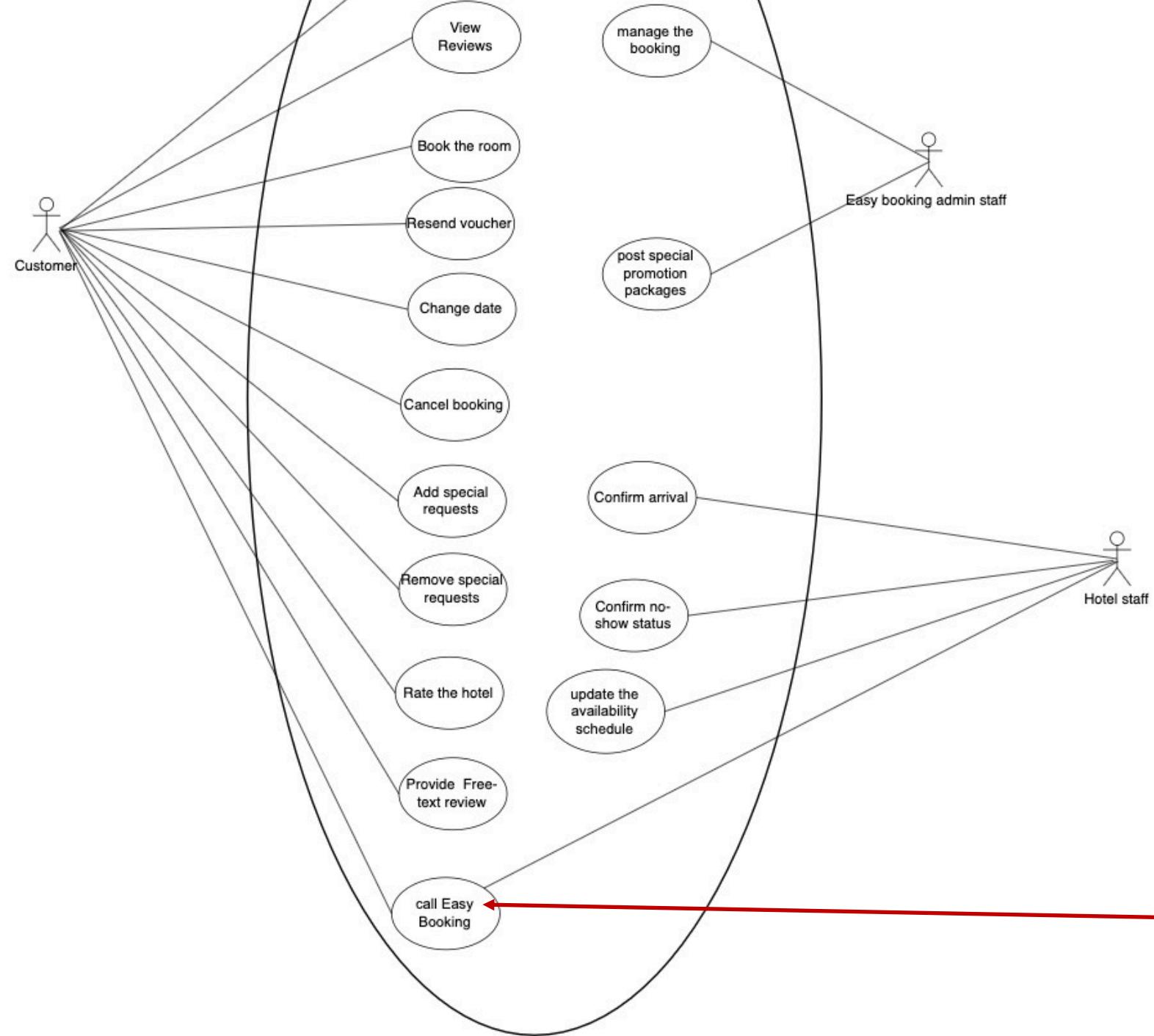


We think about what the actor do rather than what the system does. I.e. it cannot be an actor receive something rather than an actor does something to get something

Try to keep the use case naming concise. We elaborate the details in the use case description.

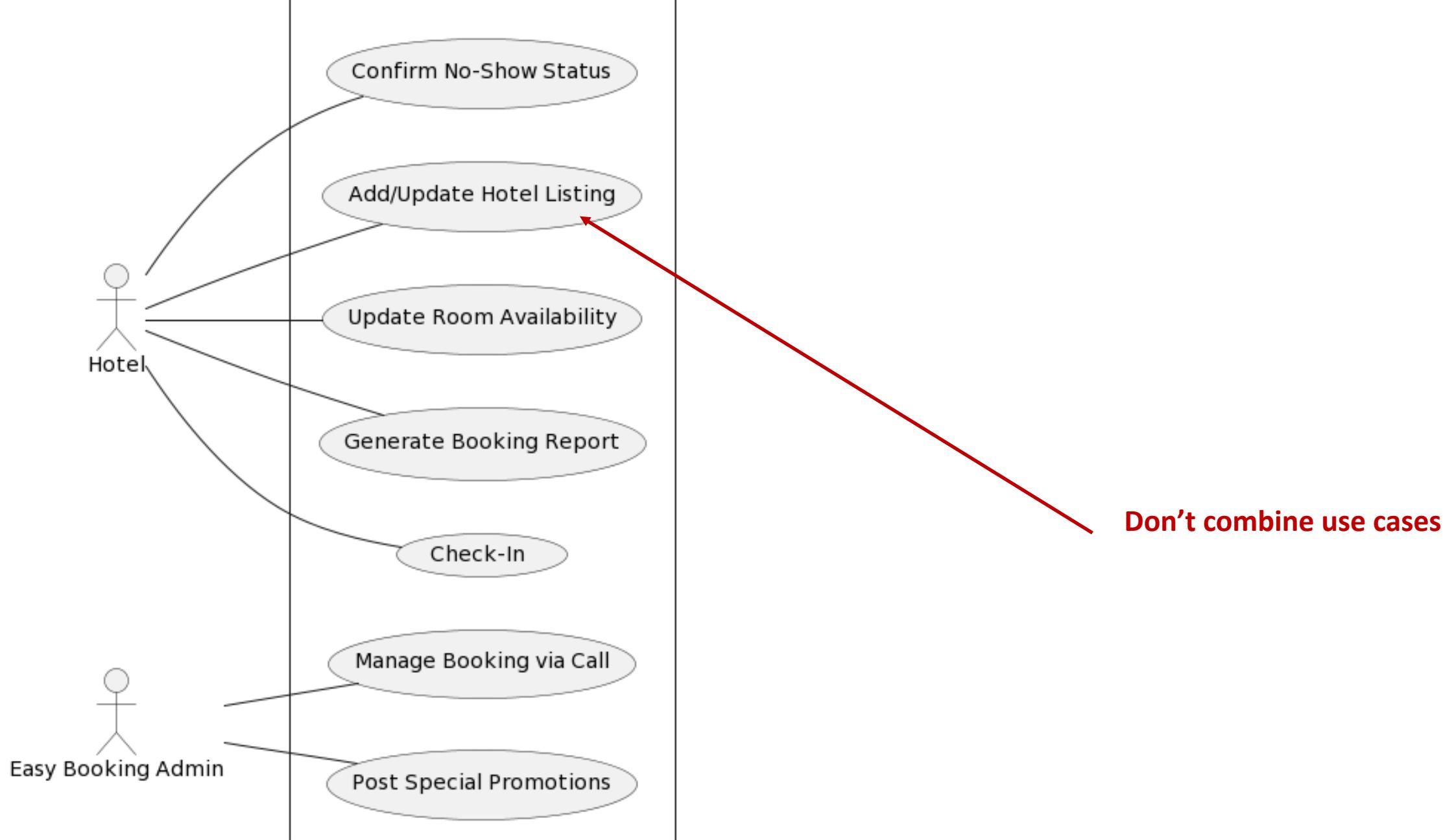


Use case must be a system
interaction

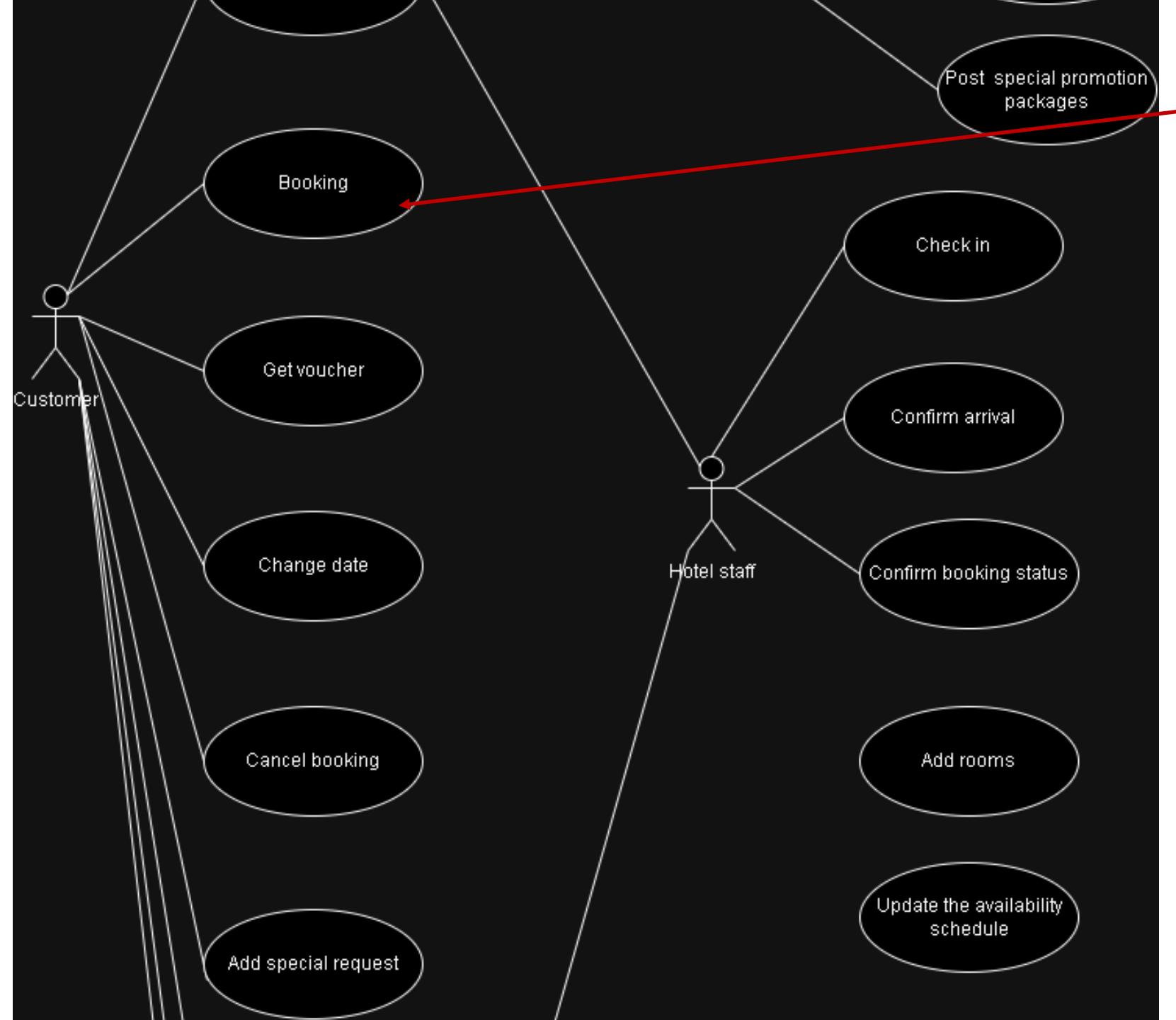


This is likely to be what happens in the real-world rather than a system function

Don't combine use cases

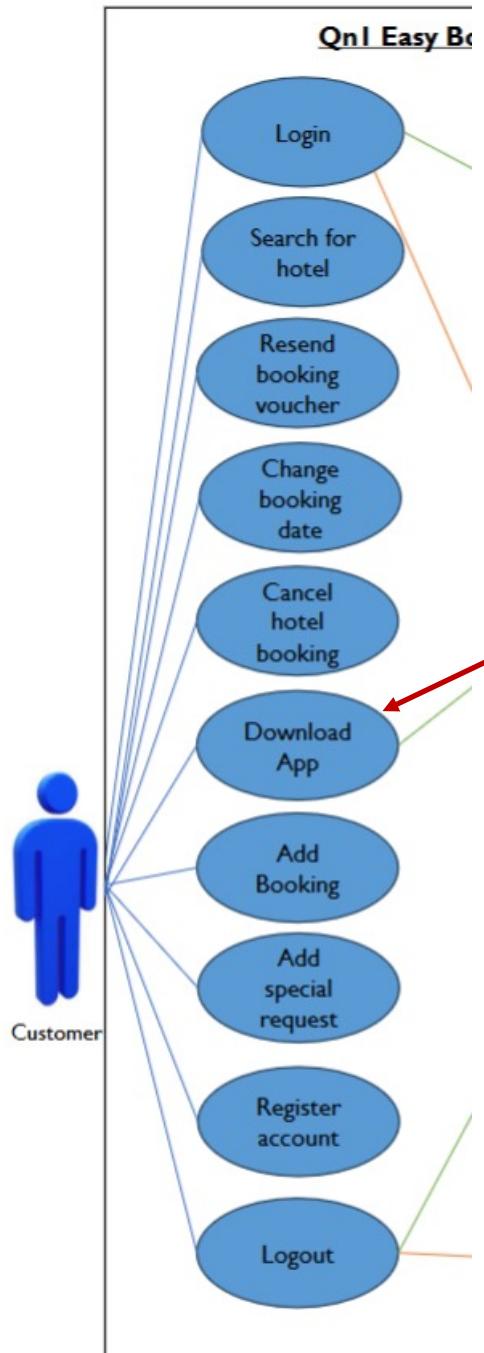


Use case must be an action



Should be an action
(not a
thing/information)

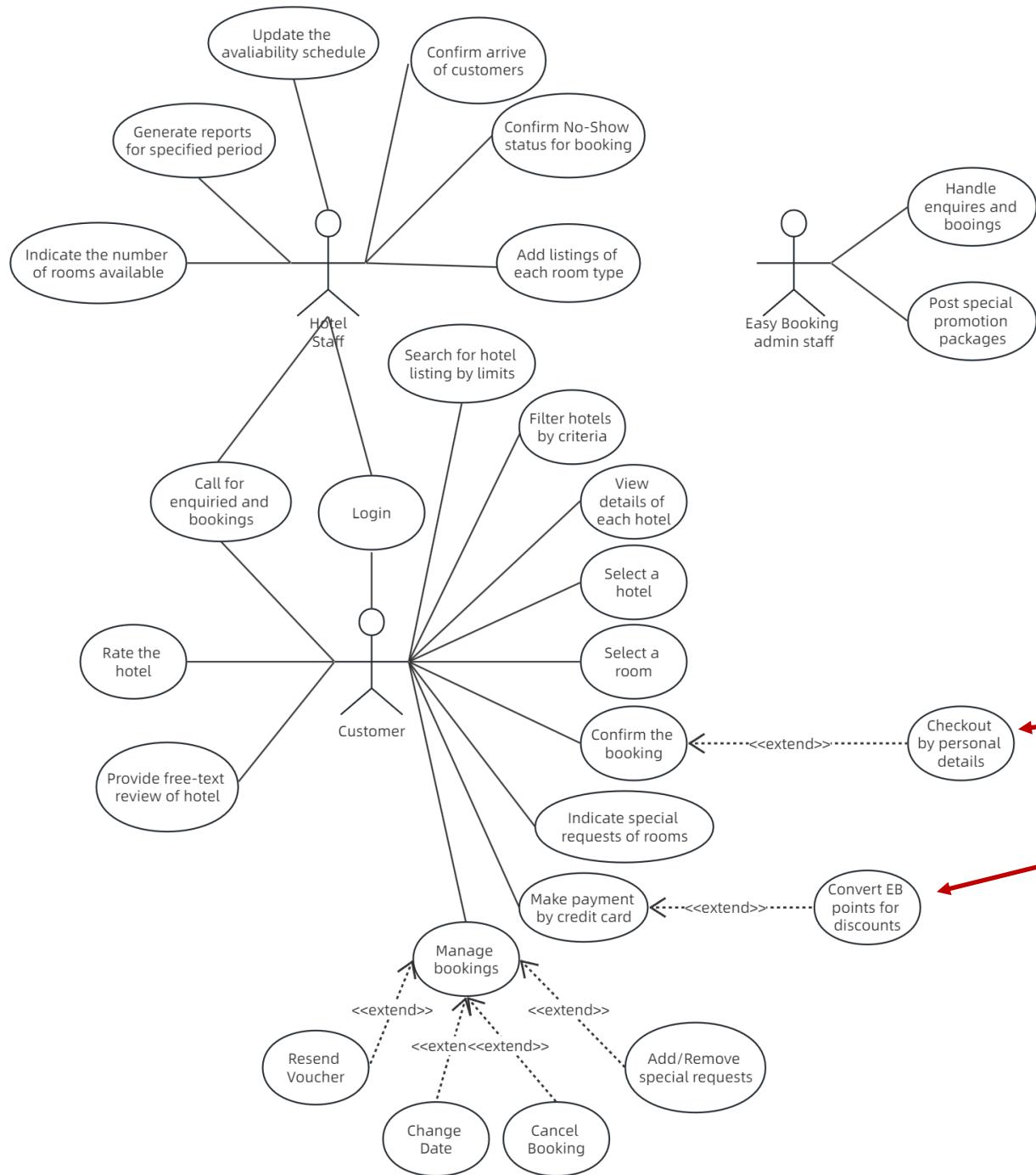
A use case describes the function
of a system (not just describing
what the user does)



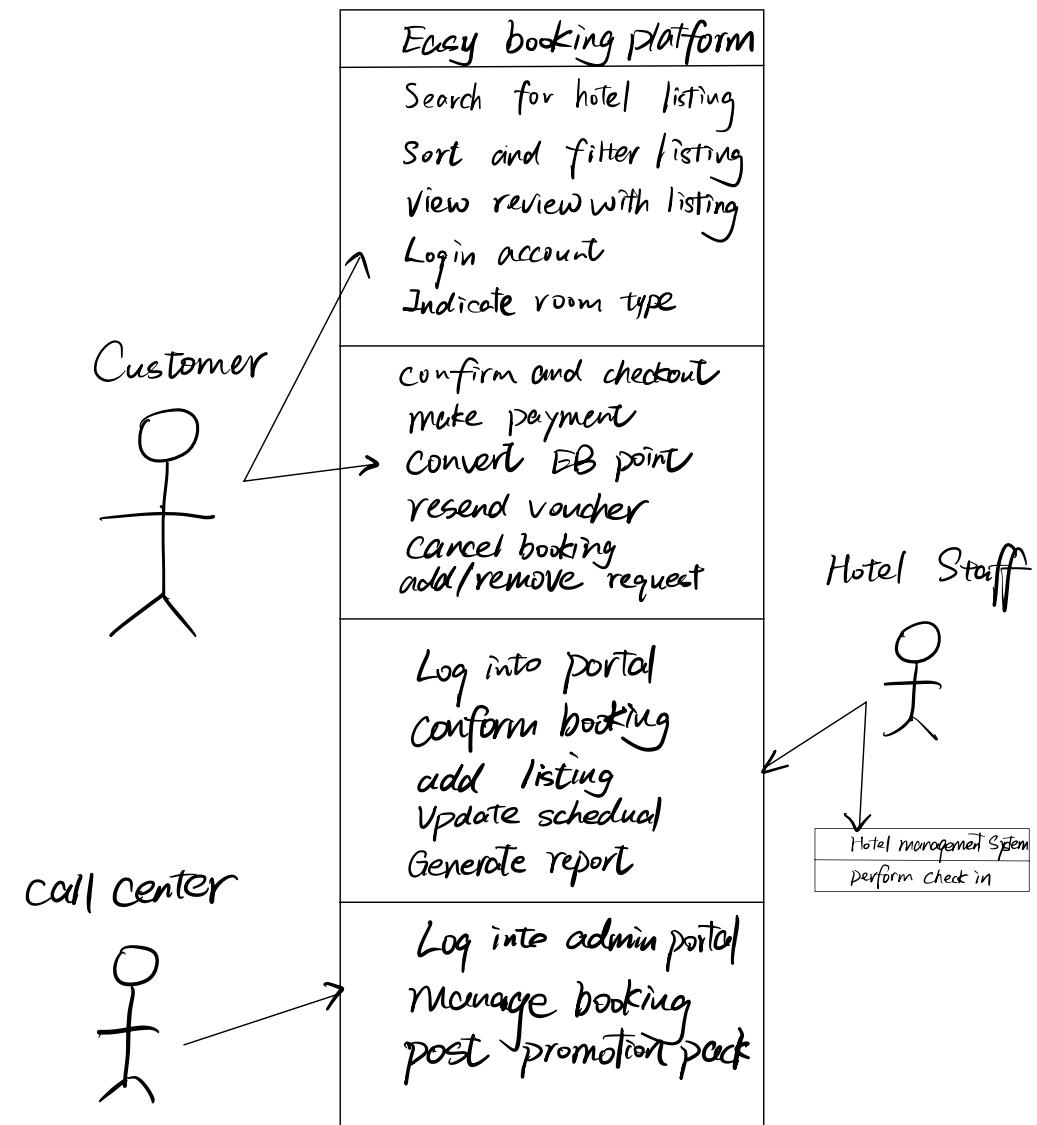
It is not just describing the business processes the actors will perform

Use cases are one action performed
by an actor
("Integrate HMS via API" is not a use
case)

Notations



**Extends use wrongly.
Extended use cases are
use cases themselves
so it should be linked
to an actor**



Should follow the proper notations

Actor: Customer

Search and Select Hotel

- Input destination and date details
- Filter and sort hotels based on various criteria such as price, rating, etc.
- View hotel details and reviews

Book a Hotel

- Select hotel and room type
- Add special requests
- Complete payment, potentially utilizing promotional codes or EB points

Manage Booking

- View booking details
- Modify booking dates
- Cancel booking
- Add/remove special requests
- Resend voucher

Review Hotel

- Rate the hotel after checkout
- Write a review for the hotel
- Earn EB points through reviewing

Actor: Hotel Staff

Manage Room Listings

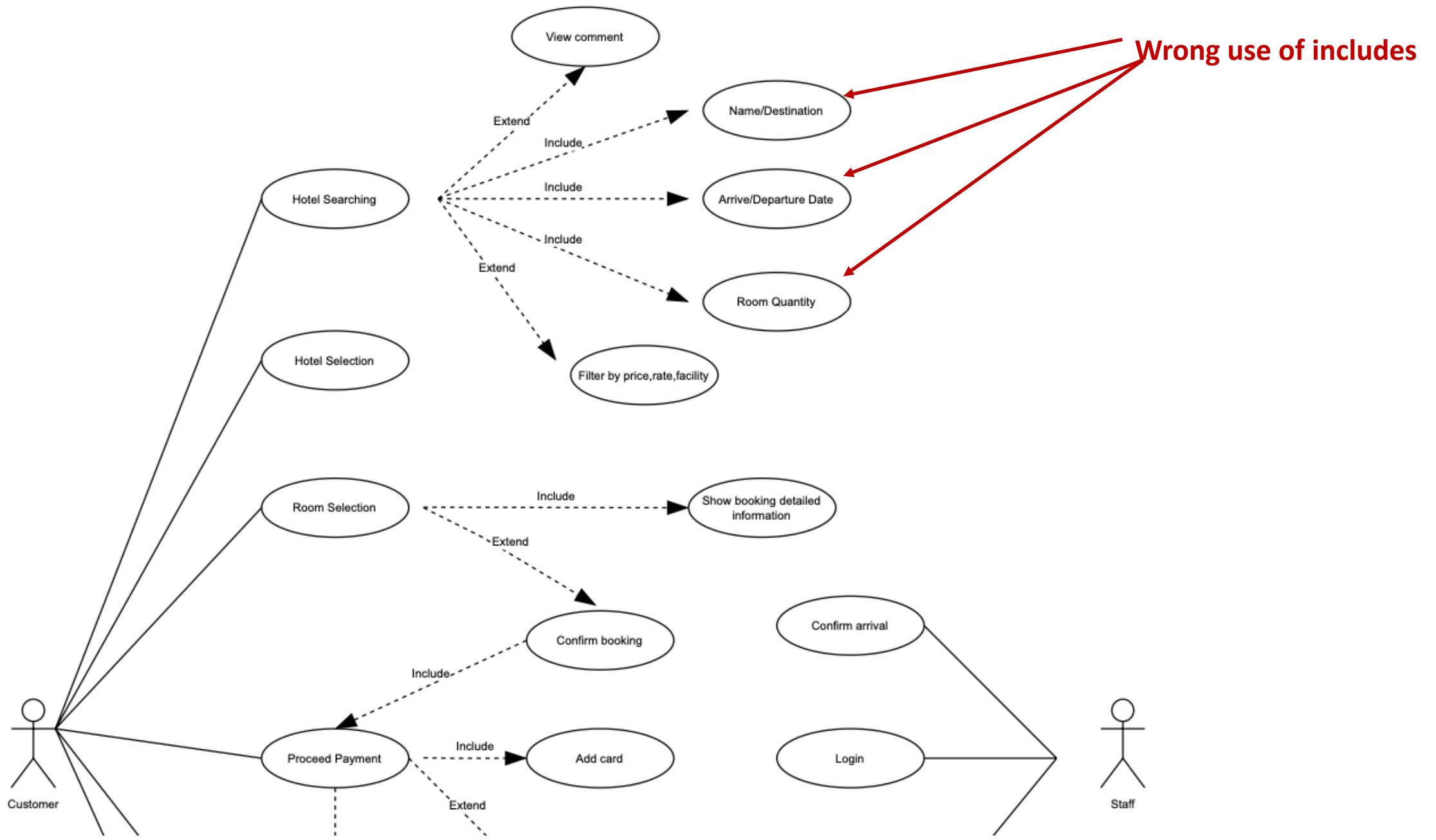
- Add/update room details
- Set room availability

Manage Bookings

- View booking list
- Confirm customer arrival
- Mark no-show bookings

Reporting and Analysis

- Generate booking reports for a specified period



Sample Solution



Q2

When doing the use case description for assignment 1

- Remember to fill in the template in a continuous word/pdf document rather than doing it as ppt where the exception condition is shown before the flow of events

Make sure not to leave blank for
brief description



use case:	Add a hostel booking		
Triggering Event:	Customer book a hostel		
Brief Description:	- - -		
Actor	Customer		
Preconditions	None		
Postconditions	A new record is created in Easy Booking database		
Flow of Events	Actor	System	
	1. Customer select hostel, room, date	1.1 System show the relative info customers select	
	2. customer select login or visit as a guest	2a.1. system generate	

Should include all the steps needed to create the booking (from the point where the user access the site to the check out process – it's not just the check out process)

Flow of Events:	Actor	System
	<p>2. The customers confirm their booking by entering their payment information including credit card number, expiration date, cardholder name, and CVV number.</p> <p>3. The customer can use Easy Booking (EB) points for discounts or input a promo code for special discounts.</p>	<p>1. The system shows the customer a booking details screen with information including hotel name, address, check-in and check-out dates, chosen room type, pricing, and any special requests.</p> <p>4. The system calculates the final price after discounts and informs customers the price</p>

Also take note that actor should start the process (rather than the system)



Preconditions should be conditions (“boolean expression”) rather than steps

2. Use Case Description

Use Case:	Add a Booking
Triggering Event:	Customer wants to make a new booking for hotel stay at Easy Booking platform
Brief Description:	This use case describes the process of a customer adding a new booking for a hotel stay on the Easy Booking platform.
Actors:	Customer
Preconditions:	<ol style="list-style-type: none">1. Customer logs in to their Easy Booking account or performs a guest checkout.2. Customer initiates a hotel search and selects a hotel.
Postconditions:	<ol style="list-style-type: none">1. A new booking record is created.2. Customer receives the booking confirmation and hotel vouchers.3. The number of the availability of the rooms is updated.
Flow of Events:	See below
Exception Conditions:	Credit Card Verification failed

Exception condition should include the step by which the exception happens, and the step should be a step on the system side

	convert EB points and/or enters promotion code	<p>8.1b If payment successful, display the Booking ID and notify the customer that payment verification is in progress</p> <p>9. Email booking confirmation and hotel voucher in PDF to customer and hotel admin staff</p>
Exception Conditions:	Process timeout	

	<p>7b. If enter promotion code</p> <p>8. Enter credit card information, such like card number, expiration date, card holder name, and CVV number.</p>	<p>7b.1 Apply the promotion code and show the final amount after promotion</p> <p>8.1 Display the booking ID and notify the customer that payment verification is in progress. Verify the credit card details within 10 minutes.</p> <p>8.1a If the purchase is successful, email the customer the booking confirmation and the hotel voucher in PDF format. Send a copy of the booking confirmation to the hotel administrative staff for their reference. Update the database of available hotels</p> <p>8.1b If the purchase is failed, go to step 8</p>
Exception Conditions	8. Credit card information cannot verify	

Don't repeat the step numbers

Flow of Events:	Actor	System
	<ol style="list-style-type: none"> 1. The customer triggers the booking process by searching for a hotel with specific criteria. 2. The customer selects a hotel from the list of options. 3. The customer choose an ideal room with detailed information(check-in date, check-out date and room type) 4. The customer chooses to either log in to their Easy Booking account or proceed with guest checkout. If logged in <ul style="list-style-type: none"> 4.1 Confirm the customer details. If guest checkout <ul style="list-style-type: none"> 4.2 Provides personal information (First Name, Last Name, Email, Phone Number, Country of Passport). 	<ol style="list-style-type: none"> 1.1 The Easy Booking system retrieves and displays a list of available hotels matching the search criteria. 2.1 The system displays available room types, along with pricing and room facilities. 3.1 The system presents booking details, including the hotel name, address, check-in date, check-out date, and selected room type. 4.1 The system validates the entered information. 4.2 If payment details are valid, the system generates a Booking ID and notifies the customer that payment verification is in progress.

Repeated step number

Make sure you don't join use cases together. 1 use case description only for 1 use case

	<p>8. Customers make payment using credit card (card number, expiration date, card holder name, and CVV number)</p> <p>enter credit cards details</p> <p>8.1 Display the Booking ID and notify the customer that payment verification is in <u>progress</u></p> <p>8.2 Within the next 10 minutes, <u>verify</u> the credit card details, and email the customer the booking confirmation and the hotel voucher in PDF format ,complete the order and save</p>
<p>9. Customers receive booking confirmation and hotel <u>voucher</u></p> <p>10. Customer log into his/her Easy Booking account and manage their bookings by using the “Manage My Booking” <u>button</u> in the email</p> <p>11. Customers select one or more of the following options: Resend Voucher Change Date; Cancel Booking, Add/Remove Special Requests</p>	<p>data in database</p> <p>8.3 Send a copy of the booking confirmation to the hotel administrative staff for their reference (<u>should it be another business case between system and hotel staff???</u>)</p> <p>10.1Display customer account log in page and “My Booking” page with options</p> <p>11.1Response to customer’s options, email the hotel voucher to his/her email address; change Booking date and determine whether there is a need for additional payment; Refund the payment back to the user and set the room back as available for booking (<u>send a copy to the hotel staff</u>)</p>

Not part of this case case

Not part of this case

	Actor	System
Flow of events	<ol style="list-style-type: none">1. Search for hotels by providing the hotel name or destination, date of stay, number of nights stayed and number of rooms required.2. User selects a hotel from the list of available options.3. User chooses a room with a detail4. If user is registered or logged in jump to 5 4a. User registration or login5. If user has added a bank card jump to 6 5a. User adds bank card information including card number, expiration date, cardholder name and CVV number.6. User decides if use redeeming points7. Make payment8. User arrives	<ol style="list-style-type: none">1. The system retrieves a list of hotels matching the search criteria and displays it to the user.2. System retrieves and displays a list of available room types with detail3. System displays the reservation details, including the hotel name, address, check-in date, check-out date, and selected room type.4. System verifies the login information5a. System verifies the card information6. Database update information7. Confirm booking, send confirmation information and receipt8. Booking completed

Too brief/missing details

Flow of Events:	Actor	System
	<ol style="list-style-type: none"> 1. Customer searches for hotel listing 2. Customer select room 3. Login to easy booking account 4. Buyer clicks pay by credit card <ol style="list-style-type: none"> 4a.1 Enters credit card details (cc number, expiry date, CVV) 5. Complete order 	<ol style="list-style-type: none"> 1.1 displays hotel listing 2.2 display booking details screen containing details of the booking such as the hotel name, address, check-in date, check-out date, 4a.1.1 Credit card verified 5.1 Displays booking id 5.2 Send booking email confirmation to Customer and hotel administrative staff

Don't use postcondition to
describe what happens in the use
case

Use Case:	Add a booking	
Triggering Event:	Users book hotels or apartment directly from their online portal or from the EasyBooking iPhone/Android mobile app	
Brief Description:	The booking process consists of 5 steps: Hotel Searching, Hotel Selection, Room Selection, Login/Guest Checkout, and Payment	
Actors:	Easy Booking: a new hotel-booking platform	
Preconditions:	-	
Postconditions:	Payment must be paid by cash, nets or credit card Purchase order must be submitted	
Flow of Events:	Actor	System
Exception Conditions:		

Postconditions	<ul style="list-style-type: none">- Booking is created, new booking entry recorded in system database- Customer is issued a booking confirmation & hotel voucher- Room availability in system database for the particular type of room booked is decreased by the number of rooms booked
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Align the steps

Flow of Events:	Actor	System
	<p>1selects a hotel and room type and proceeds to the booking details screen.</p> <p>2indicate special requests such as non-smoking room, bed preferences, floor preferences, etc.</p> <p>3enters their credit card details, including card number, expiration date, cardholder name, and CVV number.</p> <p>4receive Booking confirmation Hotel voucher in PDF format</p>	<p>1.1Displays the booking details, including the hotel name, address, check-in date, check-out date, and room details (pricing, facilities, etc.).</p> <p>2.1Presented with the option to use Easy Booking (EB) points for discounts and/or enter a promotion code for a special discount.</p> <p>2.2calculates the final amount after applying discounts and displays it to the customer.</p> <p>3.1validates the credit card information in real-time and ensures it is valid before proceeding.</p> <p>3.2if valid creates a new booking record in the database</p> <p>3.3notifies the customer that the booking is being processed and payment verification is in progress.</p> <p>3.4 sends the customer: Booking confirmation Hotel voucher in PDF format</p>

We won't document under the
flow of event the failure case

	12. If customer choose Resend voucher	request 12.1 Email customer the hotel voucher
	12a. If customer choose Change date, edit the check-in date and <u>save</u>	12a.1 Update the check-in date in the database, and if there is a need for additional fee, go to <u>9</u>
	12b. If customer choose Cancel booking	12b.1 Update the associated <u>booking</u> status in database, and

refund the payment back to customer, then Update the associated room availability

Make sure the postcondition is satisfied

Booking record not created

- | | |
|--|---|
| <ul style="list-style-type: none">8. Indicates any special requests, such as non-smoking room, twin beds, high floor, etc.
9. Initiates the payment process using a credit card and enters the card number, expiration date, cardholder name, and CVV number.
10. If the customer doesn't want to choose to convert Easy Booking (EB) points, finish.
10a. If the customer want to choose to convert Easy Booking (EB) points for discounts or enters a promotion code for special discounts. | <ul style="list-style-type: none">9.1 Initiates the payment processing with the payment gateway.

10a.1 Calculates the final amount after discounts. |
|--|---|

Make to include the conditions
for the alternate flows & use
alternate flows properly

Flow of Events:	Actor	System
	<ol style="list-style-type: none"> 1. Search for a listing 2. Selects a hotel for view 3. Select a room type 4. Confirm on the check-in and check-out dates <div style="border: 2px solid red; padding: 10px;"> 5.a. Choose to login 5.b.i Choose to do a guest check-out 5.b.ii Key in first name, last name, email, phone number and country of passport in the form 5.c Indicates special request if any </div> 6. Confirm booking details 	<ol style="list-style-type: none"> 1.1 Display listing based on search criteria 2.1 Display a list of available room types 3.1 Display hotel name, address and check-in and check-out dates 4.1 Display selection to login or check out as a guest and a special request form for the booking 5.a.1 (Assuming user info has been recorded in the DB during account registration) Auto fill-in the first name, last name, email, phone number and country of passport in the booking form based on the account info 5.b.i.1 Display user information form for customer to key in their details 6.1 Create new booking record in the bookings table with a foreign key of account_id pointing to the logged in customer's account if 5.a is chosen. Leave account_id blank if checkout as guest is chosen. Another record of booked listing should be created in the booked_listings table, recording the selected listing id, room type, check-in & check-out dates and special request if any. A foreign key of booking_id should point to the newly created booking record for association.

Flow of Events:	Actor	System
	<p>1. Searches for listings using hotel name, check-in date, number of nights, and number of rooms required</p> <p>2. If customer decides to sort the listing by:</p> <ul style="list-style-type: none"> 2a. Hotel name 2b. Price 2c. Review score <p>3. If customer decides to filter the listings further, customer to select filter conditions (pricing, review score, area, accommodation type, and hotel facilities)</p>	<p>1.1 Displays the listings associated with the search conditions</p> <p>2a.1 Displays listings by hotel name</p> <p>2b.1 Displays listings by price</p> <p>2c.1 Displays listings by review score</p> <p>3a. Display updated listings which also fulfil the filter conditions</p>

Others: specific to this question

Use case name	Add a booking					
Triggering event	Customer wants to make a new booking.					
Brief description	The customer searches the hotel, selects the hotel, selects the room, do login/guest checkout, and make a payment.					
Actors	Customer					
Pre-conditions	-					
Post-conditions	Booking must be created.					
Flow of events	<table border="1"> <thead> <tr> <th>Actor</th> <th>System</th> </tr> </thead> <tbody> <tr> <td> 1. Searches for listings using keywords. 2. Selects the hotel. 3. Selects the room. 4a. Logs into Easy Booking account. 4b. Does a guest checkout by entering his/her details. 5. If the buyer doesn't have any access to discount, go to step 6. 5a. Converts Easy Booking (EB) points. 5b. Enters a promotion code </td><td> 1. Displays the list of available hotels that fits the search criteria. 2. Shows a list of the available room types. 3. Displays the booking details. 4a. Logs the user into the system. 4b. Creates a new member record and save the record in database. 5. Displays the form for user to enter credit card details. 6. Displays the Booking ID, verifies the credit card details, email the booking confirmation once the </td></tr> </tbody> </table>	Actor	System	1. Searches for listings using keywords. 2. Selects the hotel. 3. Selects the room. 4a. Logs into Easy Booking account. 4b. Does a guest checkout by entering his/her details. 5. If the buyer doesn't have any access to discount, go to step 6. 5a. Converts Easy Booking (EB) points. 5b. Enters a promotion code	1. Displays the list of available hotels that fits the search criteria. 2. Shows a list of the available room types. 3. Displays the booking details. 4a. Logs the user into the system. 4b. Creates a new member record and save the record in database. 5. Displays the form for user to enter credit card details. 6. Displays the Booking ID, verifies the credit card details, email the booking confirmation once the	
Actor	System					
1. Searches for listings using keywords. 2. Selects the hotel. 3. Selects the room. 4a. Logs into Easy Booking account. 4b. Does a guest checkout by entering his/her details. 5. If the buyer doesn't have any access to discount, go to step 6. 5a. Converts Easy Booking (EB) points. 5b. Enters a promotion code	1. Displays the list of available hotels that fits the search criteria. 2. Shows a list of the available room types. 3. Displays the booking details. 4a. Logs the user into the system. 4b. Creates a new member record and save the record in database. 5. Displays the form for user to enter credit card details. 6. Displays the Booking ID, verifies the credit card details, email the booking confirmation once the					

This is not just “either-or”. Both can happen so it shouldn't be alternate flow

Flow of Events:	Actor	System
	<ol style="list-style-type: none"> 1. Search for hotel listing by supplying a hotel name (or destination), check-in date, number of nights stay, and number of rooms required 2. Selects the hotel 3. Selects the room 4. Login to confirm booking 5. Make payment via credit card <ol style="list-style-type: none"> 5a. Convert Easy Booking (EB) points for discounts 5b. Enter a promotion code for special discount 	<ol style="list-style-type: none"> 1.1 Display the list of available hotels that fits the search criteria 2.1 Display the list of the available room types 3.1 Display details of booking 4.1 Verifies log in details 4.2 If valid, indicate special requests. 4.2a If invalid, do a guest checkout by entering his/her details. 5.1 Display the Booking ID and notify the customer that payment verification is in progress 5a1. Display final amount after discount from the EB points 5b1. Display final amount after discount from promotion code 5.2 Verify whether the credit card details are valid 5.3 Email customer booking confirmation and hotel voucher in PDF format once the purchase is successful 5.4 Send booking confirmation to

Notations

Main Flow:

1. Customer enters desired hotel name or destination.
2. Customer specifies check-in date, number of nights, and number of rooms.

3. System displays available hotels matching the criteria.
4. Customer sorts or filters the results as needed.
5. Customer selects a hotel from the list.
6. System displays available room types for the selected hotel.
7. Customer selects a desired room type.
8. System redirects the customer to the booking details screen.
9. Customer logs into their Easy Booking account or opts for guest checkout.
 1. If opting for guest checkout, customer provides personal details (First Name, Last Name, Email, Phone Number, Country of Passport).
10. Customer adds any special requests (non-smoking room, bed type, etc.).
11. System displays the final booking amount.
12. Customer chooses to convert available EB points for a discount or enters a promotion code, if any.

Use Case Name	Add a Booking	
Triggering Event	Customer wants to book a hotel room via the Easy Booking platform.	
Brief Description	When a customer decides to book a hotel room, the system and the customer collaborate to verify room availability, collect necessary details, validate payment information, generate a booking ID, and confirm the booking.	
Actors	Customer	
Pre-Conditions	The customer has successfully searched for a hotel and selected a room. The system has availability data for the selected room.	
Post-Conditions	A new booking record is created in the database, and a confirmation email is sent to the customer.	
Flow of Events	Actor	System
	Chooses the "Book Now" option for a specific room.	Displays the booking details page.
	Logs into their Easy Booking account or proceeds as a guest.	Displays the form to enter personal details and payment information.
	Fills in all required fields and proceeds to the payment gateway.	Validates the payment details.
	-	Generates a Booking ID and displays it to the customer.
Exception Conditions	Invalid Payment Details: System displays an error message and prompts the customer to re-enter payment information. Guest Checkout: System asks for essential personal details if the customer proceeds as a guest.	

Step number missing

Sample Solution

Use Case:	Add a booking	
Triggering Event:	Customer wants to add a new booking	
Brief Description:	Customer supplies the information required for the 5 steps in the booking process. The system creates a booking record and verifies the credit card details. Once the payment is successful, the booking confirmation is sent to both the customer and the hotel	
Actors:	Customer	
Preconditions:	-	
Postconditions:	A booking record is created. A member record is created (if customer is a guest) The room availability information is updated.	
Flow of Events:	Actor	System
Exception Conditions:	1.1 No listing matches. 5a.1 Member does not exist. 8.1 Customer credit card details are invalid.	

Flow of Events:	Actor	System
	<p>1. Customer searches for hotel listing by supplying a hotel name (or destination), check-in date, number of nights stay, and number of rooms required.</p> <p>2. Customer selects a hotel.</p> <p>3. Customer selects a room.</p> <p>4. Customer enters special requests such as non-smoking room, twin beds, large bed, high floor, etc.</p>	<p>1.1 System displays a list of available hotels that fits the search criteria.</p> <p>2.1 System displays a list of available room types (with the room pricing, facilities of hotel/room, etc).</p> <p>3.1 System displays the booking details screen (hotel name, address, check-in date, check-out date, etc) together with the special requests form.</p> <p>4.1 System updates the special requests.</p> <p>4.2 System displays the payment form.</p>

Flow of Events:	Actor	System
	<p>5. If the customer is logged in, go to step 6.</p> <p>5a. If the customer is not logged in, but is an Easy Booking member, he/she enters login details.</p> <p>5b. If the customer is not logged in, but is not an Easy Booking member, he/she does a guest checkout by entering his/her details (First Name, Last Name, Email, Phone Number, Country of Passport).</p>	<p>5a.1 System verifies the login details and logs the user into the system.</p> <p>5a.2 System retrieves the EB points of user.</p> <p>5a.3 System displays the EB points of user and the form for user to enter credit card details.</p> <p>5b.1 System creates a new member record and save the record in database.</p> <p>5b.2 System displays the form for user to enter credit card details.</p>

Flow of Events:	Actor	System
	<p>6. If the customer wants to convert EB points for discounts, he/she indicates this intention.</p> <p>7. If the customer wants to enter a promotion code, he/she enters the promotion code.</p> <p>8. Customer enters credit card details (card number, expiration date, card holder name, and CVV number).</p>	<p>6.1 System updates the final amount.</p> <p>7.1 System retrieves the promotion code information and updates the final amount.</p> <p>8.1 System verifies the credit card details and processes the payment.</p> <p>8.2 System creates a booking record and displays the Booking ID and notice that payment is in progress.</p> <p>8.3 System emails the customer the hotel voucher and the booking confirmation.</p> <p>8.4 System emails the hotel the booking confirmation.</p> <p>8.5 System updates the booking schedule of listing.</p>