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Company name: Four Seasons Hotel.

Modelling : Hotel Booking System.

Description:

Four season Hotel chain has over 100 hotel across the republic of Ireland. It focuses mainly on families and functions such as wedding. It has an average of 4,000 people staying in each hotel every week. Customers have to book over the phone or email. Four season hotel chain is looking to implement a database that will manage it bookings and payments. The hotel want to rollout this across all of their hotels over the next year their will not need to be any customization as each hotel is standardize. This system will include add on, payments , room , room types.

The boundary:

The inside of the boundary is a database that will store guest information, booking, payments, rooms, add-on's & staff. The outside of the boundary is Payroll, Staff Timetable, finances.

Entities :

Overview:

1. Booking
2. Guest/Customer
3. payment
4. room
5. room type
6. Add on
7. Staff
8. Hotel
9. Reservation
10. Request

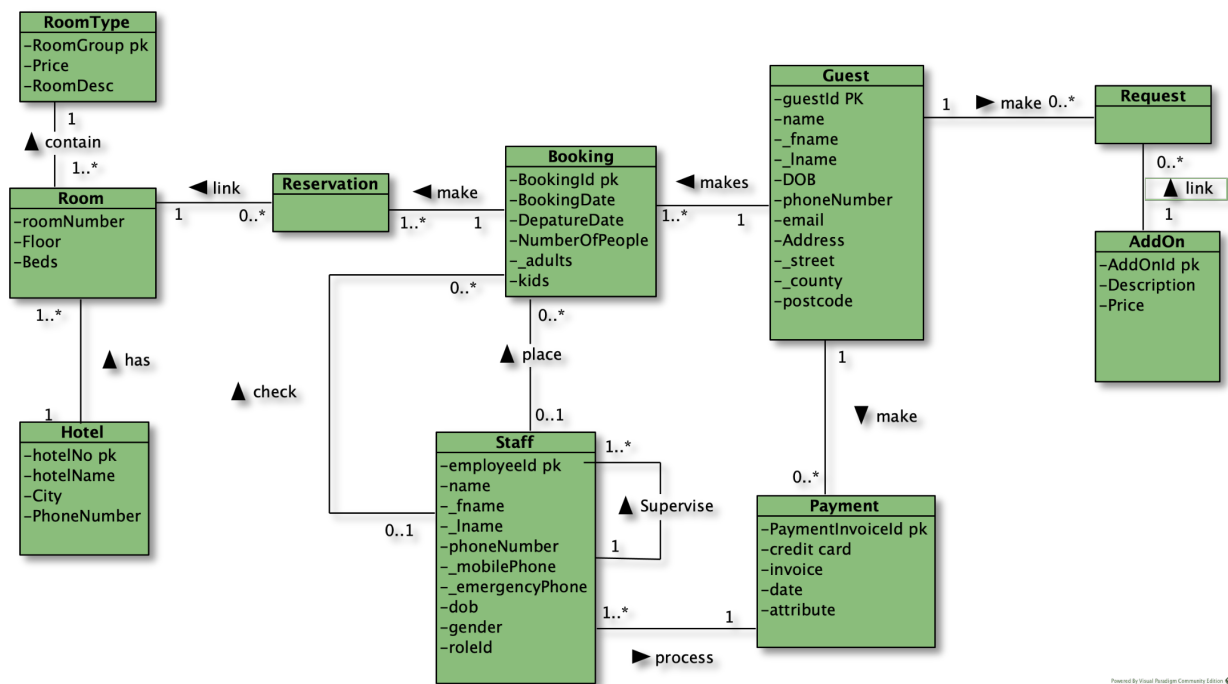
Entities Associations:

- Each guest may make one or many bookings as they please. Each booking is linked to one guest only at the Four Season Hotel.
- A booking makes a reservation in the hotel. A booking can reserve one to many . Each reservation is linked to one guest only.
- In the Four Seasons Hotel a room is connected (contains) to a room-type. A room is linked to one room-type such as wedding suite.
- Each room-type is linked to one to many rooms in the hotel such as executive sweats.
- A reservation is linked to a room . A room can be linked to many reservations in the hotel.
- A reservation is linked to one booking and a booking can be linked to one or many reservations.
- Each room is linked to one hotel in the Four Seasons Hotel chain. Each hotel can be linked one to many different rooms.
- A staff member In reception will check no rooms or many rooms to check the booking. Each booking can only be checked by one staff at a time.
- staff are supervised by one staff (supervisor) and he/she mange's one to many staff .
- A staff member will place zero to many bookings in the hotel upon guest request. A booking can only be made by one staff member.
- At the end of guest stay at the Four Seasons Hotel they will go to reception to make payment. A employee (staff) will process one payment at a time and payment can be handled by multiple staff members.
- A guest will go to reception to make a payment at the end of their stay at the Four Seasons Hotel. A guest will make zero to many payments. A payment can only be linked to one guest in the hotel.

- The guest may wish to add-on to their package such as late checkout. Add-on is linked to zero to many request and a request can only have one add-on linked.
- A guest make zero to many request at the hotel and each request is linked to one guest only.

Attributes:

Guest	name (first name & last name) , guest ID , date of birth, phone number , email , address (street add, County, post code)
booking	Booking ID , booking date (date & time) departure date (date & time), number of people(adults, kids)
payment	Payment invoice id ,payment method , credit card , invoice , date , employee
room	Room number , floor , beds
Room type	Price , room description e.g. wedding room
Add-on	Add on ID, description , price
staff	Employee ID , name(first name & last name), phone number (phone number , emergency contact) gender, role Id
Hotel	Hotel number , hotel name ,city ,phone number
Request	Has no attributes in Conceptual modelling only in logical modelling
Reservation	Has no attributes in Conceptual modelling only in logical modelling

Conceptual modelling:**Entities Description :****1. Guest**

Is the customer of the Four Seasons Hotel who has booked a room and is staying for a period. It will store all the Information that is relevant such as name, contact number, email.

2. booking

It is person who has made an arrangement with Four Seasons Hotel to have a hotel room on a particular date until an end date. It will store information such arrival date and departure date.

3. payment

It is paying for your service at Four Seasons Hotel upon hotel check-out. A credit card or cash is required to facilitate the payment. The customer will pay add-on and any other incidents that might have arisen.

4. room

This is a room in the hotel which will have set amount of bed with a toilet and washing facilities. Each room is different within the hotel and is grouped by room type. This Entity will store room number floor and amount of beds.

5. Room type

This is a group of hotel rooms that grouped by type such as luxury family room. It also will store price of the rooms grouped. The room type will also give a brief description to understand the difference in each set of rooms e.g. Queen Room will have a bed fit for a queen and elegant interior design and additional amenities such as mini bar.

6. Add-on

Four Seasons Hotel offers some addons which are an extra cost to the guest in this entity it will store if the guest upgrade using description for what the upgrade is and the relevant price.

7. staff

It is an registered employee who works for Four Seasons Hotel and is who will manage the booking, payments and checkouts for this booking system.

8. Hotel

This is a group of buildings that the Four Seasons Hotel own across Ireland. They each provide accommodation for travellers and tourists. Each hotel will have its own name and hotel number.

9. Reservation

This entity is used to sort out the many to many between room and booking it has no attributes in Conceptual modelling. It will be used in the logical modelling. It will hold information to allow the linking of both entities.

10. Request

This entity is used to sort out the many to many between guest and add-on it has no attributes in Conceptual modelling. It will be used in the logical modelling. It will hold information to allow the linking of both entities.

Logical Database Design**RoomType**(roomGroup , price , roomDesc)

Primary key: roomgroup

Reserve(roomNumber , bookingId)

Primary key roomNumber, bookingId

Foreign Key roomNumber reference Room(roomNumber)

Foreign Key bookingId reference Booking(bookingId)

Request(guestId , addOnId)

Primary key guestId , addOnId

Foreign Key guestId reference Guest(guestId)

Foreign Key addOnId reference AddOn(addOnId)

Room(roomNumber , floor , beds, roomGroup, hotelNo)

Primary key roomNumber, hotelNo

Foreign Key roomGroup reference RoomType(roomGroup)

Foreign Key hotelNo reference hotel(hotelNo)

Booking(bookingId , bookingDate , departureDate , adults , kids, employeeId, guestId)

Primary key bookingId

Foreign Key employeeId references staff(employeeId)

Foreign Key guestId reference Guest(guestId)

Guest (guestId , fName , lName , DOB , phoneNumber , email , street , county , postcode

Primary key guestId

AddOn(addonId , description price)

Primary key addonId

Staff(employeeID , fName ,lName , mobilePhone , emergencyPhone , dob ,gender ,roleId, paymentInvoiceId, supervisor)

Primary key employeeID

Foreign Key paymentInvoiceId reference payment(paymentInvoiceId)

Foreign Key supervisor references staff(employeeID)

Payment (paymentInvoiceId , creditCard , invoice , date , guestId)

Primary key paymentInvoiceId

Foreign Key guestId reference from Guest(guestId)

Hotel (hoteNo, hotelName , City , phoneNumber)

Primary key hoteNo