**HOTEL BOOKING SYSTEM**

Key Requirement:

* Hotel Room Inventory Management
* Guest Management
* Reservation Management

Two Users – Admin(Login), Guest(Register, Login)

**Guest Functionality :**

* Able to look for the hotels available based on the location, date
* Able to search for the rooms based on the room type and occupancy
* Book rooms
* Modify Booking
* Cancel Booking
* Provide Rating

**Admin Functionality:**

* Manage Hotels
* Manage Rooms
* Manage Guests (including Activation)
* Manage Booking
* Manage Discounts (based on the Guest’s booking )
* Manage Ratings
* Manage Payments

**Entities Involved**

**Hotel** :HotelId, name, address ,city, totalNoOfRooms, Rating, Amenities, Restriction , status(soft delete)

( Amenities – wifi, swimmingpool, cafe, restaurants, Parks, ParkingArea

Restrictions – No Pets, Cannot cancel at the day of checkin, Common checkin and checkout time)

**Guest** : GuestId, name,Email, PhoneNumber, Address, Role

**Room**: HotelId, RoomId,RoomTypeId, Images, IsAvailable(for soft delete)

**Room Type**: RoomTypeId, Type,Amount,occupancy,cotsAvailable, Amenities,Discount, HotelId

**Booking**: BookId, GuestId, date,NoOfRooms, Discount, TotalAmount, AdvancePayment, BookingStatus, PayId

**BookedRoom**: RoomId, BookId, CheckInDate, CheckOutDate

**Payment**: PayId, BookId, AmountPaid, PaymentDate, PaymentMode, PaymentStatus

**Rating**: RatingId, HotelId, PersonId, reviewRating , comment, date

**HotelAvailabilityByDates :** HotelId, Date, NoofRoomsAvailable

**Refund :** refundId,guestId, bookId, refundAmount

**Business Logic Plan**

Hotel Availability :

* Search by Location
* If rooms are available then display availability else it is disabled.

Room Availability:

* Based on date, occupancy, roomtype
* Shows all rooms with availability status (only available rooms can be booked)

Reserve Room :

* Can book available rooms
* Confirm booking.
* Update the availability status

Modify Booking:

* Remove room – cannot remove room on the day of checkin and have penalty as similar to cancel booking.

Cancel Booking :

* Based on the date of cancelation refund will be done (4days before – free, 3 days before – 10%, 2 days before – 20%, 1 day before – 50%)
* Cannot cancel on the day of checkin

Payment Management:

* Booking can have many payments(failed, advance payment, full Payment done) but only the updated one will be mapped with the booking.

Discount Management:

* Based on the Guest’s booking history (regular user will have dynamic discounts)
* Dynamic discount will be applied based on the information provided by respective hotels

Rating system:

* User can provide rating for the hotels.(Avg rating will be calculated for each hotel)