DAMG6210: Data Management & Database Design

Group 10: Hotel Management System

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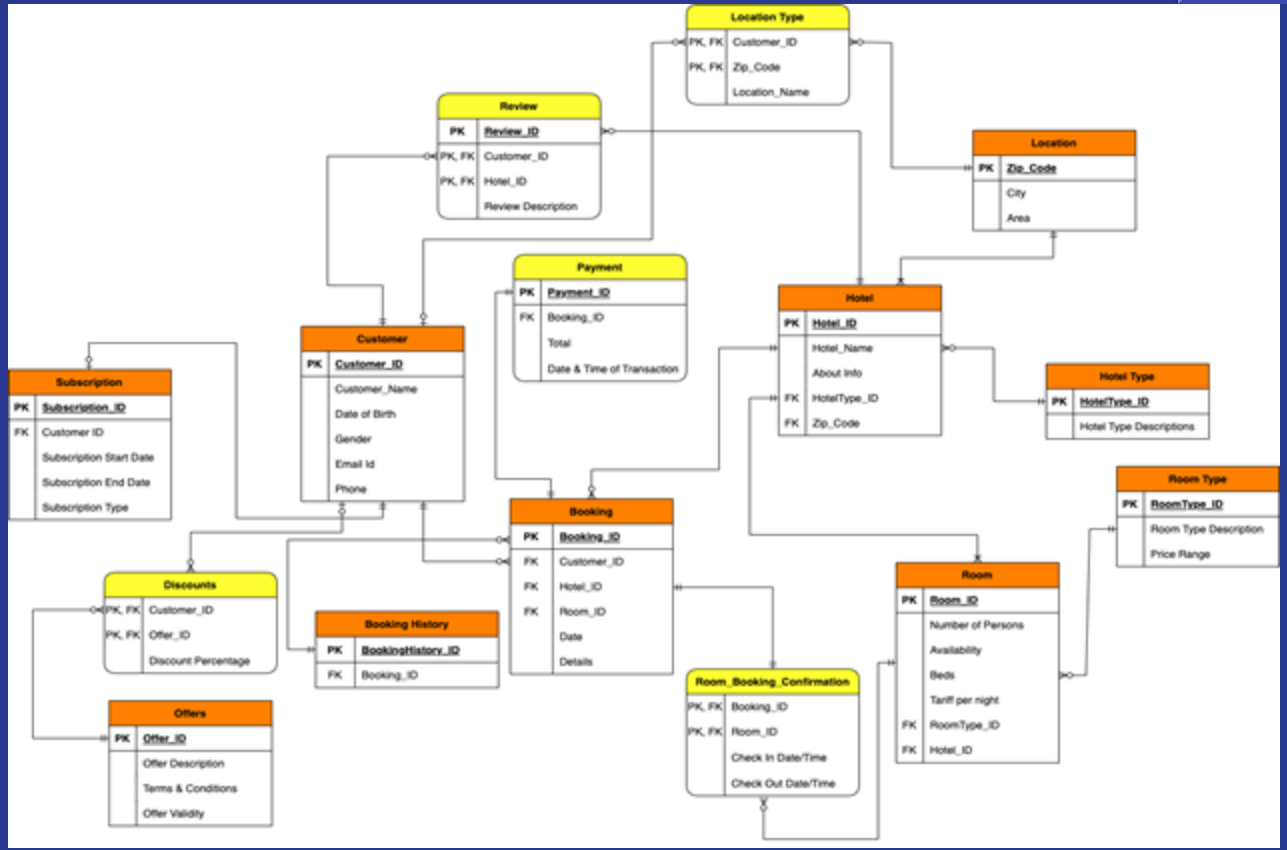
Problem Statement

To create a database management system that will facilitate the hotel bookings easy and smooth process. This database application will allow users to look up hotels based on their preferred location depending on availability and book rooms by checking the ratings, feedback review, hotel type and check in and check out date.

Business Problem Address

Booking hotels have always been a hustle when going on a trip and, it's time consuming task where travelers need to wait in queues or check for the availability at the hotel walk-in. To solve this issue, a hotel booking system is a perfect solution. A hotel booking system will be a database management system that will store traveler details, preferred locations, and booking details. This system will allow travelers to book and confirm their booking at their hotel according to their preferred location, date or travel, and preferred room type.

ERD:


Location Type
PK, FK Customer_ID
PK, FK Zip_Code
Location_Name
Review
PK Review_ID
PK, FK Customer_ID
PK, FK Hotel_ID
Review Description
Location
PK Zip_Code
City
Area
Payment
PK Payment_ID
FK Booking_ID
Total
Date & Time of Transaction
Hotel
PK Hotel_ID
Hotel_Name
About Info
FK HotelType_ID
FK Zip_Code
Hotel Type
PK HotelType_ID
Hotel Type Descriptions
Customer
PK Customer_ID
Customer_Name
Date of Birth
Gender
Email Id
Phone
Subscription
PK Subscription_ID
FK Customer ID
Subscription Start Date
Subscription End Date
Subscription Type
Booking
PK Booking_ID
FK Customer_ID
FK Hotel_ID
FK Room_ID
Date
Details
Room Type
PK RoomType_ID
Room Type Description
Price Range
Discounts
PK, FK Customer_ID
PK, FK Offer_ID
Discount Percentage
Booking History
PK BookingHistory_ID
FK Booking_ID
Room
PK Room_ID
Number of Persons
Availability
Beds
Tariff per night
FK RoomType_ID
FK Hotel_ID
Offers
PK Offer_ID
Offer Description
Terms & Conditions
Offer Validity
Room_Booking_Confirmation
PK, FK Booking_ID
PK, FK Room_ID
Check In Date/Time
Check Out Date/Time

Sample DDL Queries

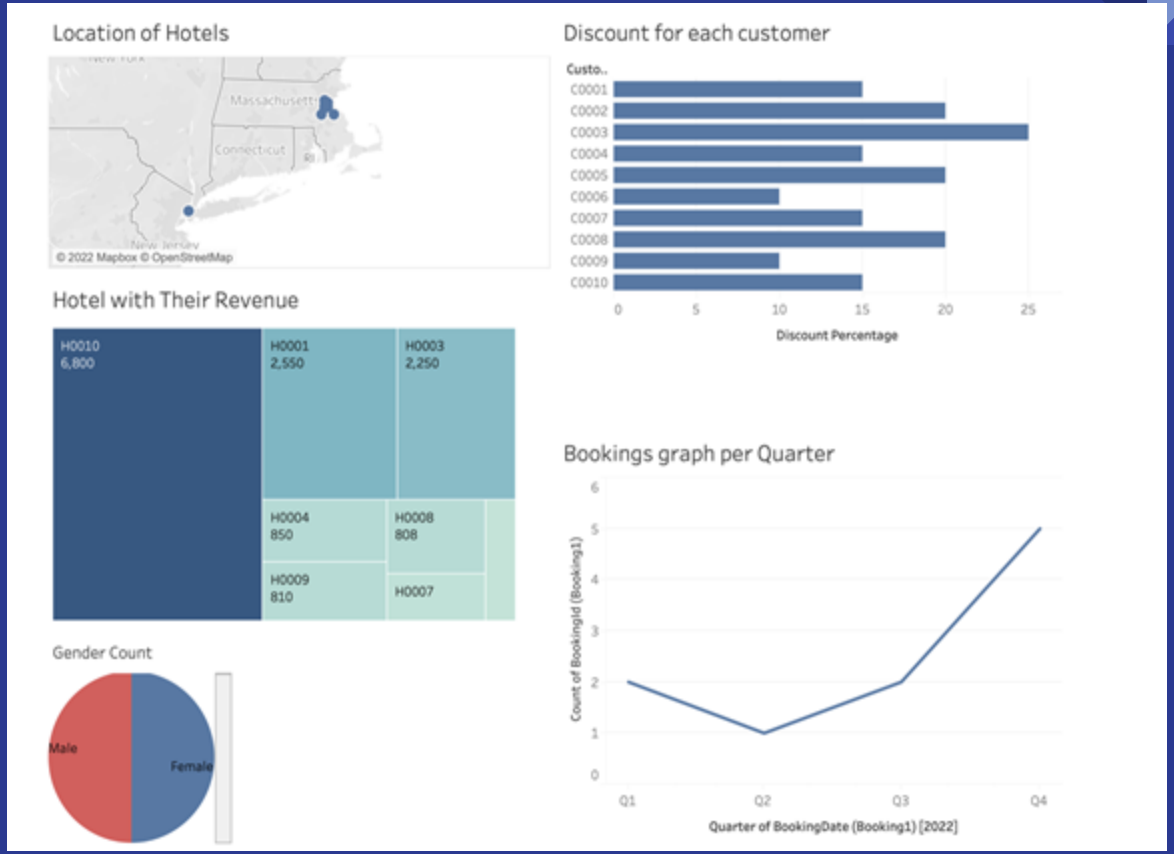
STORED PROCEDURES:

```
Create Proc Subscription_reminder @months int
As
begin
select count(*) as NoOfCustomersWhoNeedReminders from (
select c.CustomerId,s.SubscriptionId,s.SubscriptionEndDate,c.EmailId,
(select case when DATEDIFF(MONTH,GETDATE(),s.SubscriptionEndDate)>@months
then 'No Need for Reminder' else 'Need Reminder' End) as Reminder
from Subscriptions right join Customer cons.CustomerId=c.CustomerId where
(select case when DATEDIFF(MONTH,GETDATE(),s.SubscriptionEndDate)>@months
then 'No Need for Reminder' else 'Need Reminder' End) = 'Need Reminder') s
select c.CustomerId,s.SubscriptionId,s.SubscriptionEndDate,c.EmailId,
(select case when DATEDIFF(MONTH,GETDATE(),s.SubscriptionEndDate)>6
then 'No Need for Reminder' else 'Need Reminder' End) as Reminder
from Subscriptions right join Customer cons.CustomerId=c.CustomerId order by
s.SubscriptionEndDate
End
```

TRIGGERS:

```
CREATE TRIGGER EncryptionTrigger
ON Customer
AFTER INSERT
AS
BEGIN
OPEN SYMMETRIC KEY EmailEncryptor DECRYPTION BY CERTIFICATE
Certificate_EmailEncrypt;
UPDATE Customer SET ENCRYPTED_Email = ENCRYPTBYKEY(KEY_GUID('EmailEncryptor'),
EmailId) FROM Customer;
CLOSE SYMMETRIC KEY EmailEncryptor;
END
```

Visualization:



Demo

https://github.com/prathameshwalinu/DMDD_6210_Group10

Thank you!