HOTEL MANAGEMENT SYSTEM

🔹 Introduction

Title: Hotel Management System (ER Design & Database Overview)

Talking Points:

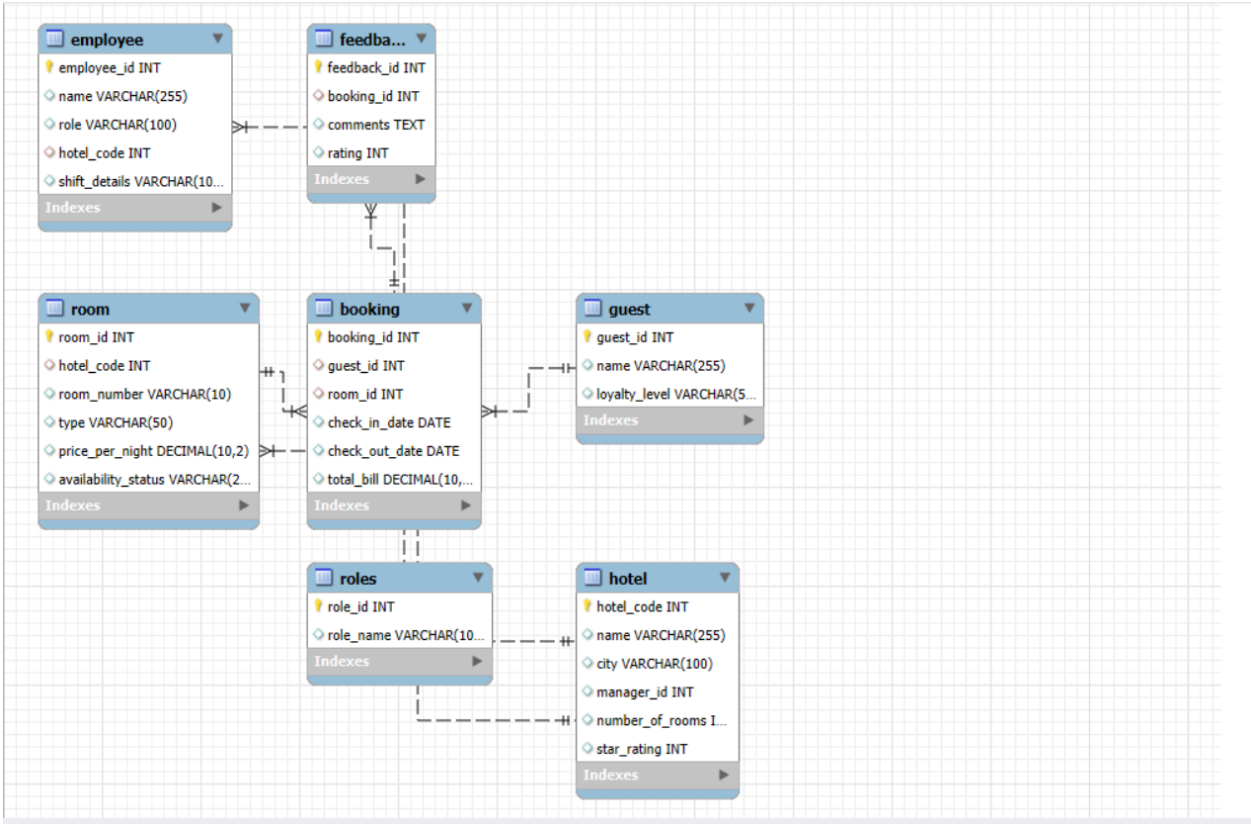
- This project demonstrates a database design for managing operations of a multi-city hotel chain.
- It includes entities like Hotels, Rooms, Guests, Bookings, Employees, and Feedback.
- The system is aimed at ensuring efficient handling of hotel operations, guest management, and staff coordination.

🔹 Key Objectives

Talking Points:

- Manage multiple hotels across various cities.
- Track room availability and pricing.
- Store guest profiles and loyalty levels.
- Handle bookings with billing information.
- Assign and manage employees across shifts and roles.
- Collect guest feedback to improve services.

🔹 Entity-Relationship Diagram



Talking Points:

- The ER diagram visualizes relationships between core entities.
- Each hotel is uniquely identified and managed by an employee.
- Guests can book rooms, and each booking is linked to billing and feedback.

- Employees are assigned to hotels with defined roles and shifts.
- Room availability and booking history are tracked.

🔹 Entities Overview

Hotel

- Identified by `hotel_code`.
- Attributes: name, city, manager, rooms, rating.

Room

- Belongs to a hotel.
- Attributes: room number, type, price, availability.

Guest

- Attributes: guest ID, name, loyalty level.

Employee

- Attributes: employee ID, name, role, shift, hotel.

Booking

- Connects a guest and a room.
- Tracks check-in/check-out, bill.

Feedback

- One feedback per booking.
- Includes comments and rating.

Roles

- Standardizes role names like Manager, Chef, Security.

🔹 Relationships

Talking Points:

- One hotel has many rooms and employees.
- Each employee is assigned to one hotel.
- Each hotel is managed by a specific employee (1:1).
- One guest can have multiple bookings.
- One room can be booked multiple times but by one guest at a time.
- Each booking can have one feedback entry.
- Roles define the function of employees.

🔹 Normalization & Integrity

Talking Points:

- All tables are normalized to reduce redundancy.
- Foreign key constraints ensure data integrity (e.g., room belongs to hotel, booking linked to guest and room).
- Manager is also an employee (linked via `manager_id`).
- `CHECK` constraint used for feedback rating (1 to 5 only).

🔹 Sample Data Inserted

Talking Points:

- 5 sample hotels, each with a manager.
- 5 guests with different loyalty levels.
- Rooms inserted across hotels with varying types and prices.
- Bookings linked to specific rooms and guests with calculated bills.
- Feedback submitted for each booking.
- Employees with different roles and shift timings added.

🔹 Benefits of the System

Talking Points:

- Centralized control of multi-city hotel operations.
- Easy tracking of guest preferences and loyalty.
- Transparent booking and billing process.
- Structured employee management.
- Feedback-driven service improvement.

🔹 Conclusion

Talking Points:

- The system is scalable and maintainable.

- Ensures a smooth experience for both hotel management and guests.
- Can be extended further to include online payment, rewards system, and analytics.