PROJECT BASED LEARNING RECORD
On
UCS4001
DATABASE MANAGEMENT SYSTEM

SCHOOL OF COMPUTER SCIENCE AND ENGINERING

IILM UNIVERSITY

JANUARY 2026 – MAY 2026

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SECTION :- 2CSE11

Hotel Booking System Database Project Report

1. Introduction

The Hotel Booking System database is designed to manage hotel reservations efficiently. It stores information about customers, hotels, rooms, bookings, and payments. The main goal of this database is to organize booking operations, maintain records, and ensure data consistency.

2.Abstract

This project presents the design and implementation of a structured relational database system. The purpose of this system is to efficiently store, manage, and retrieve organized data using a well defined schema and relationships between entities. The database is designed using Entity–Relationship (ER) modeling concepts and is implemented in MariaDB using SQL commands. The project demonstrates how real world data can be transformed into structured tables with primary keys, foreign keys, and constraints to maintain data integrity and consistency. The system ensures accuracy, avoids redundancy, and supports efficient querying, making it suitable for academic learning and real world applications.

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3. Objective

The objective of this database system is to:

- **Store customer details**
- **Maintain hotel and room information**

- **Record bookings**
- **Track payments**
- **Establish relationships between entities**

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3. Entities and Attributes

3.1 Customer

- **customer_id (Primary Key)**
- **name**
- **email**
- **phone**
- **address**

3.2 Hotel

- **hotel_id (Primary Key)**
- **hotel_name**
- **location**
- **rating**

- **contact_number**

3.3 Reservation

- **reservation_id (Primary Key)**
- **room_type**
- **check_in**
- **check_out**
- **customer_id(Foreign Key)**

3.4 Admin

- **admin_id (Primary Key)**
- **name**
- **email**
- **phone**
- **hotel_id (Foreign Key)**

3.5 Payment

- **payment_id (Primary Key)**

- **amount**
- **payment_method**
- **payment_date**
- **reservation_id (Foreign Key)**

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4. Relationships Between Entities

- One Customer can make multiple Reservations (1:M).
- One Hotel can have multiple Reservations (1:M).
- One Reservation can have multiple Payments (1:M).
- One Hotel can have multiple Admins (1:M).

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6. Advantages of This Database Design

- **Eliminates duplicate data**
- **Maintains data integrity**
- **Ensures structured storage**
- **Supports fast queries**
- **Easy to maintain and update**

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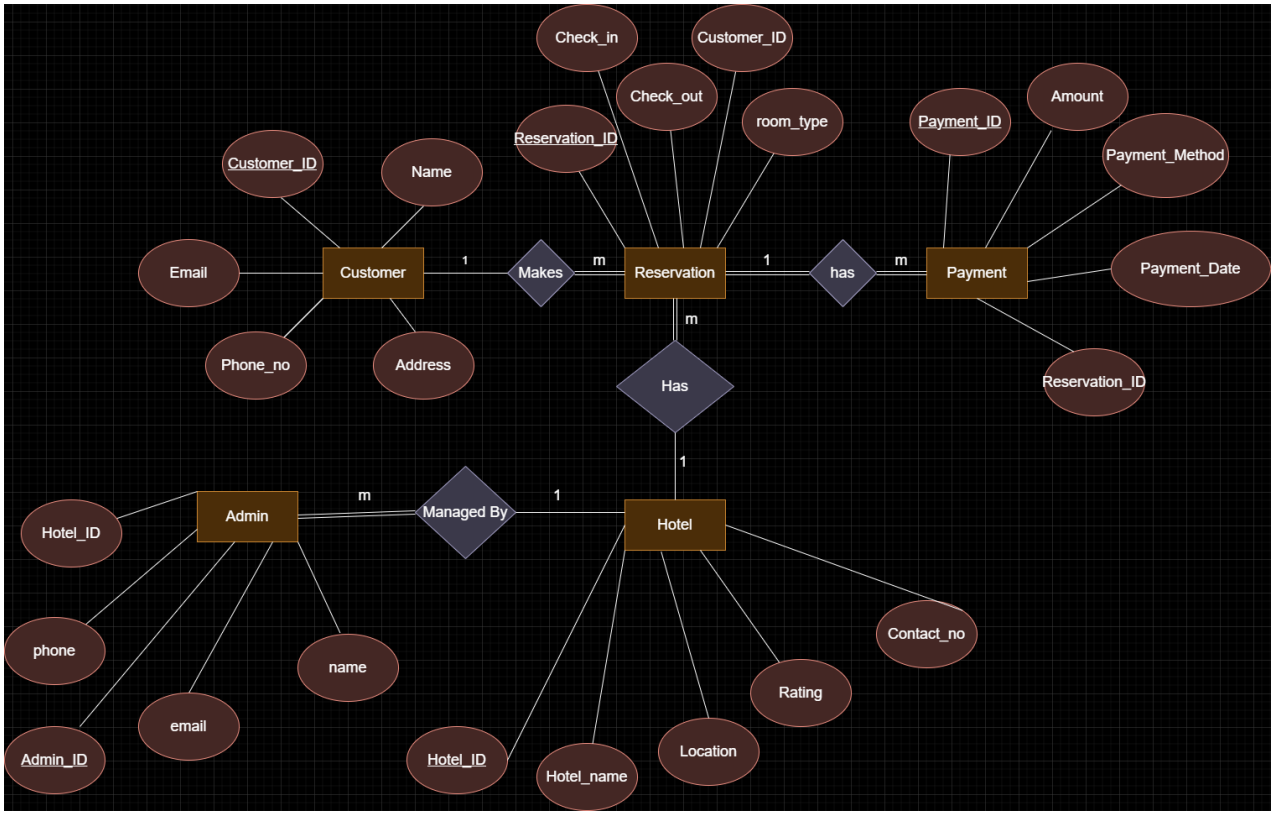
7. Conclusion

The Hotel Booking System database is a well-structured relational model that efficiently manages hotel reservations. It clearly defines entities, attributes, and relationships, ensuring accurate data storage and retrieval. This design supports real-world booking operations and can be expanded in the future to include additional features such as staff management or online payment gateways.

E-R DIAGRAM :


Check_in
Customer_ID
Check_out
room_type
Reservation_ID
Payment_ID
Amount
Payment_Method
Customer_ID
Name
Email
Customer
1
Makes
m
Reservation
1
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Payment
Payment_Date
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Address
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1
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1
Hotel
Hotel_ID
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name
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Rating
email
Admin_ID
Hotel_ID
Hotel_name
Location