Hotel Management System – DBMS Project

Progress Report

Team Members:
 Dixit Prajapati (dp81128n@pace.edu)
 Anitta Jaison (aj61057n@pace.edu)
 Neha Mukunda (nm21277n@pace.edu)

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1. Project Summary

This project simulates a real-world **Hotel Operations Management System**, developed using **MySQL**. It supports the following operations:

- Room bookings

- Guest management

- Check-in and check-out processing

- Payment and invoice tracking

- Reporting and business insights:

    - Daily and monthly revenue

    - Guest booking history

    - Room occupancy rate

    - Average Daily Rate (ADR)

    - Revenue Per Available Room (RevPAR)

    - Room usage stats and frequency

    - Revenue by hotel and room type

    - Discount summaries and payment status

2. Overview

#	Milestone
1	Requirement analysis, planning, version control setup
2	Schema design, table creation, constraints and keys
3	Sample data population and insert scripts for all tables
4	Room booking logic, check-in/check-out features, room status updates
5	Advanced SQL queries (revenue, occupancy, ADR, RevPAR, guest history)
6	Financial tracking: invoices, discounts, payments, reporting
7	SQL optimization: indexing and error handling
8	ER Diagram creation, documentation & presentation prep (In Progress)

3. Completed Technical Components

Component	Description
Database Schema	18 interlinked tables with primary/foreign keys
Sample Data	Full dataset using clean `INSERT INTO` scripts
Room Logic	Booking, availability checks, room status updates
Guest Handling	Guest creation, retrieval, and booking association
Check-in/Check-out	SQL queries to update and manage room state
Invoice Management	Invoices with tax, total, discount integration
Reports	Daily/monthly revenue, ADR, RevPAR, occupancy rate
Guest History	Booking history, total amount spent, last stay
Discount Handling	Discounts applied by room type or dates
Indexed Queries	Performance-optimized fields (e.g., guest ID, status)
Views	SQL views for financial and guest reports
ER Diagram	Diagram of database structure

4.   Project Status Summary

Component	Status
Database schema and relationships	Completed
Sample data and insertion scripts	Completed
Room booking & check-in/out logic	Completed
Report queries and KPIs	Completed
Invoice, discount tracking	Completed
SQL indexing and optimization	Completed
ER Diagram export	Completed
Presentation slides	In Progress - Dixit, Anitta, Neha

5.   Deliverables Overview

- `01_hotel_management_schema.sql` — Database schema definition

- `02_hotel_management_data_v5.sql` — Sample data insertion scripts

- `03_Query for Transaction Booking & Invoice.sql` — Booking and invoice queries

- `04_Adv SQL Query for General Reporting.sql` — General reporting queries

- `05_Adv SQL Query for Financial Reporting.sql` — Financial reporting queries

- `06_Hotel Management ER Diagram` — Database structure diagram

- `Project Progress Report.pdf` — Project documentation

- `GitHub Repository` — Full project source code