

Tourism Department Office Project Charter

Project Title: Hotel Booking Analytics for Cancellation Trends and Most Booked Hotel Insights

Course Name & Code: **MSIT 611 - Data Warehouse Technology and Implementation**

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1 Executive Summary, Project Purpose, and Goals

1.1 Executive Summary

The Hotel Booking Analytics for Cancellation Trends and Most Booked Hotel Insights project aims to implement a centralized, cloud-based data warehouse designed specifically for the hospitality sector. By integrating booking data from multiple channels and locations, the system will provide hotel management with powerful analytical tools to track booking patterns, identify the most frequently booked hotels, and uncover the primary causes of cancellations. This data-driven approach will enable management to make informed strategic decisions, optimize pricing and promotions, improve occupancy rates, and reduce financial losses from cancellations. The project's ultimate goal is to transform raw booking data into actionable insights that drive customer retention, revenue growth, and operational efficiency across the hotel network.

1.2 Project Purpose

To build a cloud-based data warehouse system that consolidates and analyzes hotel booking data from multiple platforms and locations, enabling management to monitor cancellation patterns, identify top-performing hotels, and develop strategies to enhance customer retention. By leveraging analytics, the system will provide actionable insights into booking behavior, seasonal trends, and revenue impact, allowing hotel operators to optimize pricing models, improve occupancy rates, and reduce losses from cancellations.

1.3 Project Goals and Objectives

Achieve measurable improvements in hotel performance, including a 15% reduction in booking cancellations, a 10% increase in occupancy rates for underperforming hotels, and a 20% improvement in the accuracy of revenue forecasting. The goal is to utilize advanced analytics to enhance decision-making processes in hotel management, optimize promotional strategies, and strengthen customer loyalty programs. By implementing a centralized data warehouse and real-time reporting tools, the project seeks to improve operational efficiency, maximize revenue potential, and provide hotel executives with actionable insights to sustain long-term business growth.

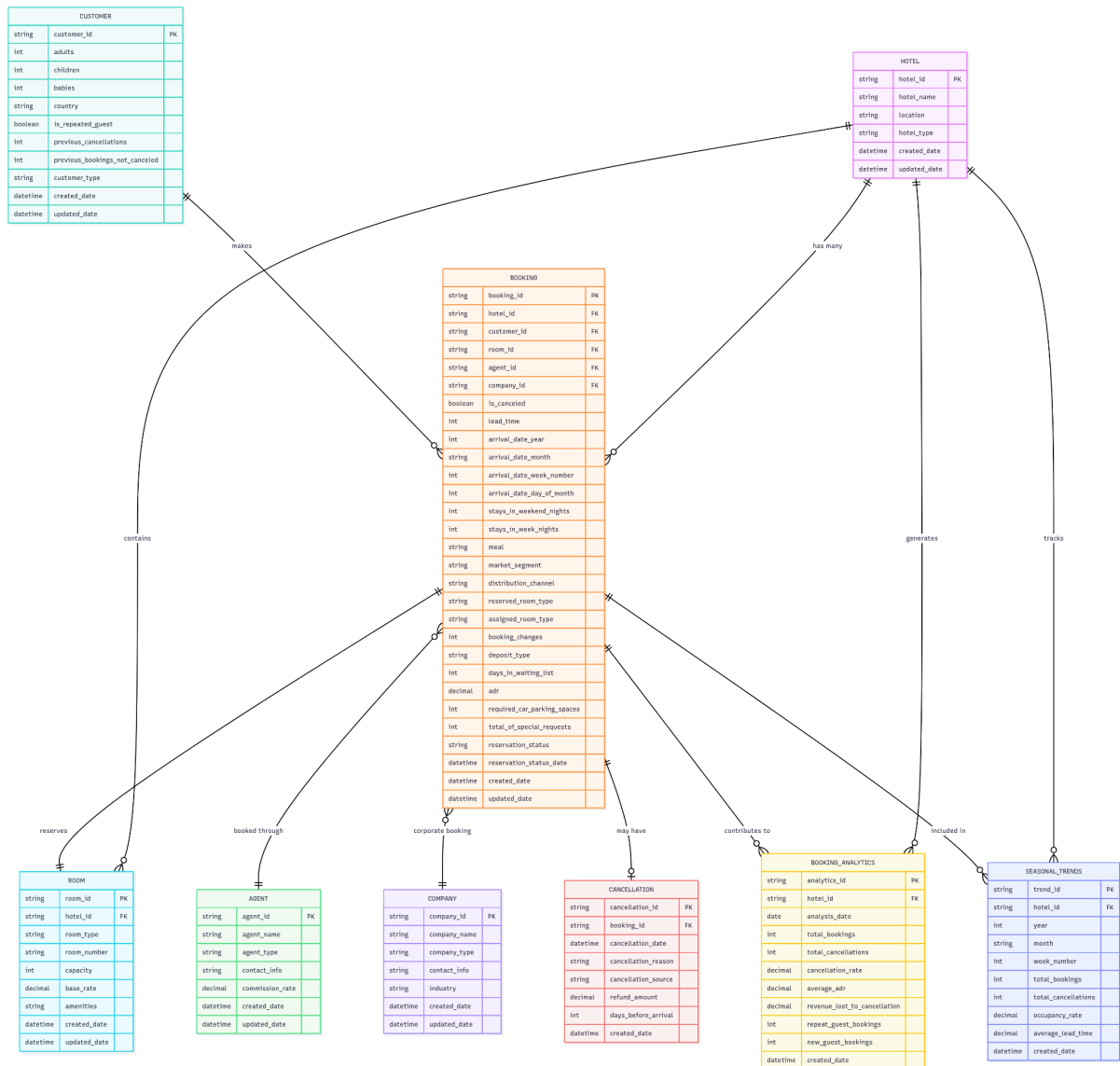
2. Business Question, ERD and Entity Descriptions

2.1 Business Question

1. "Which hotels have the highest confirmed bookings over the past year, and during which months or seasons do they peak?"
2. "What are the most common reasons for booking cancellations, and how do these vary by location, booking channel, or customer segment?"

3. "What is the financial impact of booking cancellations, and what cost savings can be achieved through targeted retention strategies?"
4. "Based on historical booking data, what promotional campaigns or pricing adjustments can optimize occupancy rates across all hotel locations?"

2.2 Entity-Relationship Diagram



2.3 Entity Descriptions

Core Entities:

1. **HOTEL:** Centralizes hotel information for tracking "most booked hotels"
2. **CUSTOMER:** Consolidates guest data across bookings for repeat customer analysis.
3. **BOOKING:** Main transactional entity containing all booking details
4. **CANCELLATION:** Dedicated entity for detailed cancellation analysis

Analytics Entities:

1. **BOOKING_ANALYTICS:** Pre-aggregated metrics for performance dashboards
2. **SEASONAL_TRENDS:** Time-based analysis for identifying booking patterns

Supporting Entities:

3. **ROOM, AGENT, COMPANY:** Normalize related data for better analysis