Group M: Dhruv and Jason

Business Analysis Report : Last Resort Hotels

1. Introduction

Last Resort Hotels has expanded rapidly across multiple large-scale properties, creating a highly complex operational environment. With thousands of rooms, versatile meeting spaces, and continuous service usage, the company requires a centralized, reliable system to manage reservations, events, billing, and guest activity.

A modern relational database provides the foundation for integrating all of these functions, improving efficiency, enhancing the guest experience, and enabling data-driven decisions in a competitive hospitality industry.

2. Business Overview

2.1 Core Operations

The hotel serves two main customer groups:

- **Guests** booking sleeping rooms.
- **Hosts** (individuals or organizations) booking meeting rooms and event spaces.
  These customers interact with numerous facilities including sleeping rooms, event rooms, dining services, recreational amenities, and health clubs.

These segments interact with a wide range of facilities and services, including rooms, event spaces, dining services, housekeeping, recreational amenities, and health clubs.

2.2 Room Types and Complexity

- **Sleeping Rooms:** Varied by bed type, smoking preference, location, and capacity.
- **Suites:** Combine sleeping and meeting capabilities under a single access point.
- **Meeting Rooms:** Different sizes and uses; some convertible into sleeping rooms.
- **Outdoor Areas:** Function as event spaces.
  Because many spaces can serve multiple purposes, scheduling and assigning rooms is operationally complex.

The same physical space may serve multiple functions depending on guest needs, which significantly increases scheduling and tracking complexity.

2.3 Facility Structure

Hotel complexes are organized hierarchically:

- **Building → Wing → Floor → Room**.
  Wings have unique characteristics such as proximity to pools or accessibility features, which are key factors in reservation decisions.

3. Key Business Processes

3.1 Reservations

- Reservations are made well in advance, often up to two years, and depend on multiple guest preferences: bed type, location, smoking policy, proximity to facilities, and event needs.
- Specific room assignments are made closer to arrival due to potential maintenance or renovation issues.
- Allocation follows a lowest-number assignment logic within wings and floors.

3.2 Events and Meetings

- Events can involve multiple rooms, hosts, and guests.
- Pricing for meeting rooms varies by **time slot** (e.g., breakfast, lunch, evening) and includes discounts or waivers based on guest volume.
- Events are closely tied to guest reservations, requiring the system to link meeting room bookings with sleeping room allocations.

3.3 Billing and Payments

- Each service usage (room, food, drinks, facilities, etc.) generates a charge recorded in real time.
- Billing may be:
  - **Single party billing** (e.g., corporate host pays for event).
  - **Split billing** (e.g., multiple guests sharing a room).
- Accuracy and timeliness are critical: the system must reflect all charges instantly to avoid discrepancies during checkout.

3.4 Customer Relationship Management

- Returning guests have profiles reflecting their history, payment behavior, and flexibility, influencing deposit requirements and booking privileges.

- Hosts may represent organizations, requiring tracking of both individual and organizational relationships.

3.5 Operational Efficiency

- Housekeeping, maintenance, and availability are continuously updated through magnetic card entries.
- Room statuses (cleaned, occupied, undergoing maintenance, reserved) are dynamic and must be accessible in real time to the staff.

4. Challenges in the Current System

4.1 Complex Room Configurations:

- Rooms with convertible functions and multiple adjacency rules make manual tracking inefficient and error-prone.

4.2 Fragmented Information:

- Billing, reservations, housekeeping, and events are interconnected but handled separately, creating gaps and delays.

4.3 High Data Volume:

- Thousands of rooms, services, and transactions per day across multiple buildings require a scalable data solution.

4.4 Lack of Real-Time Access:

- Without instant visibility, staff cannot make quick, informed decisions to accommodate guest requests.

4.5 Customer Experience Risk:

- Operational inefficiencies can lead to delays, double bookings, billing errors, and poor service.

5. Role of the Database System

The integrated SQL database centralizes all operational data and provides:

- **Reliable data integrity** via PK/FK constraints and normalized structures.
- **Real-time availability** of rooms, events, and status updates.
- **Efficient billing workflows** linking charges, events, and room assignments.
- **Scalability** to support new hotel properties and additional service types.
- **Advanced reporting capabilities** for revenue, occupancy, service usage, and customer behavior.

6. Proposed Entities and Data Relationships (ERD)

The ERD reflects all major business areas, including rooms, room types, reservations, events, customers, billing, services, and operational tracking. **The interactive ERD was reverse-engineered in MySQL Workbench from the implemented schema.**

https://drive.google.com/file/d/1C3fNh8QrjzfxlNZHH1QlJxSHQ-zt_mnU/view?usp=sharing

7. Strategic Benefits

7.1 Operational Efficiency:

- A single, well-organized system will make it much easier for staff to manage room assignments, billing, and event scheduling. This means less time spent on manual work and fewer chances for errors.

7.2 Better Guest Experience:

- With accurate, real-time information, the hotel can offer more personalized service, handle changes quickly, and make every guest's stay smoother and more enjoyable.

7.3 Smarter Use of Resources:

- Clear visibility into how spaces and services are used will help the hotel cut down on unnecessary costs, avoid mistakes, and make better use of staff and facilities.

7.4 More Revenue Opportunities:

- A more connected system makes it easier to adjust pricing, offer add-ons, and upsell services in ways that feel natural to guests — helping the hotel grow its revenue without adding pressure on operations.

7.5 Scalability for Growth:

- Because the system is designed to be flexible, it can easily adapt as the hotel expands to new properties or adds new services, without needing to rebuild everything from scratch.

8. Conclusion

Last Resort Hotels operates in a complex hospitality environment where reservations, events, billing, and guest interactions are deeply interconnected. A well-designed relational database provides the structure needed to manage this complexity, improve operational performance, enhance the guest experience, and enable strategic decision-making.

This system becomes the backbone of the hotel's future growth, ensuring it remains competitive while delivering high-quality service at scale.