

HOTEL BOOKINGS ANALYSIS

The hotel industry depends on data to enhance guest experience and optimize business operations. In this SQL project, you will analyze a hotel reservation dataset to uncover patterns in guest behavior, booking trends, pricing, and room preferences.

You will write SQL queries to answer practical questions and support data-driven decisions — a critical skill for roles in data analytics and business intelligence.

Dataset Fields:

- `Booking_ID`: Unique ID for each booking
- `no_of_adults`: Number of adults
- `no_of_children`: Number of children
- `no_of_weekend_nights`: Weekend nights booked
- `no_of_week_nights`: Weekday nights booked
- `type_of_meal_plan`: Meal plan selected
- `room_type_reserved`: Room type
- `lead_time`: Days between booking and arrival
- `arrival_date`: Arrival date
- `market_segment_type`: Source of booking (Online, Offline, etc.)
- `avg_price_per_room`: Average price per room
- `booking_status`: Confirmed or Canceled

Write SQL queries to answer the following:

1. What is the total number of reservations in the dataset?
2. Which meal plan is the most popular among guests?
3. What is the average price per room for reservations involving children?
4. How many reservations were made for the year 20XX (replace XX with the desired year)?
5. What is the most commonly booked room type?

6. How many reservations fall on a weekend (`no_of_weekend_nights > 0`)?
7. What is the highest and lowest lead time for reservations?
8. What is the most common market segment type for reservations?
9. How many reservations have a booking status of "Confirmed"?
10. What is the total number of adults and children across all reservations?
11. Rank room types by average price within each market segment.
12. Find the top 2 most frequently booked room types per market segment.
13. What is the average number of nights (both weekend and weekday) spent by guests for each room type?
14. For reservations involving children, what is the most common room type, and what is the average price for that room type?
15. Find the market segment type that generates the highest average price per room.

How to Import `hotel_bookings.csv` into MySQL

To import the `hotel_bookings.csv` file into MySQL, follow either of the two methods below: using MySQL Workbench (recommended) or using SQL commands.

- Open MySQL Workbench and connect to your MySQL server.
- Create a new database using the query:
`CREATE DATABASE hotel_db; USE hotel_db;`
- In the left panel, right-click on the `hotel_db` schema and select "Table Data Import Wizard".
- Browse and select the `hotel_bookings.csv` file from your system.
- Choose the option to create a new table and name it `hotel_bookings`.
- MySQL Workbench will attempt to auto-detect column names and types. Review and make changes if needed.
- Click "Next" through the wizard steps and finish the import process.

- After successful import, verify the data using:
`SELECT * FROM hotel_bookings LIMIT 10;`