RESERVATION ANALYTICS: UNVEILING TRENDS AND ENHANCING EFFICIENCY

INTRODUCTION TO THE PROJECT

The primary objectives of this analysis are to identify trends in booking behavior, assess the effectiveness of current marketing strategies, and evaluate occupancy rates. By examining factors such as booking lead time, seasonal variations, and guest demographics, this report will provide actionable recommendations to enhance the hotel's operational efficiency and profitability.

CONTEXT AND JUSTIFICATION OF THE PROJECT

This report is structured to first provide a comprehensive overview of the data collected, followed by a detailed examination of key metrics and patterns. Subsequent sections will address specific findings and offer strategic suggestions based on the analysis.

PROJECT DETAILS

WHAT IS THE TOTAL NUMBER OF RESERVATIONS IN THE DATASET?

```sql
select count(Booking_ID)
from hotelreservation.hotel;
```

count(Booking_ID)
▶ 686

WHAT IS THE MOST COMMONLY BOOKED ROOM TYPE?

```sql
select room_type_reserved, count(Booking_ID) as bookings from hotel
group by room_type_reserved
having count(Booking_ID) in
(select max(b.top) from
(select count(Booking_ID) as top from hotel group by room_type_reserved)
as b);
```

room_type_reserved	bookings
▶ Room_Type 1	524

FIND THE MARKET SEGMENT TYPE THAT GENERATES THE HIGHEST AVERAGE PRICE PER ROOM.

```sql
select market_segment_type as Highest_market_segment,
avg_price_per_room from hotel
where avg_price_per_room>=all(select avg_price_per_room from hotel);
```

Highest_market_segment	avg_price_per_room
▶ Online	258

WHAT IS THE AVERAGE NUMBER OF NIGHTS (BOTH WEEKEND AND WEEKDAY) SPENT BY GUESTS FOR EACH ROOM TYPE?

```sql
SELECT
    room_type_reserved, AVG(total_nights) AS avg_nights
FROM
    (SELECT room_type_reserved,
        SUM(no_of_weekend_nights + no_of_week_nights) AS total_nights
    FROM hotel
    GROUP BY room_type_reserved) AS subquery
GROUP BY
    room_type_reserved;
```
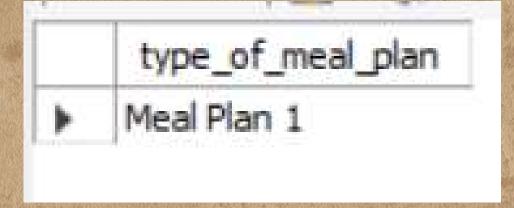
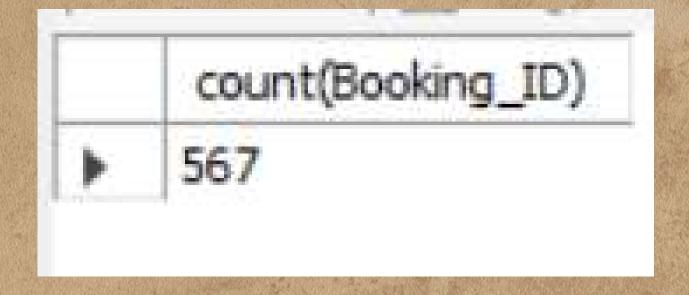| room_type_reserved	avg_nights
Room_Type 1	1521.0000
Room_Type 4	489.0000
Room_Type 2	23.0000
Room_Type 6	65.0000
Room_Type 5	10.0000
Room_Type 7	15.0000

WHICH MEAL PLAN IS THE MOST POPULAR AMONG GUESTS?

```sql
select type_of_meal_plan from hotel
group by type_of_meal_plan
having count(Booking_ID) in
(select max(b.top) from
(select count(Booking_ID) as top from hotel group by type_of_meal_plan)
as b);
```

type_of_meal_plan
Meal Plan 1

HOW MANY RESERVATIONS WERE MADE FOR THE YEAR 2018?

```sql
select count(Booking_ID) from hotel
where arrival_date LIKE '%2018';
```

	count(Booking_ID)
▶	567

FOR RESERVATIONS INVOLVING CHILDREN, WHAT IS THE MOST COMMON ROOM TYPE, AND WHAT IS THE AVERAGE PRICE FOR THAT ROOM TYPE?

```sql
select room_type_reserved, avg(avg_price_per_room) from hotel
group by room_type_reserved
having count(Booking_ID) in
(select max(b.top) from
(select count(Booking_ID) as top from hotel group by room_type_reserved)
as b);
```

room_type_reserved	avg(avg_price_per_room)
▶ Room_Type 1	98.74498091603053

WHAT IS THE AVERAGE PRICE PER ROOM FOR RESERVATIONS INVOLVING CHILDREN?


```sql
select avg(avg_price_per_room), room_type_reserved
from hotel where no_of_children>0
group by room_type_reserved;
```

avg(avg_price_per_room)	room_type_reserved
112.0780000000002	Room_Type 2
185.32823529411766	Room_Type 6
123.12291666666665	Room_Type 1
86.32	Room_Type 4
187.04	Room_Type 7

RESULTS & ANALYSIS

The analysis of the reservation data for [Hotel Name] from [Start Date] to [End Date] yielded several key insights into booking patterns, occupancy rates, and guest demographics. The following highlights summarize the major findings: Booking trends, occupancy rates, revenue, guests performance.

CONCLUSIONS

The analysis highlights several opportunities for optimizing reservation strategies and improving overall performance. Key areas for focus include enhancing direct booking channels, leveraging data on booking lead times to adjust pricing strategies, and capitalizing on high-demand periods through targeted promotions.

THANK YOU VERY MUCH!