

## MENTORNESS INTERNSHIP TASK 2:- BY RAJ GUDHKA

### Hotel Reservation Analysis with SQL:-

1. What is the total number of reservations in the dataset?

```
SELECT COUNT(Booking_ID) AS total_reservation  
FROM hotel_data;
```

total_reservation
700

2. Which meal plan is the most popular among guests?

```
SELECT type_of_meal_plan, COUNT(type_of_meal_plan) AS total_count FROM hotel_data  
GROUP BY type_of_meal_plan  
ORDER BY COUNT(type_of_meal_plan) DESC  
LIMIT 1;
```

	type_of_meal_plan	total_count
▶	Meal Plan 1	527

3. What is the average price per room for reservations involving children?

```
SELECT ROUND(AVG(avg_price_per_room),1) AS avg_price_per_room_for_children  
FROM hotel_data  
WHERE no_of_children >0 ;
```

avg_price_per_room_for_children
144.6

4. How many reservations were made for the year 20XX (replace XX with the desired year)?

```
SELECT YEAR(arrival_date) AS year ,COUNT(*) AS total_reservations FROM hotel_data  
GROUP BY YEAR(arrival_date)  
ORDER BY YEAR(arrival_date) ASC ;
```

year	total_reservations
2017	123
2018	577

5. What is the most commonly booked room type?

```
SELECT room_type_reserved, COUNT(room_type_reserved) AS total_booking FROM hotel_data
GROUP BY room_type_reserved
ORDER BY COUNT(room_type_reserved) DESC
LIMIT 1;
```

room_type_reserved	total_booking
Room_Type 1	534

6. How many reservations fall on a weekend (no\_of\_weekend\_nights > 0)?

```
SELECT COUNT(*) AS total_weekend_reservations
FROM hotel_data
WHERE no_of_weekend_nights > 0 ;
```

total_weekend_reservations
383

7. What is the highest and lowest lead time for reservations?

```
SELECT MAX(lead_time) AS highest_lead_time, MIN(lead_time) AS lowest_lead_time
FROM hotel_data;
```

highest_lead_time	lowest_lead_time
443	0

8. What is the most common market segment type for reservations?

```
SELECT market_segment_type, COUNT(*) AS total_reseervations FROM hotel_data
GROUP BY market_segment_type
ORDER BY COUNT(*) DESC
LIMIT 1;
```

market_segment_type	total_reseervations
Online	518

9. How many reservations have a booking status of "Confirmed"?

```
SELECT COUNT(*) AS confirmed_reservations FROM hotel_data
WHERE booking_status = "Not_Canceled";
```

confirmed_reservations
493

10. What is the total number of adults and children across all reservations?

```
SELECT SUM(no_of_adults) AS total_adults, SUM(no_of_children) AS total_children
FROM hotel_data;
```

total_adults	total_children
1316	69

11. What is the average number of weekend nights for reservations involving children?

```
SELECT ROUND(AVG(no_of_weekend_nights),2) AS avg_weekend_nights_for_children
FROM hotel_data
WHERE no_of_children > 0;
```

avg_weekend_nights_for_children
1.00

12. How many reservations were made in each month of the year?

```
SELECT MONTH(arrival_date) AS month, MONTHNAME(arrival_date) AS month_name, COUNT(*) AS total_reservations
FROM hotel_data
GROUP BY MONTH(arrival_date) ,MONTHNAME(arrival_date)
ORDER BY COUNT(*) DESC ;
```

	month	month_name	total_reservations
▶	1	January	11
	2	February	28
	3	March	52
	4	April	67
	5	May	55
	6	June	84
	7	July	44
	8	August	70
	9	September	80
	10	October	103
	11	November	54
	12	December	52

13. What is the average number of nights (both weekend and weekday) spent by guests for each room type?

```
SELECT room_type_reserved, ROUND(AVG(no_of_weekend_nights + no_of_week_nights),2) AS avg_total_nights FROM hotel_data
GROUP BY room_type_reserved
ORDER BY AVG(no_of_weekend_nights + no_of_week_nights) DESC ;
```

room_type_reserved	avg_total_nights
Room_Type 4	3.80
Room_Type 6	3.61
Room_Type 2	3.00
Room_Type 1	2.88
Room_Type 7	2.67
Room_Type 5	2.50

14. For reservations involving children, what is the most common room type, and what is the average price for that room type?

```
SELECT room_type_reserved, COUNT(*) AS total_reservations , ROUND(AVG(avg_price_per_room),2) AS avg_price_per_room
FROM hotel_data
WHERE no_of_children > 0
GROUP BY room_type_reserved
ORDER BY COUNT(*) DESC
LIMIT 1 ;
```

room_type_reserved	total_reservations	avg_price_per_room
Room_Type 1	24	123.12

- 15) Find the market segment type that generates the highest average price per room.

```
SELECT market_segment_type , ROUND(AVG(avg_price_per_room),2) AS highest_avg_price_per_room
FROM hotel_data
GROUP BY market_segment_type
ORDER BY highest_avg_price_per_room DESC
LIMIT 1;
```

market_segment_type	highest_avg_price_per_room
Online	112.46