

Overview

 In the hotel industry, information helps make guest stays more enjoyable. I analyzed hotel booking data to understand guest preferences, booking behaviors, and factors impacting the hotel's success. Using SQL, I sifted through the data to find precise answers to key questions.

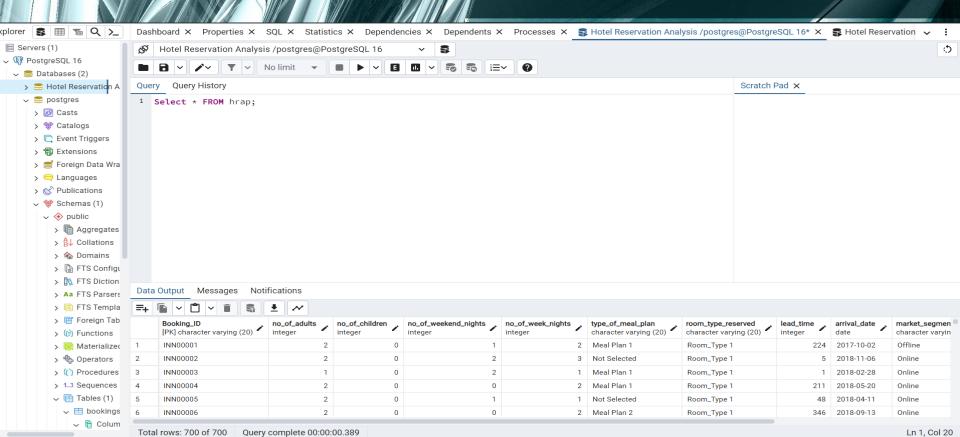
Dataset Details

- Booking ID: A unique identifier for each hotel reservation.
- no_of_adults: The number of adults in the reservation.
- no_of_children: The number of children in the reservation.
- no_of_weekend_nights: The number of nights in the reservation that fall on weekends.
- no_of_week_nights: The number of nights in the reservation that fall on weekdays.
- type_of_meal_plan: The meal plan chosen by the guests.
- room_type_reserved: The type of room reserved by the guests.
- lead_time: The number of days between booking and arrival.
- arrival_date: The date of arrival.
- market_segment_type: The market segment to which the reservation belongs.
- avg_price_per_room: The average price per room in the reservation.
- booking_status: The status of the booking.

Excel

1	А	В	С	D	E	F	G	Н	I	J	К	L
1	Booking_ID r	no_of_adults	no_of_children	no_of_weekend_nights	no_of_week_nights	type_of_meal_plan	room_type_reserved	lead_time	arrival_date	market_segment_type	avg_price_per_room	booking_statu
2	INN00001	2	0	1		2 Meal Plan 1	Room_Type 1	224		_	6	5 Not_Canceled
3	INN00002	2	0	2		3 Not Selected	Room_Type 1	5	06-11-2018	Online	106.6	8 Not_Canceled
4	INN00003	1	0	2		1 Meal Plan 1	Room_Type 1	1	07-11-2018	3 Online	6	0 Canceled
5	INN00004	2	0	0		2 Meal Plan 1	Room_Type 1	211	08-11-2018	Online	10	0 Canceled
6	INN00005	2	0	1		1 Not Selected	Room_Type 1	48	09-11-2018	Online	94.	5 Canceled
7	INN00006	2	0	0)	2 Meal Plan 2	Room_Type 1	346	10-11-2018	3 Online	11	5 Canceled
8	INN00007	2	0	1		3 Meal Plan 1	Room_Type 1	34	11-11-2018	3 Online	107.5	5 Not_Canceled
9	1NN00008	2	0	1		3 Meal Plan 1	Room_Type 4	83	12-11-2018	3 Online	105.6	1 Not_Canceled
10	INN00009	3	0	0	,	4 Meal Plan 1	Room_Type 1	121	13-11-2018	Offline	96.	9 Not_Canceled
11	INN00010	2	0	0	!	5 Meal Plan 1	Room_Type 4	44	14-11-2018	3 Online	133.4	4 Not_Canceled
12	INN00011	1	0	1		0 Not Selected	Room_Type 1	C	15-11-2018	3 Online	85.0	3 Not_Canceled
13	INN00012	1	0	2		1 Meal Plan 1	Room_Type 4	35	16-11-2018	3 Online	140.	4 Not_Canceled
14	INN00013	2	0	2		1 Not Selected	Room_Type 1	30	17-11-2018	3 Online	8	8 Canceled
15	INN00014	1	0	2	!	0 Meal Plan 1	Room_Type 1	95	18-11-2018	3 Online	9	0 Canceled
16	INN00015	2	0	0		2 Meal Plan 1	Room_Type 1	47	19-11-2018	3 Online	94.	5 Not_Canceled
17	INN00016	2	0	0)	2 Meal Plan 2	Room_Type 1	256	20-11-2018	3 Online	11	5 Canceled
18	INN00017	1	0	1		0 Meal Plan 1	Room_Type 1	C	21-11-2018	Offline	9	6 Not_Canceled
19	INN00018	2	0	1		3 Not Selected	Room_Type 1	1	22-11-2018	3 Online	9	6 Not_Canceled
20	INN00019	2	0	2		2 Meal Plan 1	Room_Type 1	99	23-11-2018	3 Online	6	5 Canceled
21	INN00020	2	0	1		0 Meal Plan 1	Room_Type 1	12	24-11-2018	Offline	7.	2 Not_Canceled
22	INN00021	2	0	2		2 Meal Plan 1	Room_Type 1	99	25-11-2018	3 Online	6	5 Canceled
23	INN00022	1	0	0		1 Meal Plan 1	Room_Type 1	122	26-11-2018	3 Corporate	6	7 Not_Canceled
24	INN00023	2	0	2		4 Meal Plan 1	Room_Type 1	2	27-11-2018	Offline	8	5 Not_Canceled
25	INN00024	2	0	0	;	3 Meal Plan 1	Room_Type 1	37	28-11-2018	Offline	10	5 Not_Canceled
26	INN00025	2	0	2		1 Not Selected	Room_Type 1	130	29-11-2018	3 Online	94.	5 Not_Canceled
27	INN00026	2	0	0		2 Meal Plan 1	Room_Type 1	99	30-11-2018	Online	114.	3 Not_Canceled
28	INN00027	2	0	1		1 Meal Plan 1	Room_Type 1	60	01-12-2018	Offline	6	5 Not_Canceled
29	INN00028	1	0	0		2 Meal Plan 1	Room_Type 4	2	02-12-2018	3 Aviation	11	0 Canceled
30	INN00029	1	0	1		2 Meal Plan 1	Room_Type 1	37	03-12-2018	Online	37.3	3 Canceled
31	INN00030	2	0	0		2 Meal Plan 2	Room_Type 1	56	04-12-2018	Offline	8	2 Not_Canceled
32	INN00031	2	0	1		1 Meal Plan 1	Room_Type 4	3	05-12-2018	Online	177.	5 Not_Canceled
// 22	ININIOOOSS	2		3		Mool Dlop 1	Room Tuno 1	107	06 12 2010	Online	07	E Not Canadad

rom CSV File by SQL Server



SQL Query

	total_reservations bigint	â
1	7	00

```
2) Which meal plan is the most popular among guests?

SELECT type_of_meal_plan,

COUNT(*) AS total_bookings

FROM hrap

GROUP BY type_of_meal_plan

ORDER BY total_bookings DESC

LIMIT 1;
```

1 Meal Plan 1 527		type_of_meal_plan character varying (20)	total_bookings bigint
	1	Meal Plan 1	527

	average_price_per_room numeric
1	144.57

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

------

SELECT COUNT(*) AS total_reservations
FROM hrap
WHERE EXTRACT(YEAR FROM arrival_date) = 2017;
```

	total_reservations bigint	•
1	12	3

```
5) What is the most commonly booked room type?
3
  SELECT room_type_reserved, COUNT(*) AS num_bookings
  FROM hrap
5
  GROUP BY room_type_reserved
6
  ORDER BY num_bookings DESC
  LIMIT 1;
8
```

	room_type_reserved character varying (20)	num_bookings bigint	3
1	Room_Type 1	53	4

	num_weekend_reservations bigint	3
1	383	3

```
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

hrap;
```

	highest_lead_time integer	lowest_lead_time integer	â
1	443		0



Т	8)	wnat	15	tne	most	common	market	segment	туре	Tor	
2	res	servat	tior	ns?							

SELECT market_segment_type, **COUNT**(*) **AS** num_reservations

FROM hrap

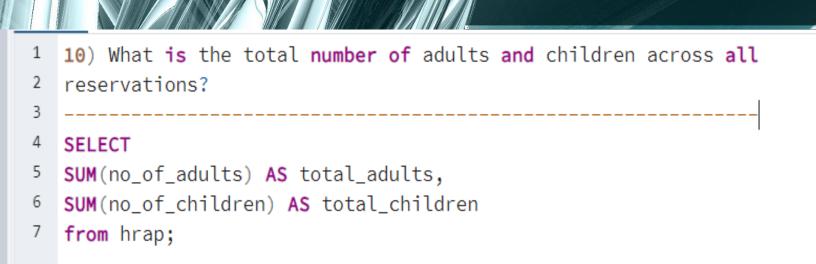
GROUP BY market_segment_type

ORDER BY num_reservations DESC;

	market_segment_type character varying (20)	num_reservations bigint
1	Online	518
2	Offline	140
3	Corporate	27
4	Complementary	14
5	Aviation	1

```
1 9) How many reservations have a booking status of
2 "Confirmed"?
3 ------
4 SELECT COUNT(*) AS num_confirmed_reservations
5 FROM hrap
6 WHERE booking_status = 'Not_Canceled';
7
```

	num_confirmed_reservations bigint
1	493

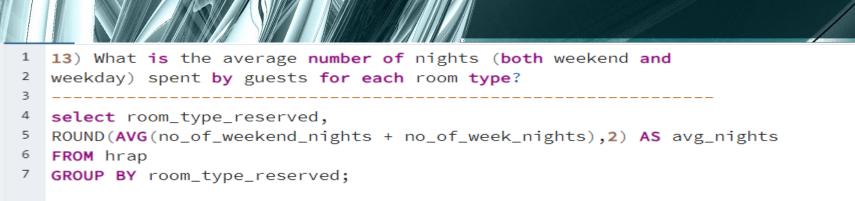


	total_adults bigint	total_children bigint
1	1316	69

```
11) What is the average number of weekend nights for
2
  reservations involving children?
3
4
  SELECT AVG(no_of_weekend_nights) AS avg_weekend_nights
5
  FROM hrap
  WHERE no_of_children > 0;
```

	avg_weekend_nights numeric	â
1	1.0000000000000000000000000000000000000	000

1	12	12. How many reservations were made in each month of the			
2	уe	year?			
3					
4 5	SELECT EXTRACT(MONTH FROM arrival_date) AS month, COUNT(*) AS num_reservations				
6	FR	ROM hrap	AS Hulli_reservacions		
7		GROUP BY EXTRACT(MONTH FROM arrival_date)			
8		ORDER BY month;			
9					
		month numeric	num_reservations bigint		
1		A			
1 2		numeric	bigint		
		numeric 1	bigint 11		
2		numeric 1	bigint 11 28		
2		numeric 1 2 3 4 5	bigint 11 28 52 67 55		
2 3 4 5		numeric 1 2 3 4 5 6	bigint 11 28 25 52 67 55 84		
2 3 4 5 6 7		numeric 1 2 3 4 5 6 7	bigint 11 28 52 67 55 84 44		
2 3 4 5 6 7 8		numeric 1 2 3 4 5 6 7 8	bigint 11 28 52 52 55 55 84 44 70		
2 3 4 5 6 7 8		numeric 1 2 3 4 5 6 7 8 9	bigint 11 28 52 67 55 84 44 70 80		
2 3 4 5 6 7 8 9		numeric 1 2 3 4 5 6 7 8 9 10	bigint 11 28 52 67 55 84 44 70 80 103		
2 3 4 5 6 7 8		numeric 1 2 3 4 5 6 7 8 9	bigint 11 28 52 67 55 84 44 70 80		



	room_type_reserved character varying (20) •	avg_nights numeric
1	Room_Type 7	2.67
2	Room_Type 1	2.88
3	Room_Type 5	2.50
4	Room_Type 2	3.00
5	Room_Type 6	3.61
6	Room_Type 4	3.80

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 AS most_common_room_type,
ROUND(AVG(avg_price_per_room),2) AS average_price
FROM hrap
WHERE no_of_children > 0
GROUP BY room_type_reserved
ORDER BY average_price DESC;

	most_common_room_type character varying (20)	average_price numeric
1	Room_Type 7	187.04
2	Room_Type 6	185.33
3	Room_Type 1	123.12
4	Room_Type 2	112.08
5	Room_Type 4	86.32

1	15) Find the market segment type that generates the highest				
2	average price per room.				
3					
4	<pre>select market_segment_type,</pre>				
5	ROUND(AVG(avg_price_per_room),2) AS average_price				
6	FROM hrap				
7	GROUP BY market_segment_type				
8	ORDER BY average_price DESC;				
	market_segment_type character varying (20)	average_price numeric			
1	Online	112.46			
2	Aviation	110.00			
3	Offline	89.98			
4	Corporate	82.40			
5	Complementary	2.54			



