**Hotel Reservation Analysis with SQL**

In this Project, we will use SQL to answer the questions related to the dataset.

**Dataset Details:**

The dataset includes the following columns:

**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.

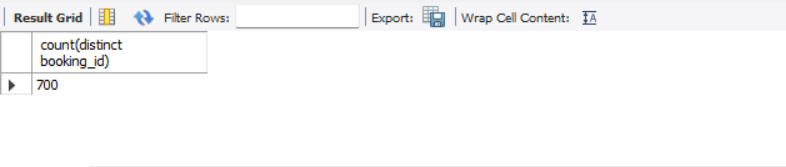
**booking\_status:** The status of the booking.

**Problem statements:**

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

**Answe**r :

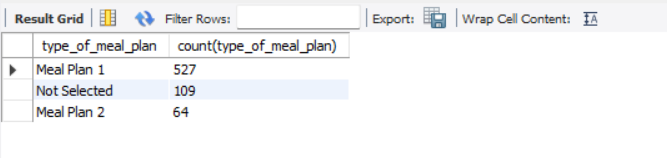
select count(distinct booking\_id) from hotel



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

**Answer .** select type\_of\_meal\_plan ,count(type\_of\_meal\_plan) from hotel

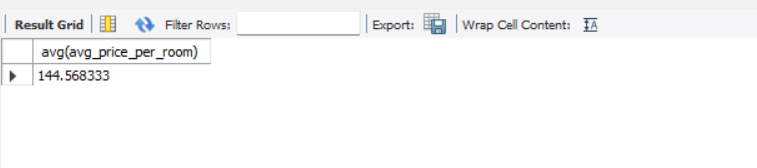
group by type\_of\_meal\_plan



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

**Answer :** select avg(avg\_price\_per\_room) from hotel

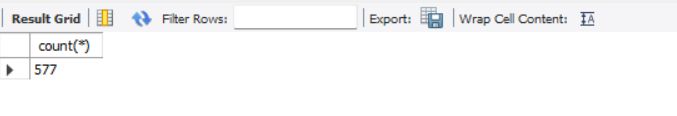
where no\_of\_children > 0 ;

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

**Answer :**

select count(\*) from hotel

where year(arrival\_date) =2018 ;



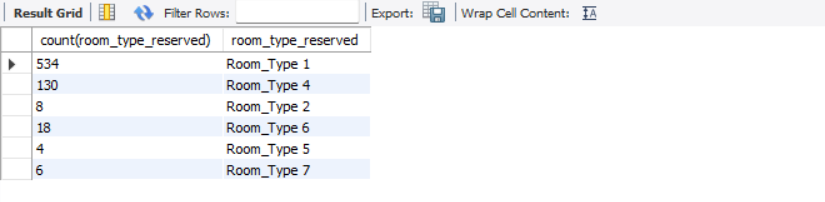
**5. What is the most commonly booked room type?**

**Answer :**

select count(room\_type\_reserved) ,

room\_type\_reserved from hotel

group by room\_type\_reserved;

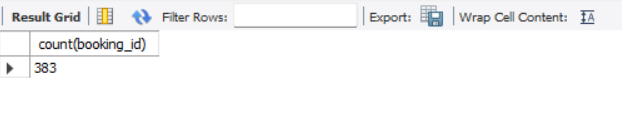
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**6. How many reservations fall on a weekend (no\_of\_weekend\_nights > 0)?**

**Answer:**

select count(booking\_id) from hotel

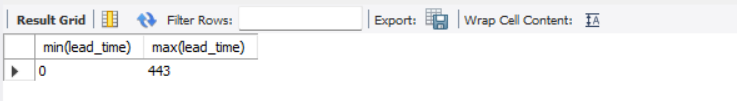
where no\_of\_weekend\_nights > 0

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

**Answer:**

select min(lead\_time) , max(lead\_time) from hotel



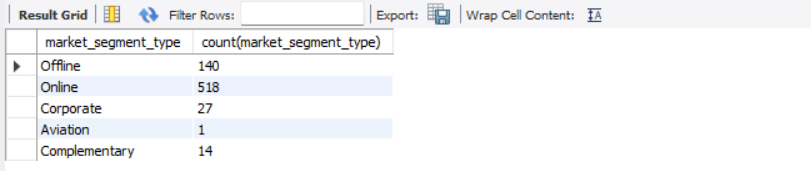
**8. What is the most common market segment type for reservations?**

**Answer :**

select market\_segment\_type , count(market\_segment\_type)

from hotel

group by market\_segment\_type;

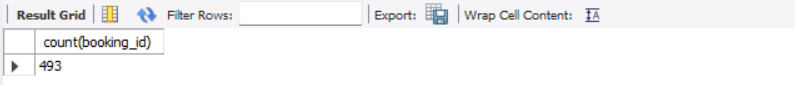


**9. How many reservations have a booking status of "Confirmed"?**

**Answer :**

select count(booking\_id) from hotel

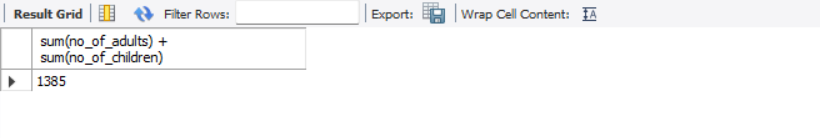
where booking\_status = "Not\_Canceled";

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

**Answer :**

select sum(no\_of\_adults) + sum(no\_of\_children) from hotel

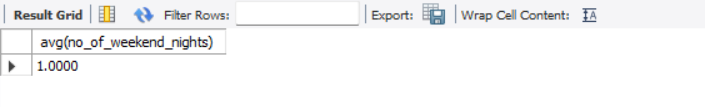


**11. What is the average number of weekend nights for reservations involving children?**

**Answer :**

select avg(no\_of\_weekend\_nights) from hotel

where no\_of\_children>0;

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

**Answer :**

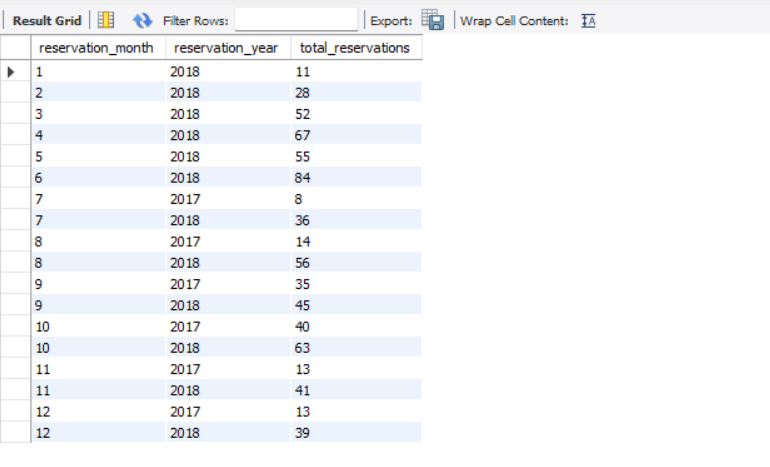
SELECT

MONTH(arrival\_date) AS reservation\_month, year(arrival\_date) AS reservation\_year,

COUNT(\*) AS total\_reservations FROM hotel

GROUP BY reservation\_month,reservation\_year

ORDER BY reservation\_month,reservation\_year

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

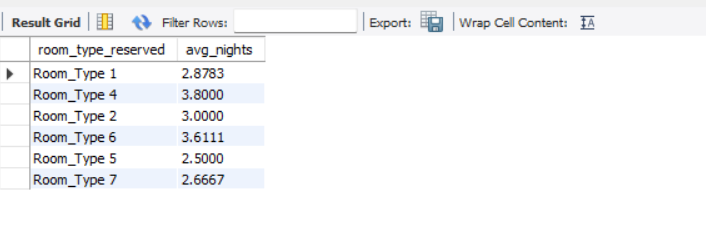
**Type?**

**Answer :**

SELECT room\_type\_reserved, AVG(no\_of\_weekend\_nights + no\_of\_week\_nights) AS avg\_nights

FROM hotel

GROUP BY room\_type\_reserved;

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

**Answer :**

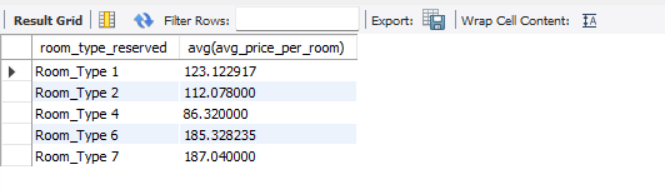
select room\_type\_reserved , avg(avg\_price\_per\_room)

from hotel

where no\_of\_children >0

group by room\_type\_reserved

order by room\_type\_reserved;



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

**Answer :**

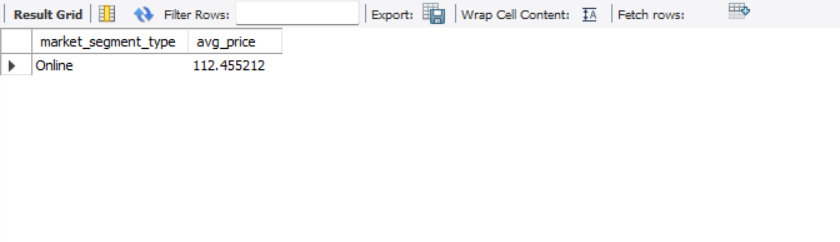
SELECT market\_segment\_type, AVG(avg\_price\_per\_room) AS avg\_price

FROM hotel

GROUP BY market\_segment\_type

ORDER BY avg\_price DESC

LIMIT 1;

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**Thanks for your attention 👏👏👏👏**