HOTEL RESERVATION ANALYSIS USING SQL

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Batch – MIP-DA-10

METHODOLOGY

CREATE DATABASE

CREATE TABLE

IMPORT DATASET

PERFORM ANALYSIS

GET RESULT

DATASET DETAILS

The dataset includes the following column

- 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.

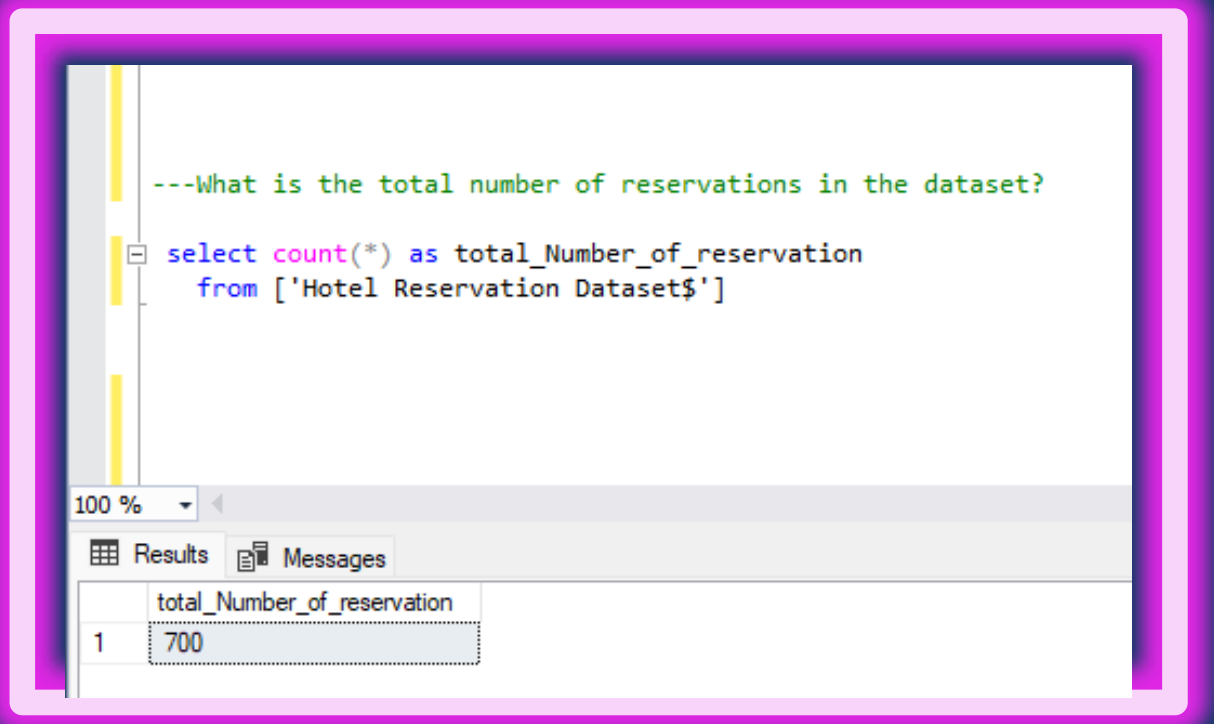
QUESTIONS ANSWERED USING SQL

QUESTION 1

what is the total number of reservationin the dataset

QUERY

select count(*) as total_number_of_reservation
from hotel reservation dataset

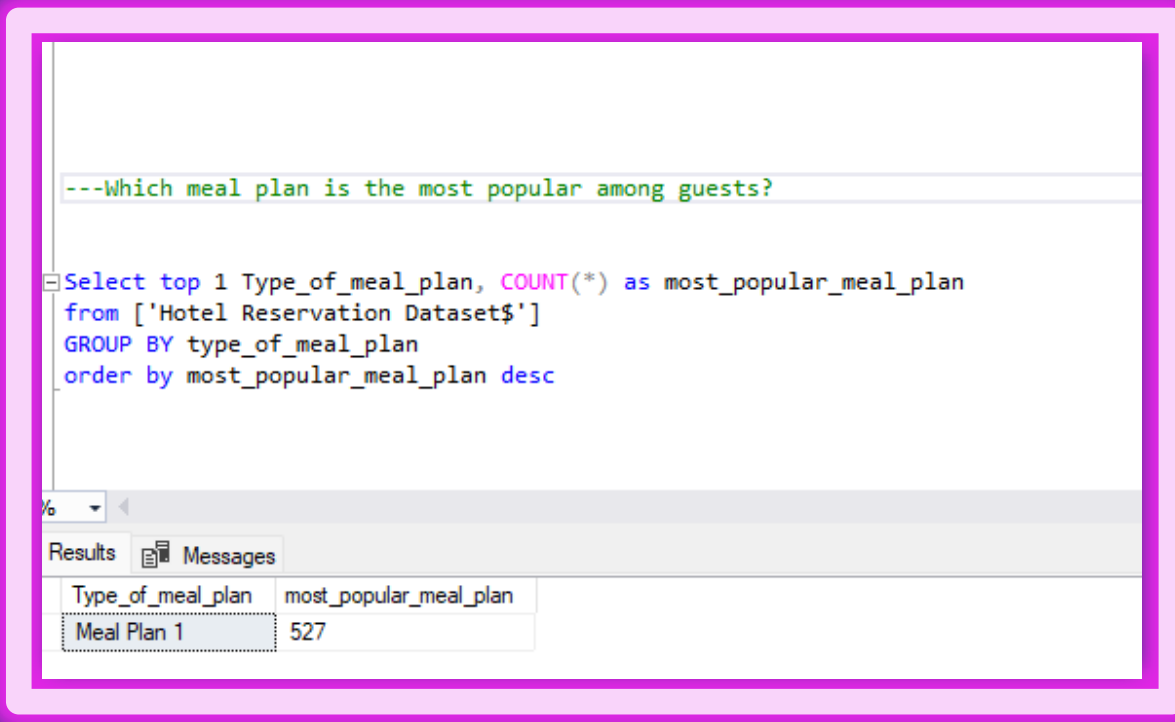


QUESTION 2

which meal plan is the most popular among guest

Query

```
select top 1 type_of_meal_plan, count(*) as most_popular_meal_plan
from hotel reservation
group by type_of_meal_plan
order by most_popular_meal_plan desc
```

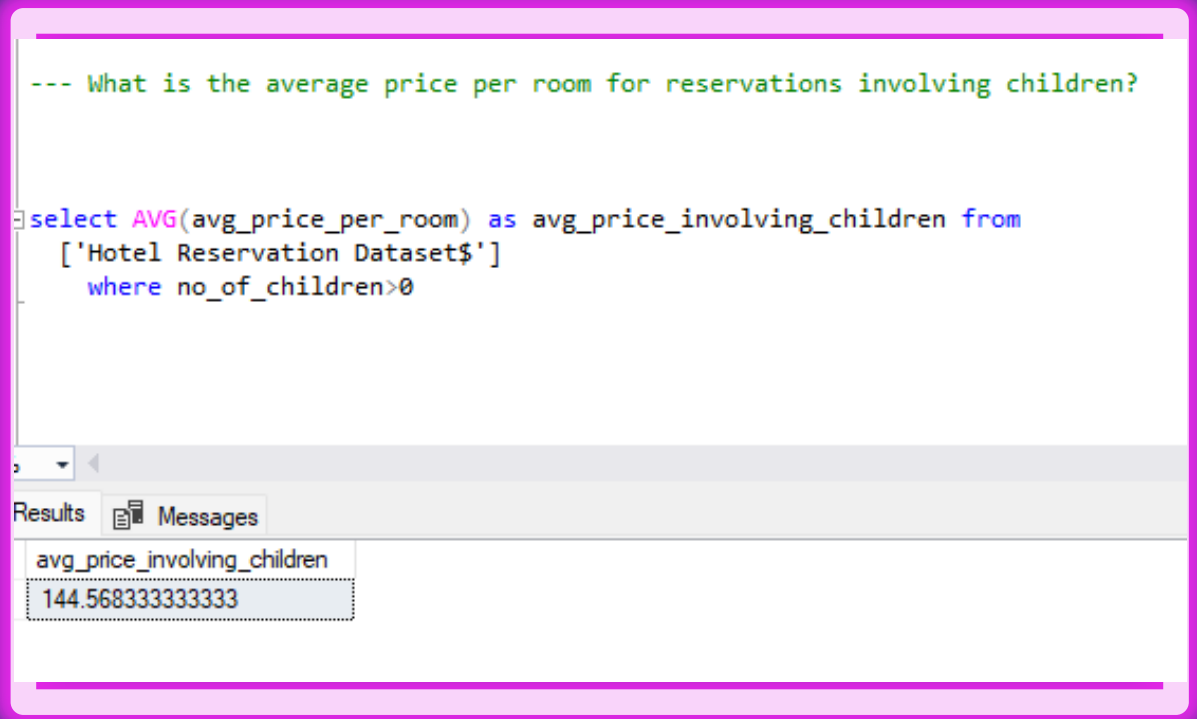


QUESTION 3

what is the average price per room for reservation involving children

Query

```
select avg(avg_price_per_room) as avg_price_involving_children
from hotel reservation
where no_of_children > 0
```



QUESTION 4

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

Query

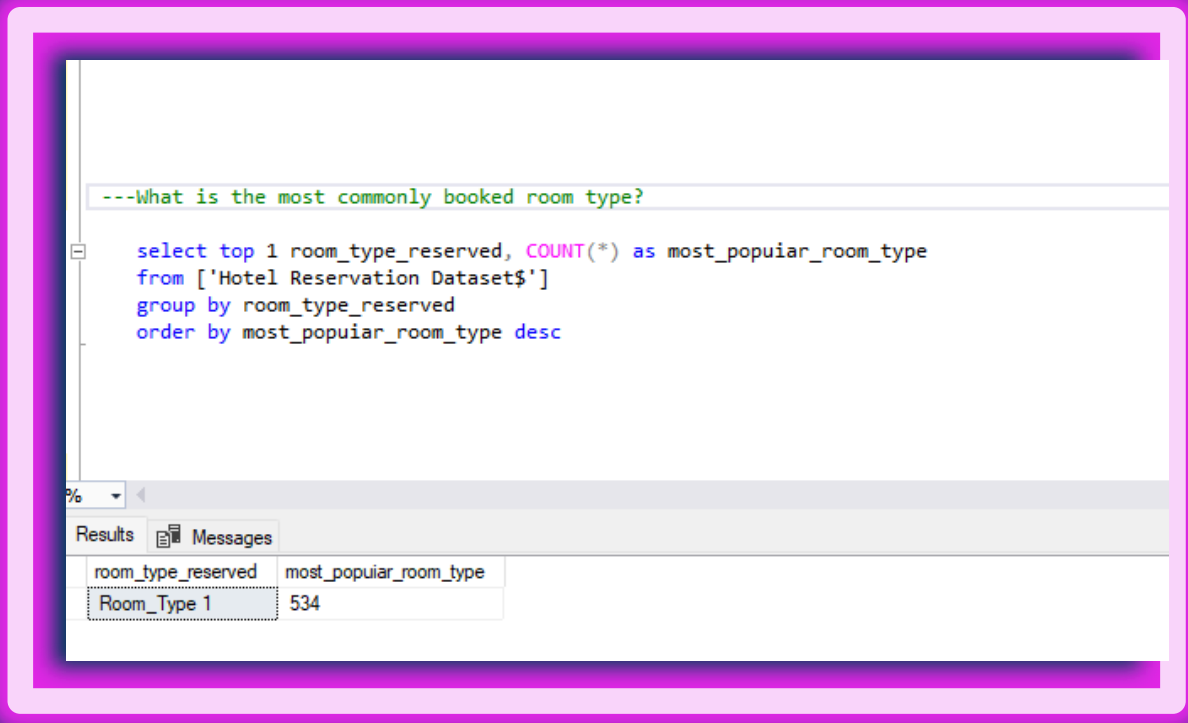
```
SELECT
COUNT(arrival_date) AS reservation_count
FROM
['Hotel Reservation Dataset$']
WHERE
TRY_CONVERT(DATE, Arrival_date, 104) IS NOT NULL
AND YEAR(TRY_CONVERT(DATE, Arrival_date, 104)) = 2017
```

QUESTION 5

what is the most commonly booked room type

Query

```
select top 1 room_type_reserved,count(*) as most_ popular_room_type
from hotel reservation
group by room_type_reserved
order by most_popular_room_type
```

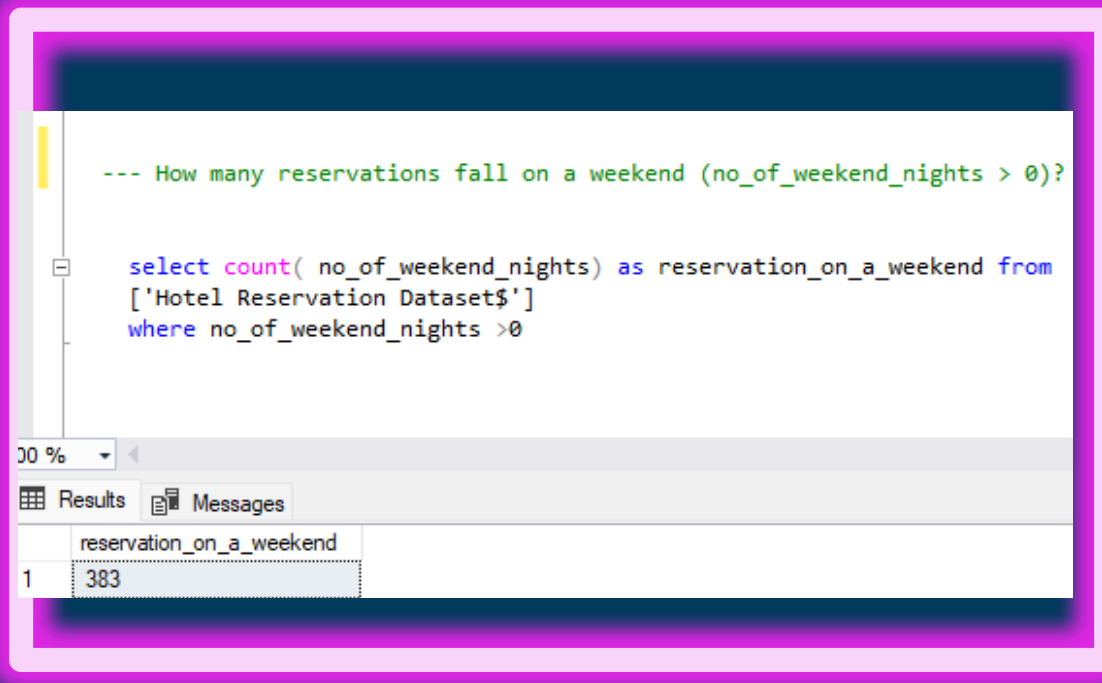


QUESTION 6

How many reservations fall on a weekend (no_of_weekend_nights > 0)?

Query

```
select count( no_of_weekend_nights) as reservation_on_a_weekend from
['Hotel Reservation Dataset$']
where no_of_weekend_nights >0
```

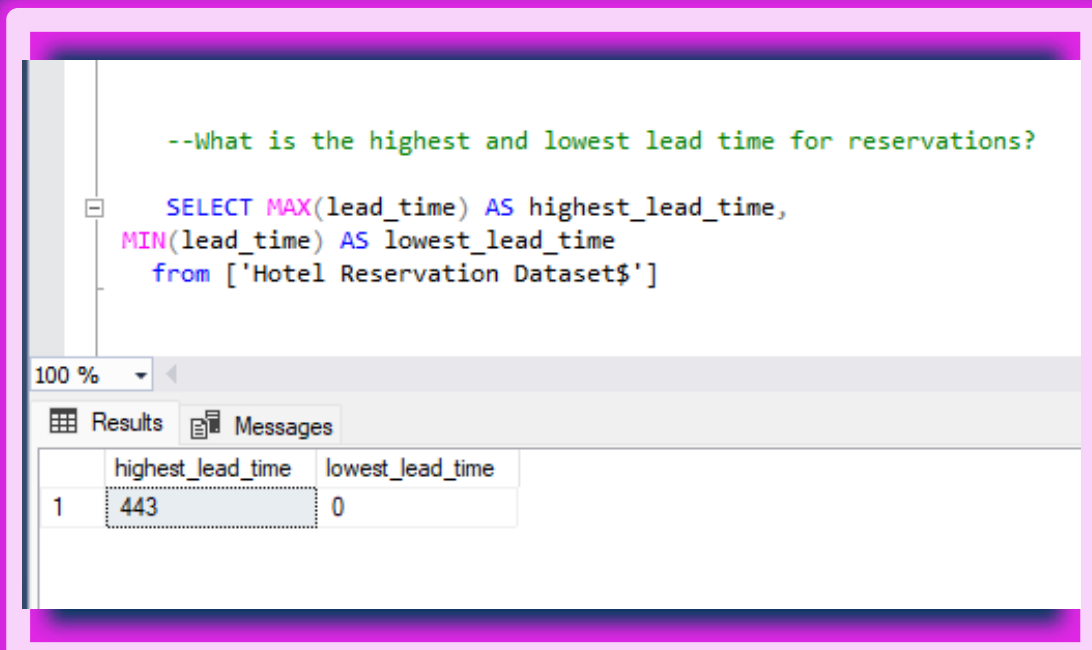


QUESTION 7

What is the highest and lowest lead time for reservations?

Query

```
SELECT MAX(lead_time) AS highest_lead_time,
 MIN(lead_time) AS lowest_lead_time
  from ['Hotel Reservation Dataset$']
```

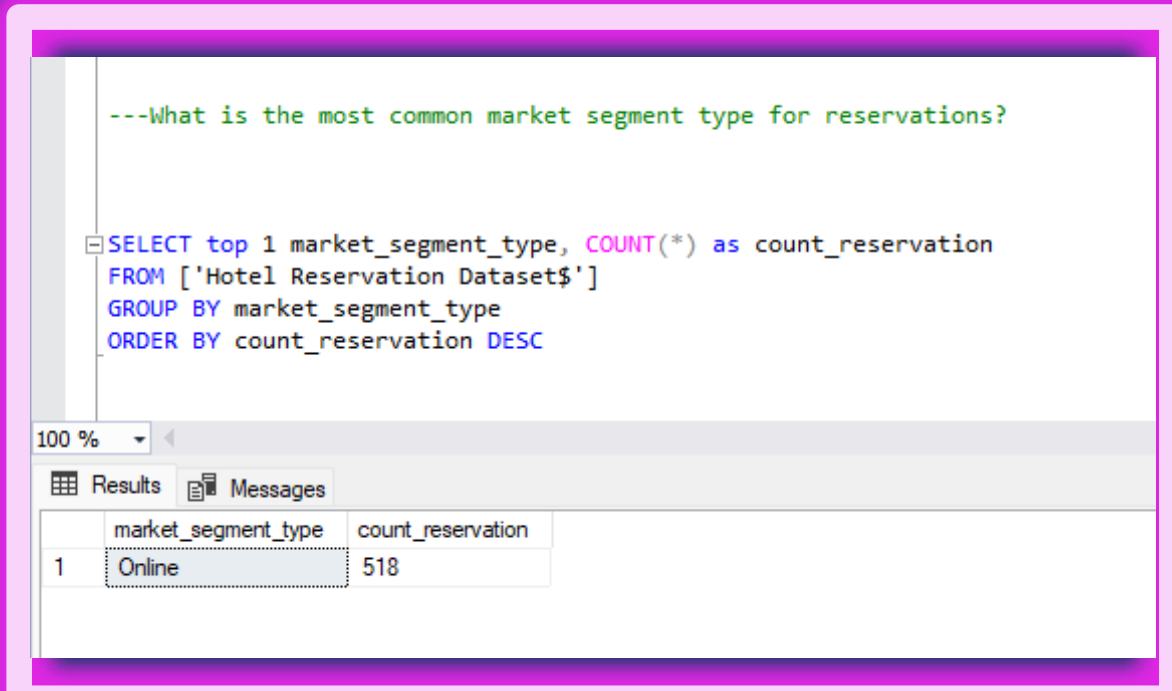


QUESTION 8

What is the most common market segment type for reservations?

Query

```
SELECT top 1 market_segment_type, COUNT(*) as count_reservation
FROM ['Hotel Reservation Dataset$']
GROUP BY market_segment_type
ORDER BY count_reservation DESC
```

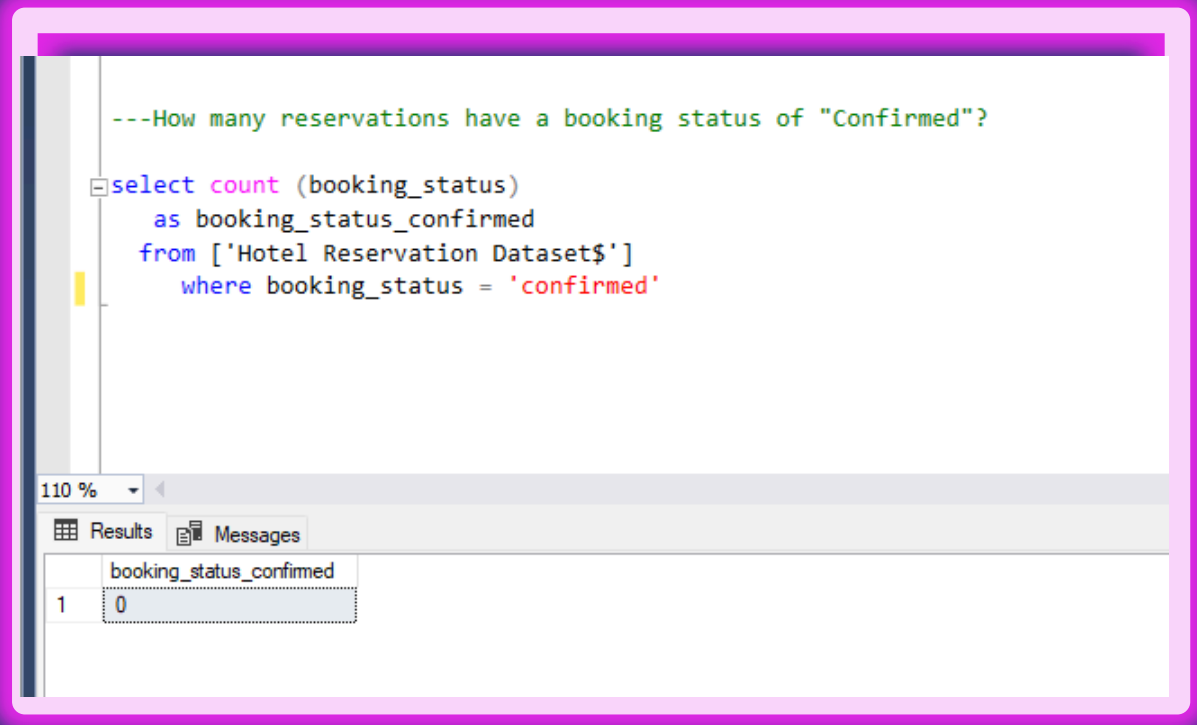


QUESTION 9

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

Query

```
select count (booking_status)
  as booking_status_confirmed
 from ['Hotel Reservation Dataset$']
   where booking_status = 'not_canceled'
```

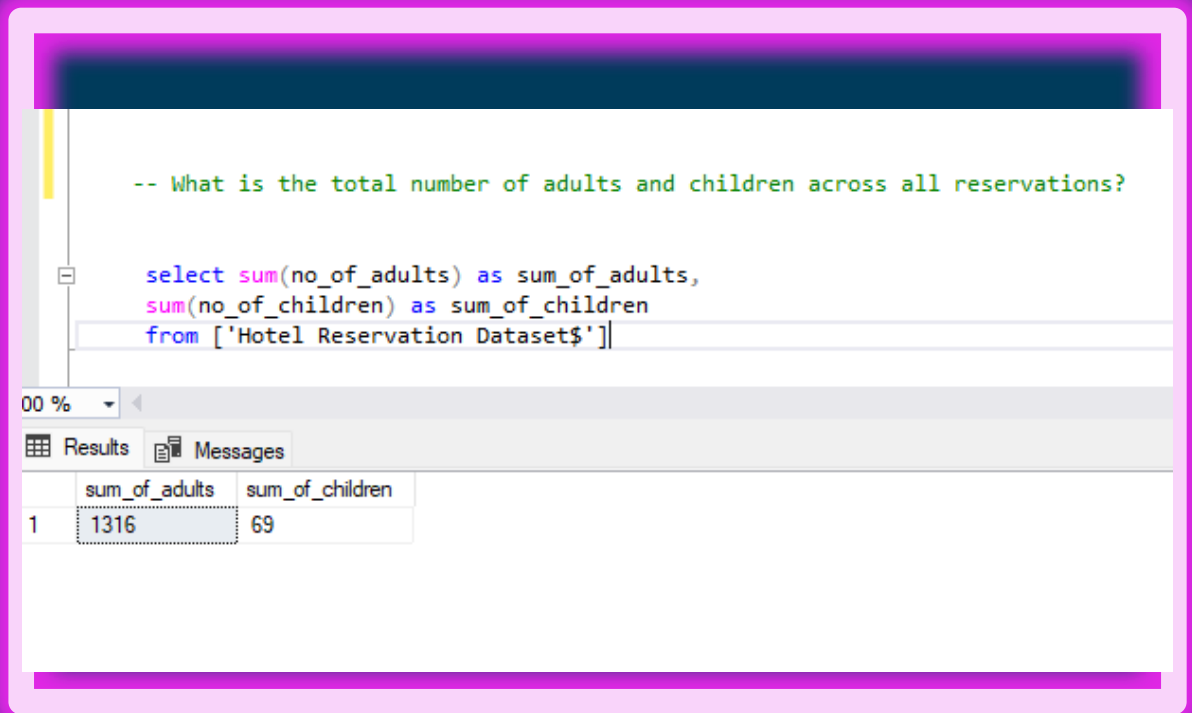


QUESTION 10

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

Query

```
select sum(no_of_adults) as sum_of_adults,
sum(no_of_children) as sum_of_children
from ['Hotel Reservation Dataset$']
```

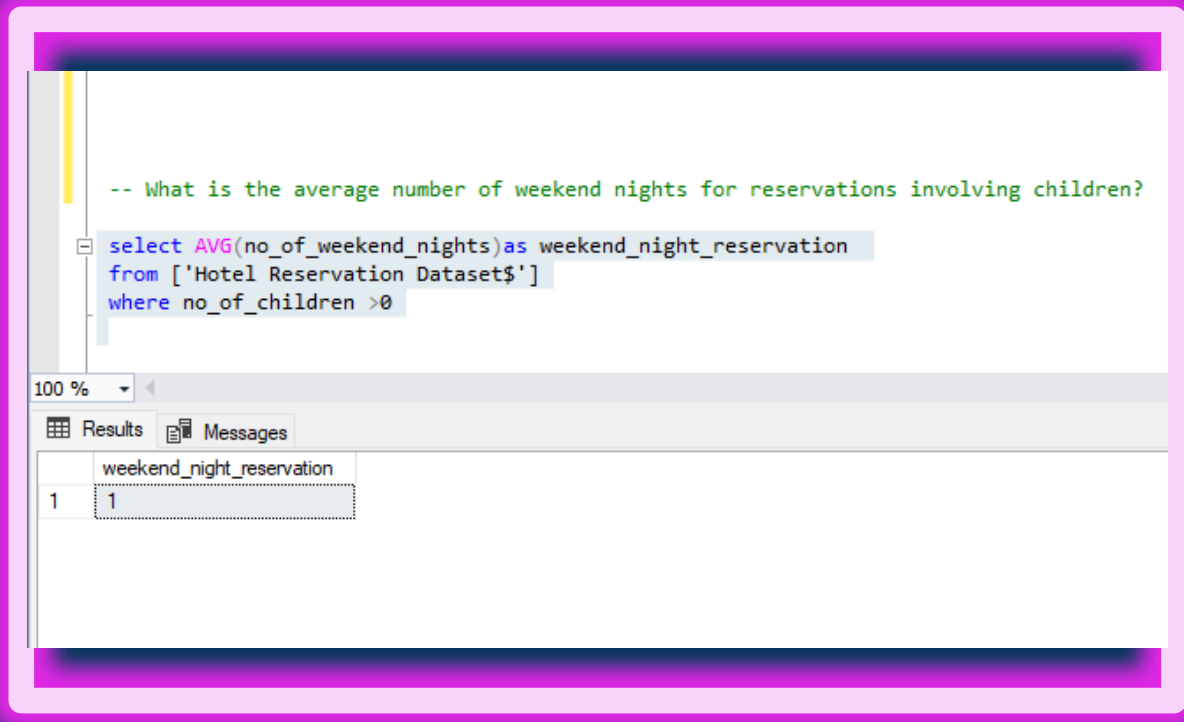


QUESTION 11

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

Query

```
select AVG(no_of_weekend_nights)as weekend_night_reservation
from ['Hotel Reservation Dataset$']
where no_of_children >0
```

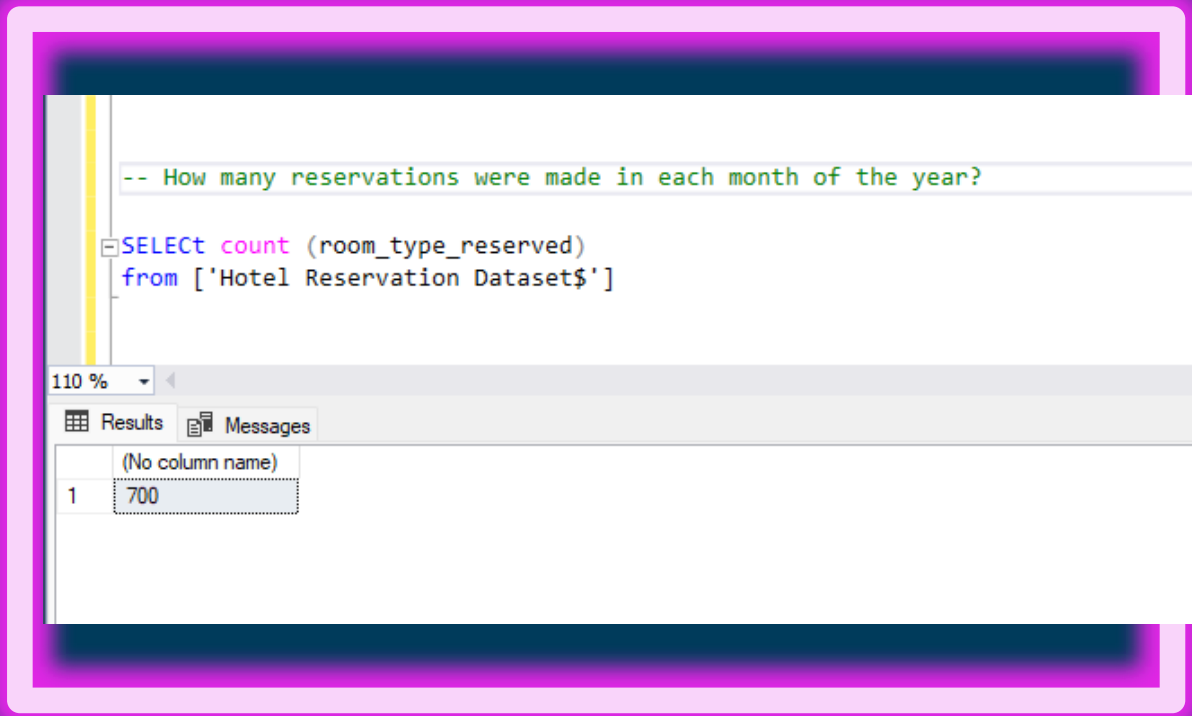


QUESTION 12

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

Query

```
select count (room_type_reserved)
from ['Hotel Reservation Dataset$']
```



QUESTION 13

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

Query

```
select room_type_reserved,
  avg(No_of_weekend_nights + No_of_week_nights) as
average_nights_spent_by_guests
from
  ['Hotel Reservation Dataset$']
group by
   room_type_reserved
```

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



select room_type_reserved,
  avg(No_of_weekend_nights + No_of_week_nights) as average_nights_spent_by_guests
from
   ['Hotel Reservation Dataset$']
group by
    room_type_reserved
```

100 %

Results | Messages

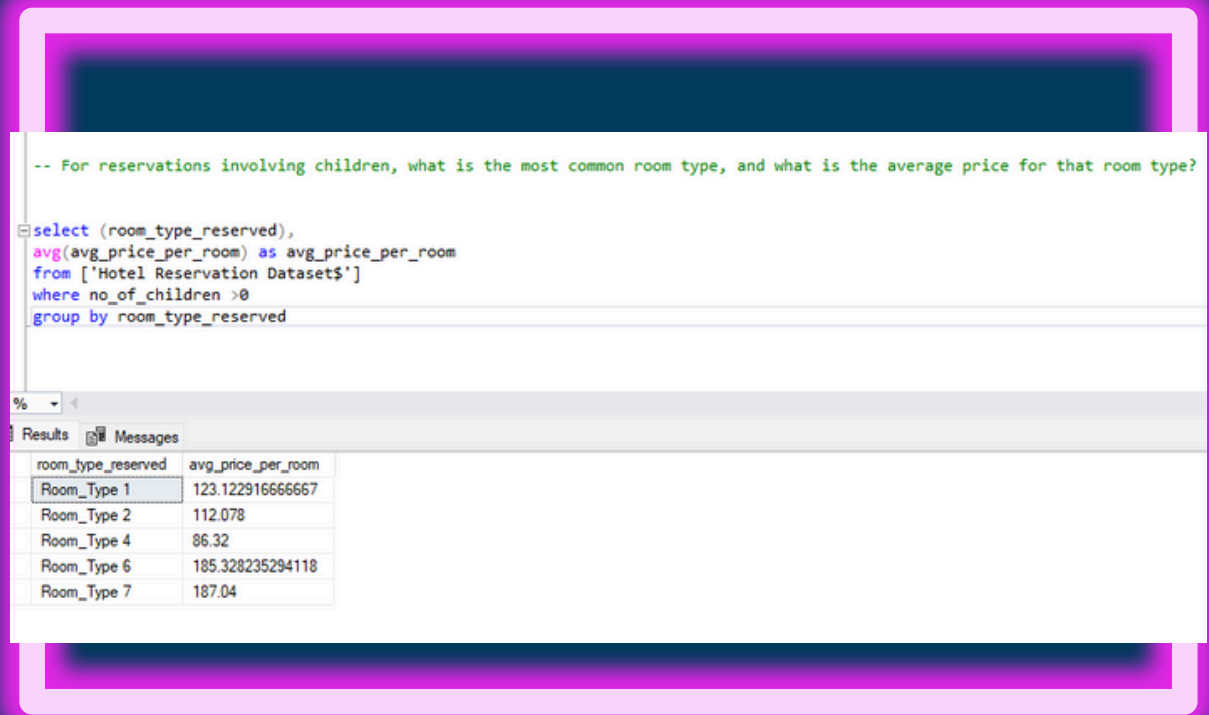
	room_type_reserved	average_nights_spent_by_guests
1	Room_Type 1	2.87827715355805
2	Room_Type 2	3
3	Room_Type 4	3.8
4	Room_Type 5	2.5
5	Room_Type 6	3.61111111111111
6	Room_Type 7	2.66666666666667

QUESTION 14

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

Query

```
select (room_type_reserved),
avg(avg_price_per_room) as avg_price_per_room
from ['Hotel Reservation Dataset$']
where no_of_children >0
group by room_type_reserved
```



QUESTION 15

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

Query

```
select (market_segment_type),(sum(avg_price_per_room)) as highest_price_per_room
from ['Hotel Reservation Dataset$']
group by market_segment_type
```

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

select (market_segment_type),(sum(avg_price_per_room)) as highest_price_per_room
from ['Hotel Reservation Dataset$']
group by market_segment_type
```

100 %

Results | Messages

	market_segment_type	highest_price_per_room
1	Aviation	110
2	Complementary	35.5
3	Corporate	2224.83
4	Offline	12597.44
5	Online	58251.8000000001

Thank you for your time!