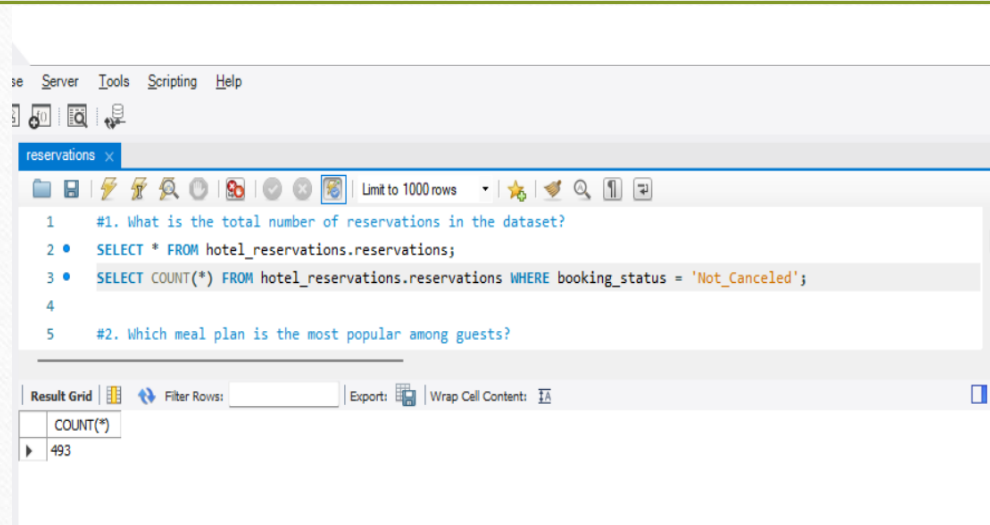


Hotel Reservations Analysis

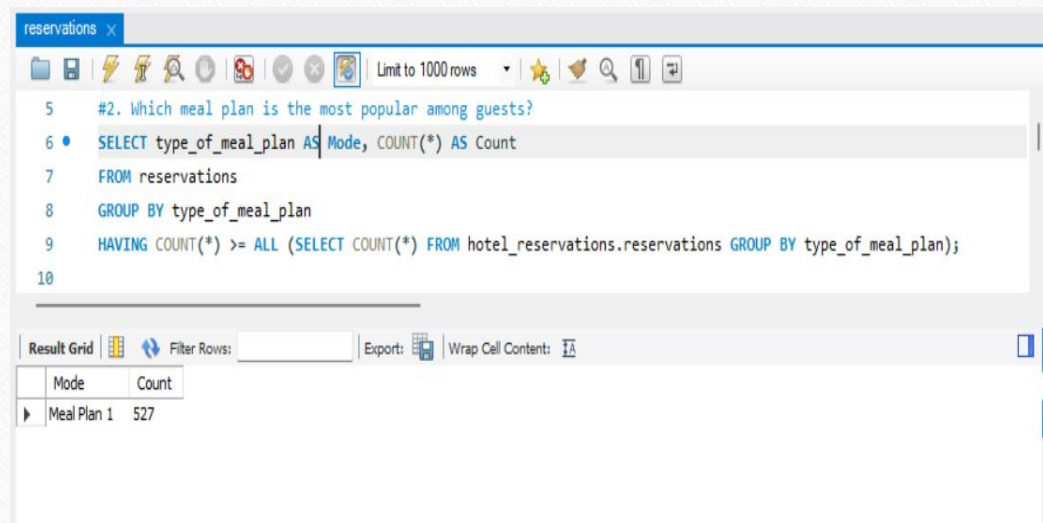
By SQL

The first question was #1. What is the total number of reservations in the dataset?



Given that there was a significant number of canceled reservations , I only put 'Not_Canceled' reservations into account

The second question was , #2. Which meal plan is the most popular among guests?



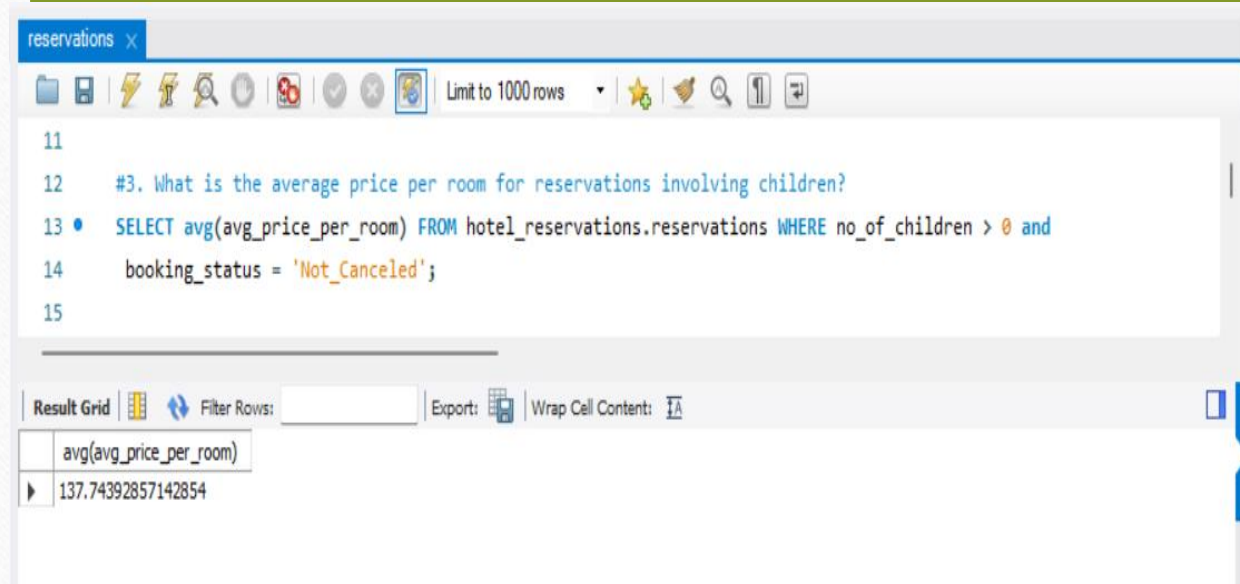
The screenshot shows a SQL query editor window titled "reservations". The query is as follows:

```
#2. Which meal plan is the most popular among guests?
SELECT type_of_meal_plan AS Mode, COUNT(*) AS Count
FROM reservations
GROUP BY type_of_meal_plan
HAVING COUNT(*) >= ALL (SELECT COUNT(*) FROM hotel_reservations.reservations GROUP BY type_of_meal_plan);
```

Below the query editor, the "Result Grid" is displayed with the following data:

Mode	Count
Meal Plan 1	527

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



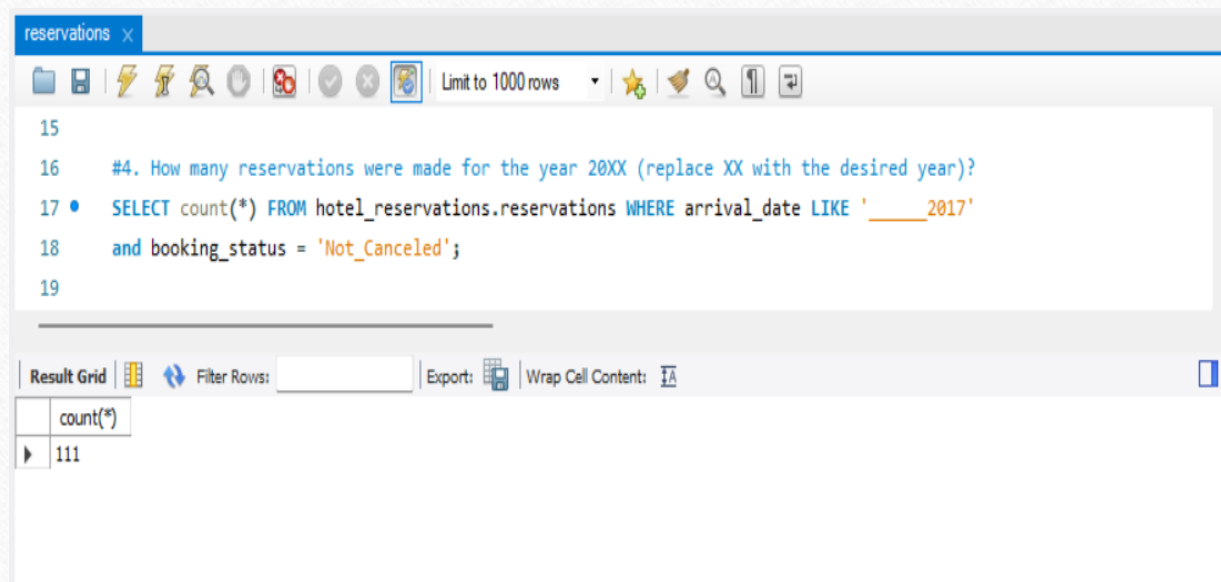
The screenshot shows a database query interface with a tab labeled "reservations". The query editor contains the following SQL query:

```
11  
12 #3. What is the average price per room for reservations involving children?  
13 • SELECT avg(avg_price_per_room) FROM hotel_reservations.reservations WHERE no_of_children > 0 and  
14 booking_status = 'Not_Canceled';  
15
```

Below the query editor, the "Result Grid" is displayed, showing the result of the query:

avg(avg_price_per_room)
137.74392857142854

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



The screenshot shows a database query editor window titled "reservations". The query is as follows:

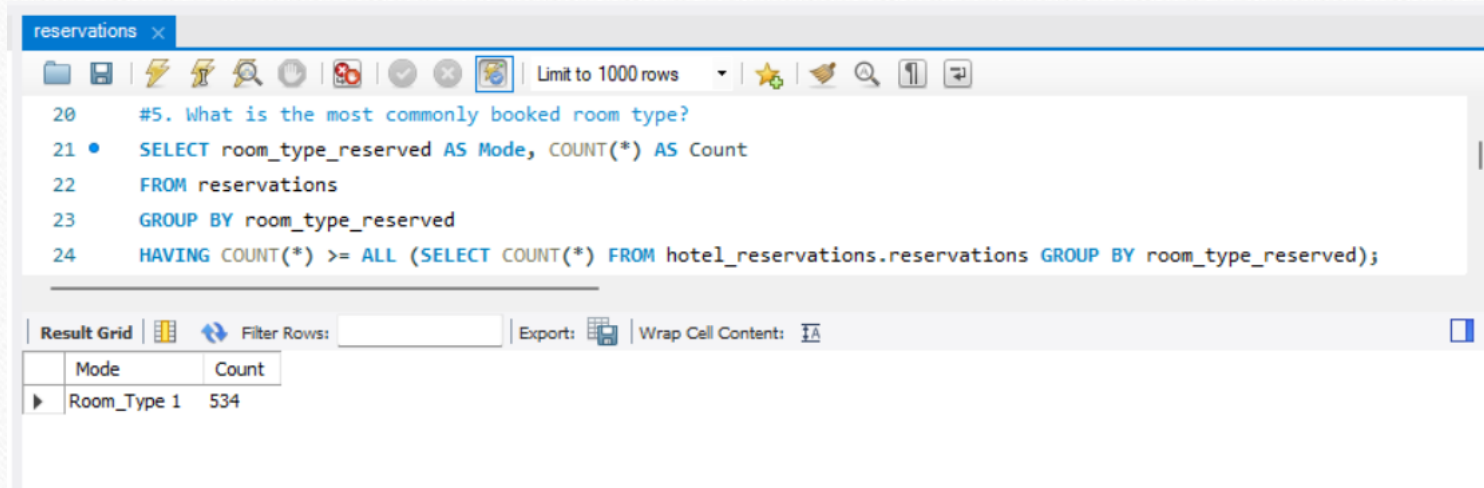
```
15  
16 #4. How many reservations were made for the year 20XX (replace XX with the desired year)?  
17 • SELECT count(*) FROM hotel_reservations.reservations WHERE arrival_date LIKE '____2017'  
18 and booking_status = 'Not_Canceled';  
19
```

Below the query editor, the "Result Grid" shows the following result:

count(*)
111

The interface includes a toolbar with various icons and a "Limit to 1000 rows" dropdown. The "Result Grid" section also has options for "Filter Rows", "Export", and "Wrap Cell Content".

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



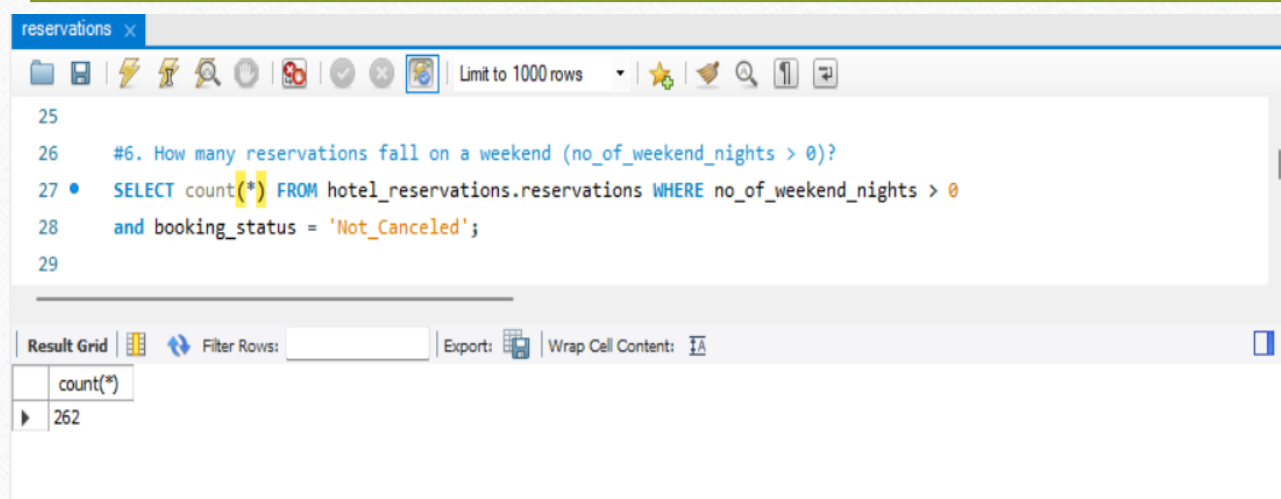
The screenshot shows a SQL query editor window titled "reservations". The query is as follows:

```
20 #5. What is the most commonly booked room type?
21 • SELECT room_type_reserved AS Mode, COUNT(*) AS Count
22 FROM reservations
23 GROUP BY room_type_reserved
24 HAVING COUNT(*) >= ALL (SELECT COUNT(*) FROM hotel_reservations.reservations GROUP BY room_type_reserved);
```

Below the query editor, the "Result Grid" is visible, showing the results of the query:

Mode	Count
Room_Type 1	534

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



The screenshot shows a database query editor window titled "reservations". The query is as follows:

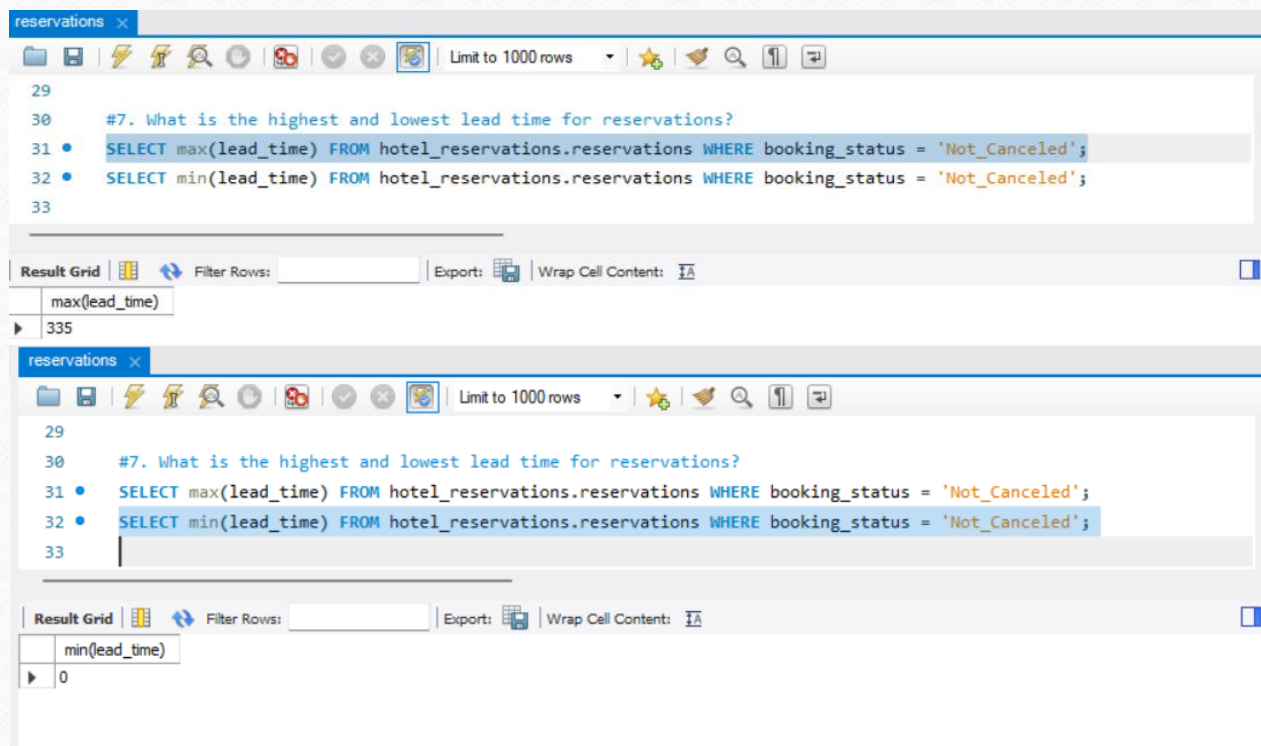
```
25  
26 #6. How many reservations fall on a weekend (no_of_weekend_nights > 0)?  
27 • SELECT count(*) FROM hotel_reservations.reservations WHERE no_of_weekend_nights > 0  
28 and booking_status = 'Not_Canceled';  
29
```

Below the query editor, the "Result Grid" is displayed with the following data:

count(*)
262

The interface includes a toolbar with various icons and a "Limit to 1000 rows" dropdown menu.

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



The screenshot displays two instances of a SQL query editor interface. Both editors have a toolbar at the top with icons for file operations, search, and execution, along with a 'Limit to 1000 rows' dropdown. The editor tabs are labeled 'reservations'.

Top Editor:

- Line 29: Blank
- Line 30: Comment: #7. What is the highest and lowest lead time for reservations?
- Line 31: Query: `SELECT max(lead_time) FROM hotel_reservations.reservations WHERE booking_status = 'Not_Canceled';`
- Line 32: Query: `SELECT min(lead_time) FROM hotel_reservations.reservations WHERE booking_status = 'Not_Canceled';`
- Line 33: Blank

Result Grid:

max(lead_time)
335

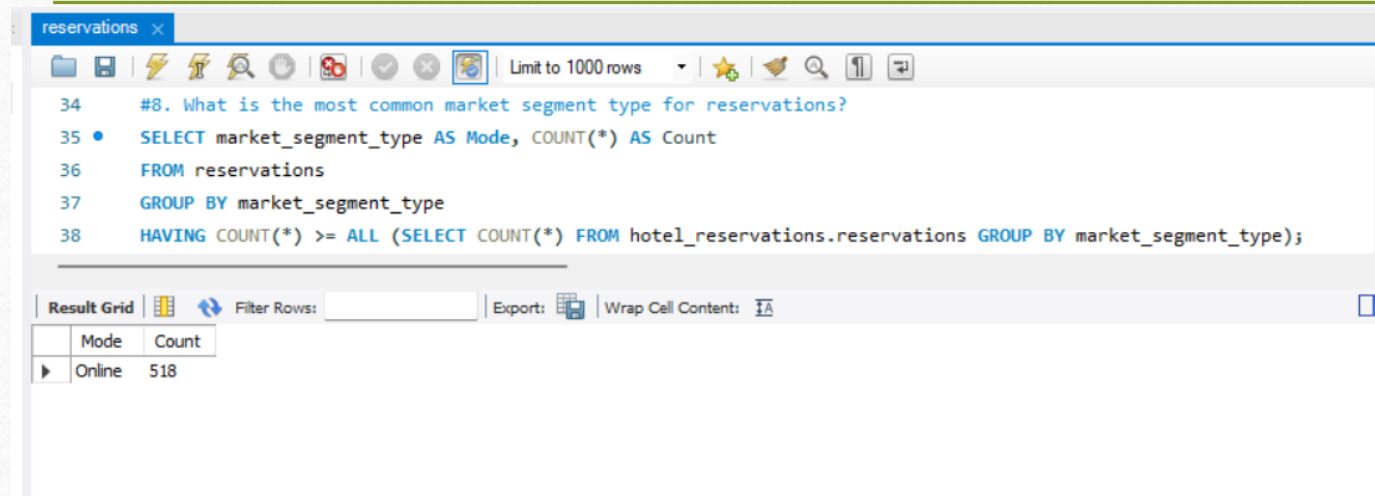
Bottom Editor:

- Line 29: Blank
- Line 30: Comment: #7. What is the highest and lowest lead time for reservations?
- Line 31: Query: `SELECT max(lead_time) FROM hotel_reservations.reservations WHERE booking_status = 'Not_Canceled';`
- Line 32: Query: `SELECT min(lead_time) FROM hotel_reservations.reservations WHERE booking_status = 'Not_Canceled';`
- Line 33: Blank

Result Grid:

min(lead_time)
0

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



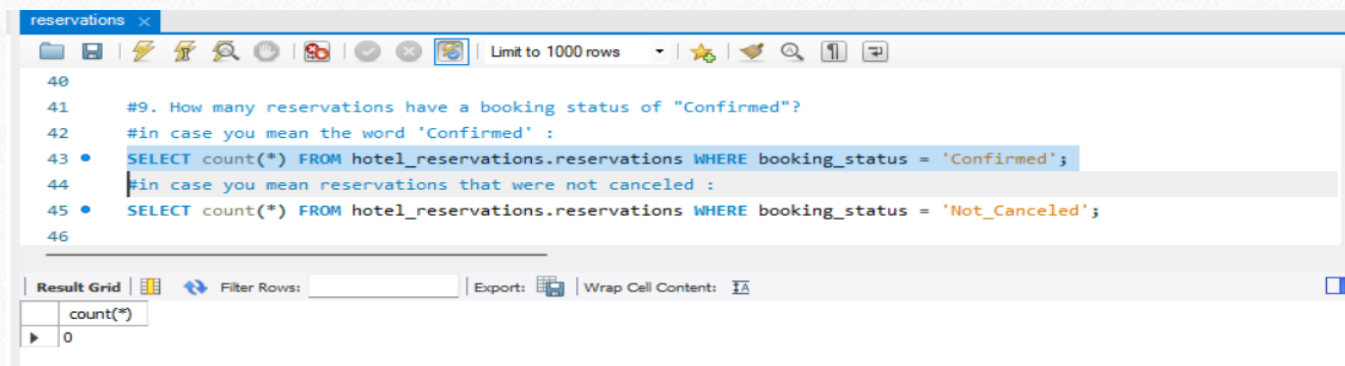
The screenshot shows a SQL query editor window titled "reservations". The query is as follows:

```
34 #8. What is the most common market segment type for reservations?
35 • SELECT market_segment_type AS Mode, COUNT(*) AS Count
36 FROM reservations
37 GROUP BY market_segment_type
38 HAVING COUNT(*) >= ALL (SELECT COUNT(*) FROM hotel_reservations.reservations GROUP BY market_segment_type);
```

Below the query editor, the "Result Grid" is displayed. It shows a single row with the following data:

Mode	Count
Online	518

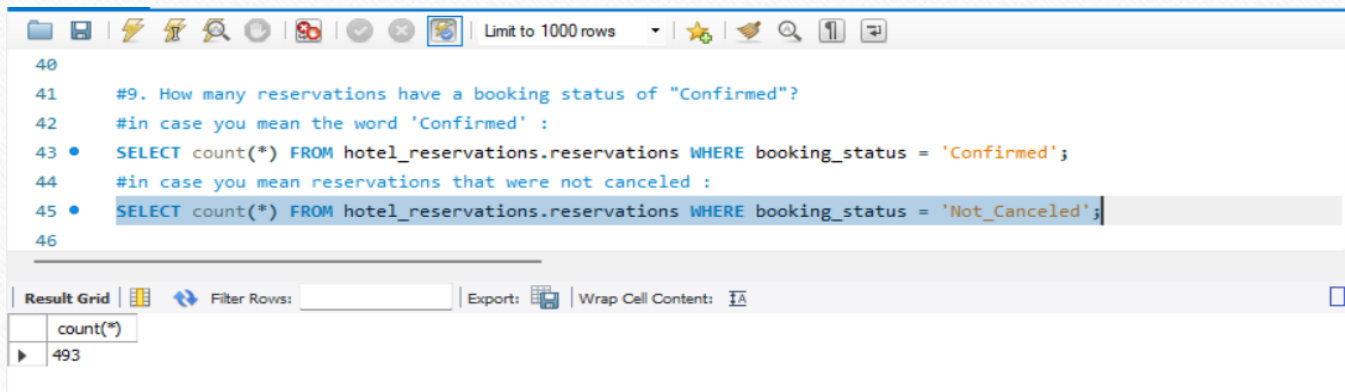
#9. How many reservations have a booking status of "Confirmed"?



The screenshot shows a database query editor window titled "reservations". The query text is as follows:

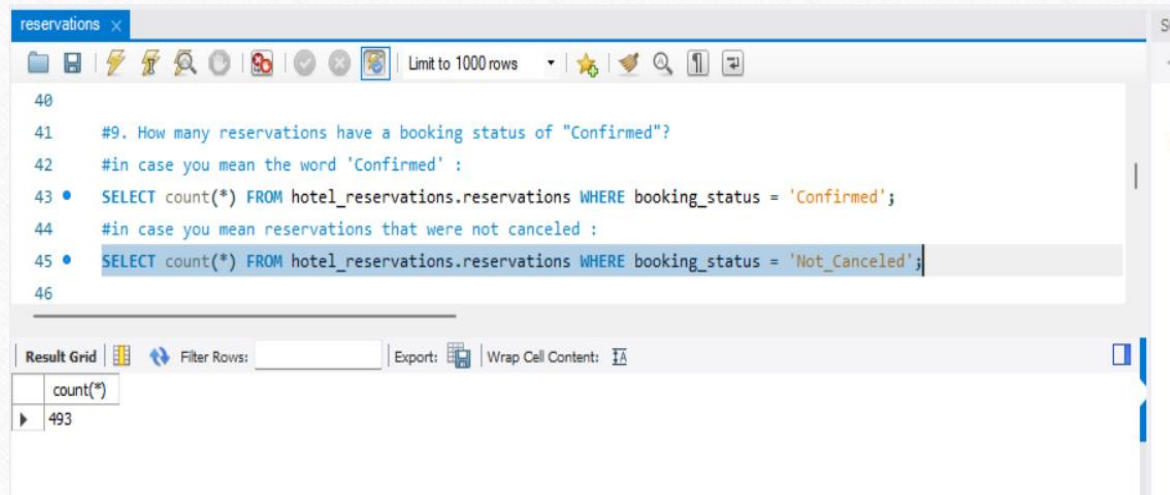
```
40
41 #9. How many reservations have a booking status of "Confirmed"?
42 #in case you mean the word 'Confirmed' :
43 • SELECT count(*) FROM hotel_reservations.reservations WHERE booking_status = 'Confirmed';
44 #in case you mean reservations that were not canceled :
45 • SELECT count(*) FROM hotel_reservations.reservations WHERE booking_status = 'Not_Canceled';
46
```

The query on line 43 is selected. The interface includes a toolbar with icons for file operations, a "Limit to 1000 rows" dropdown, and a "Result Grid" section at the bottom. The "Result Grid" shows a single column header "count(*)" and a single row with the value "0".



This screenshot is identical to the one above, but the query on line 45 is now selected. The "Result Grid" at the bottom has been updated to show the value "493" for the "count(*)" column.

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

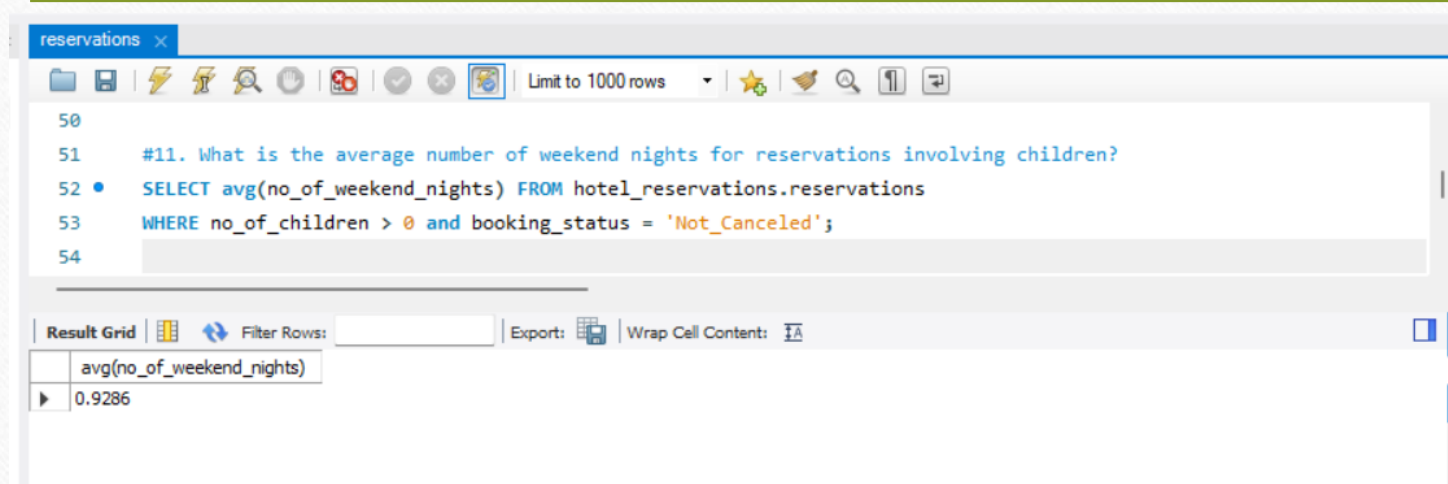


```
40
41 #9. How many reservations have a booking status of "Confirmed"?
42 #in case you mean the word 'Confirmed' :
43 • SELECT count(*) FROM hotel_reservations.reservations WHERE booking_status = 'Confirmed';
44 #in case you mean reservations that were not canceled :
45 • SELECT count(*) FROM hotel_reservations.reservations WHERE booking_status = 'Not_Canceled';
46
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

count(*)
493

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



The screenshot shows a database query editor window titled "reservations". The query is as follows:

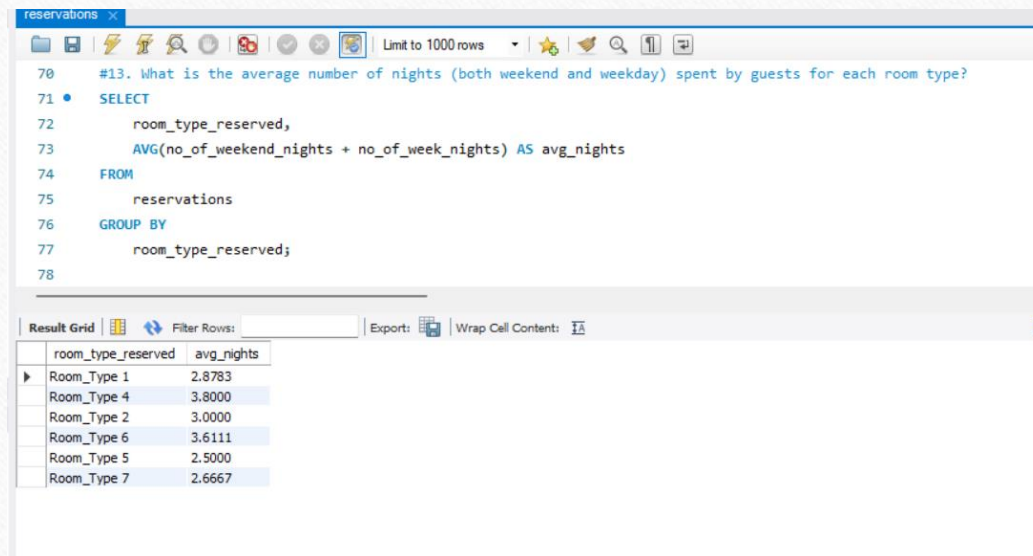
```
50
51 #11. What is the average number of weekend nights for reservations involving children?
52 • SELECT avg(no_of_weekend_nights) FROM hotel_reservations.reservations
53 WHERE no_of_children > 0 and booking_status = 'Not_Canceled';
54
```

Below the query editor, the "Result Grid" is displayed. It shows a single column header "avg(no_of_weekend_nights)" and a single row with the value "0.9286".

avg(no_of_weekend_nights)
0.9286

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

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



The screenshot shows a SQL query editor window titled 'reservations'. The query is as follows:

```
#13. 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 avg_nights
FROM
  reservations
GROUP BY
  room_type_reserved;
```

Below the query editor, the 'Result Grid' is displayed, showing the results of the query. The table has two columns: 'room_type_reserved' and 'avg_nights'.

room_type_reserved	avg_nights
Room_Type 1	2.8783
Room_Type 4	3.8000
Room_Type 2	3.0000
Room_Type 6	3.6111
Room_Type 5	2.5000
Room_Type 7	2.6667

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

```
reservations
80 • SELECT
81     room_type_reserved,
82     COUNT(*) AS reservation_count
83 FROM
84     reservations
85 WHERE
86     no_of_children > 0
87 GROUP BY
88     room_type_reserved
89 ORDER BY
90     reservation_count DESC
91 LIMIT 1;
92
```

room_type_reserved	reservation_count
Room_Type 1	24

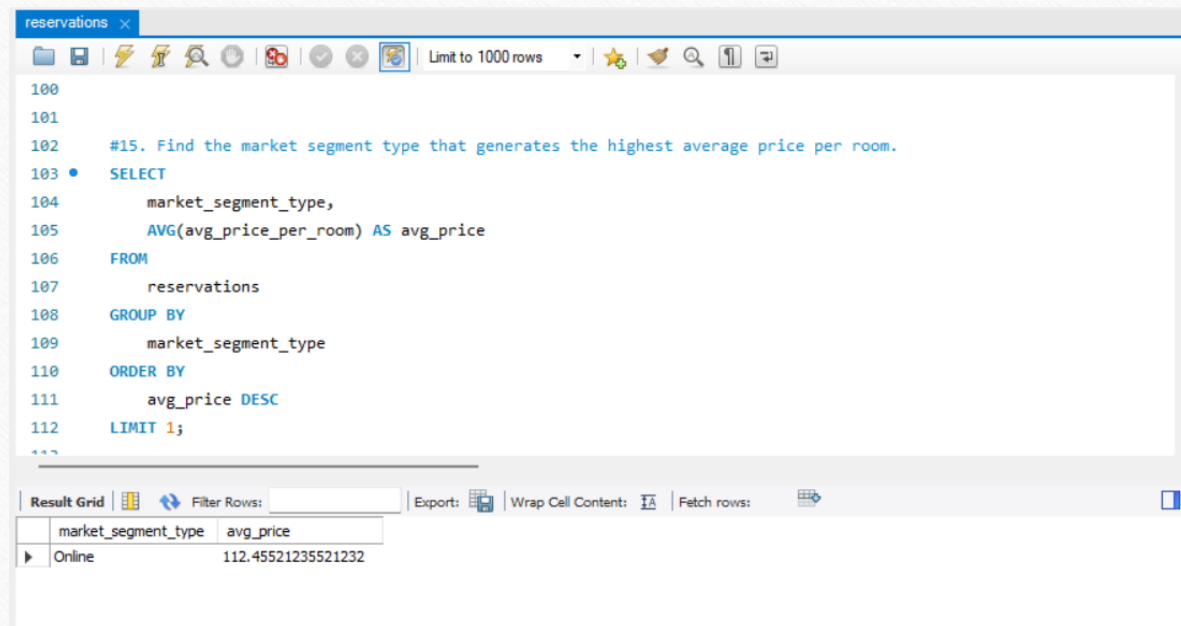
To satisfy this query , first we need to get the most common room type

```
92
93 • SELECT
94     avg(avg_price_per_room) as price
95 FROM
96     reservations
97 WHERE
98     room_type_reserved = 'Room_Type 1'
99     AND no_of_children > 0;
100
101
```

price
123.12291666666665

Then after getting the most common room type , we got the average price of that room

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



The screenshot shows a SQL query editor window titled "reservations". The query is as follows:

```
100
101
102 #15. Find the market segment type that generates the highest average price per room.
103 • SELECT
104     market_segment_type,
105     AVG(avg_price_per_room) AS avg_price
106 FROM
107     reservations
108 GROUP BY
109     market_segment_type
110 ORDER BY
111     avg_price DESC
112 LIMIT 1;
```

The bottom of the window shows the "Result Grid" with the following data:

market_segment_type	avg_price
Online	112.45521235521232