Hotel Reservation Analysis with SQL

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

```sql
SELECT COUNT('Booking_ID') AS total_number_of_reservation
FROM hotel_data;
```

	total_number_of_re...
1	700

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

```sql
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
1	Meal Plan 1	527

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

```sql
SELECT AVG(avg_price_per_room) AS 'avg_price_per_room_for_children'
FROM hotel_data
WHERE no_of_children > 0;
```

	avg_price_per_roo...
1	144.56833333333336

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

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

	year	total_reservation
1	2017	123
2	2018	577

5. What is the most commonly booked room type?

```sql
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
1	Room_Type 1	534

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

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

	total_weekend_reservations
1	383

```sql
SELECT COUNT (*) AS total_weekday_reservations
FROM hotel_data
WHERE no_of_week_nights > 0;
```

	total_weekday_reservations
1	656

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

```sql
SELECT MAX(lead_time) AS highest_lesd_time, MIN(lead_time) AS lowest_lesd_time
FROM hotel_data;
```

	highest_lesd_time	lowest_lesd_time
1	443	0

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

```
1  SELECT market_segment_type, COUNT(*) AS number_of_reservations
2  FROM hotel_data
3  GROUP BY market_segment_type
4  ORDER BY number_of_reservations DESC
5
```

	market_segment_ty...	number_of_reserva...
1	Online	518
2	Offline	140
3	Corporate	27
4	Complementary	14
5	Aviation	1

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

```
1  SELECT COUNT(*) AS Number_of_confirmed_Reservations
2  FROM hotel_data
3  WHERE booking_status = 'Not_Canceled';
4
```

	Number_of_confirmed_Reservations
1	493

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

```
1  SELECT SUM(no_of_adults) AS number_of_adults, SUM(no_of_children) AS total_children
2  FROM hotel_data;
3
```

	number_of_adults	total_children
1	"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	1

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 Month;
```

	month	month_name	total_reservations
1	1	January	11
2	2	February	28
3	3	March	52
4	4	April	67
5	5	May	55
6	6	June	84
7	7	July	44
8	8	August	70
9	9	September	80
10	10	October	103
11	11	November	54
12	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
1	Room_Type 4	3.8
2	Room_Type 6	3.61
3	Room_Type 2	3
4	Room_Type 1	2.88
5	Room_Type 7	2.67
6	Room_Type 5	2.5

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
1	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;
```

	market_segment_type	highest_avg_price_...
1	Online	112.46
2	Aviation	110
3	Offline	89.98
4	Corporate	82.4
5	Complementary	2.54