MENTORNESS PROJECT – TASK 2

Batch - MIP-DA-04

Hotel Reservation Analysis with SQL

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Questions with SQL Queries

Creating a database, name mentorness

create database mentorness;

Describing the Data set Info

describe table dataset;

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

select count(booking_id) as "Number of Reservations" from dataset;

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

SELECT type_of_meal_plan, COUNT(booking_id) AS booking_count

FROM Dataset

GROUP BY type_of_meal_plan

ORDER BY booking_count DESC

LIMIT 1;

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

select avg_price_per_room from dataset where no_of_children>0;

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

SELECT COUNT (booking_id)

FROM dataset

WHERE SUBSTRING (arrival_date, 7, 4) = '2018';

5. What is the most commonly booked room type?

select room_type_reserved, count(booking_id) from dataset

group by room_type_reserved

order by count(booking_id) desc

limit 1;

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

```
select count(booking_id) from dataset where no_of_weekend_nights>0;
```

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

```
select max(lead_time) , min(lead_time) from dataset;
```

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

```
select market_segment_type, count(booking_id) from dataset
group by market_segment_type
order by count(booking_id) desc
limit 1;
```

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

```
select count(booking_id) from dataset where
booking_status='Not_Canceled';
```

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

```
select sum(no_of_adults), sum(no_of_children) from dataset;
```

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

```
select avg(no_of_weekend_nights) from dataset where no_of_children>0;
```

To change the datatype of data column from VARCHAR to DATE format the below query is executed, it is for the next question

```
-- Alter the table to add a new date column
ALTER TABLE dataset
ADD new_arrival_date DATE;
-- Update the new date column with converted values
UPDATE dataset
SET new_arrival_date = TO_DATE(arrival_date, 'DD-MM-YYYY');
-- Drop the old varchar date column
ALTER TABLE dataset DROP COLUMN arrival_date;
-- Rename the new date column to the original name
ALTER TABLE dataset
RENAME COLUMN new_arrival_date TO arrival_date;
```

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

```sql
select month(arrival_date) "month" ,year(arrival_date) "year" ,
count(booking_id) as "number of reservations"

from dataset

group by month(arrival_date),year(arrival_date)

order by year(arrival_date),month(arrival_date) asc;
```

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

```sql
select room_type_reserved,avg(no_of_weekend_nights) as
"weekend",avg(no_of_week_nights) as "weekdays"

from dataset

group by room_type_reserved;
```

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

```sql
select room_type_reserved,avg(avg_price_per_room) from dataset

where room_type_reserved=

        (select room_type_reserved from dataset

        where no_of_children>0

         group by room_type_reserved

         order by count(room_type_reserved) desc limit 1)

group by room_type_reserved;
```

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

```sql
select market_segment_type, max(avg_price_per_room) from dataset

group by market_segment_type

order by max(avg_price_per_room) desc

limit 1;
```