Hotel Revenue Analysis

**Objective:**  
To analyze hotel booking data using SQL and Power BI in order to:

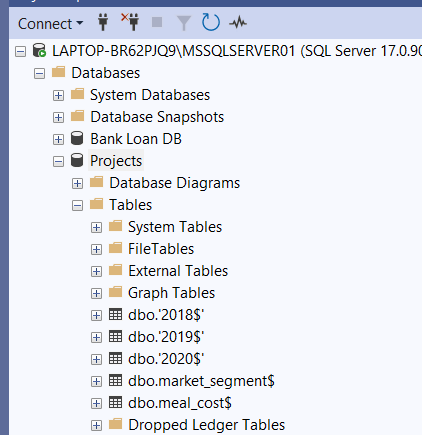
1. Evaluate whether hotel revenue is growing year over year.
2. Assess if parking lot size should be increased based on guest demand.
3. Identify seasonal trends in bookings and revenue.

**Process:**

1. **Importing database into the SQL server management studio**

**Database name:** Projects

**Tables:** dbo.`2018$’, dbo.`2019$’, dbo.`2020$’, dbo.`market\_segement$’ , dbo.`meal\_cost$’



**EDA Queries:**

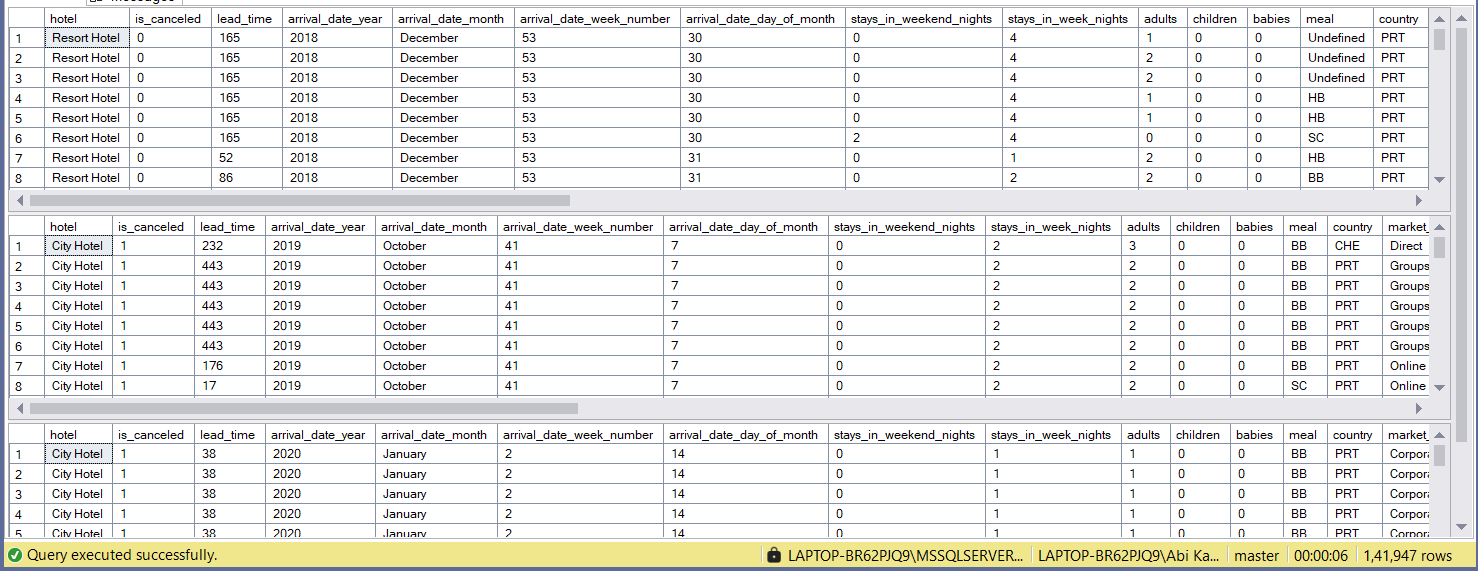
**1)Combining 2018,2019 and 2020 data**

**Before combining:**

select \* from dbo.['2018$']

select \* from dbo.['2019$']

select \* from dbo.['

****

**After combining:**

with hotels as(

select \* from dbo.['2018$']

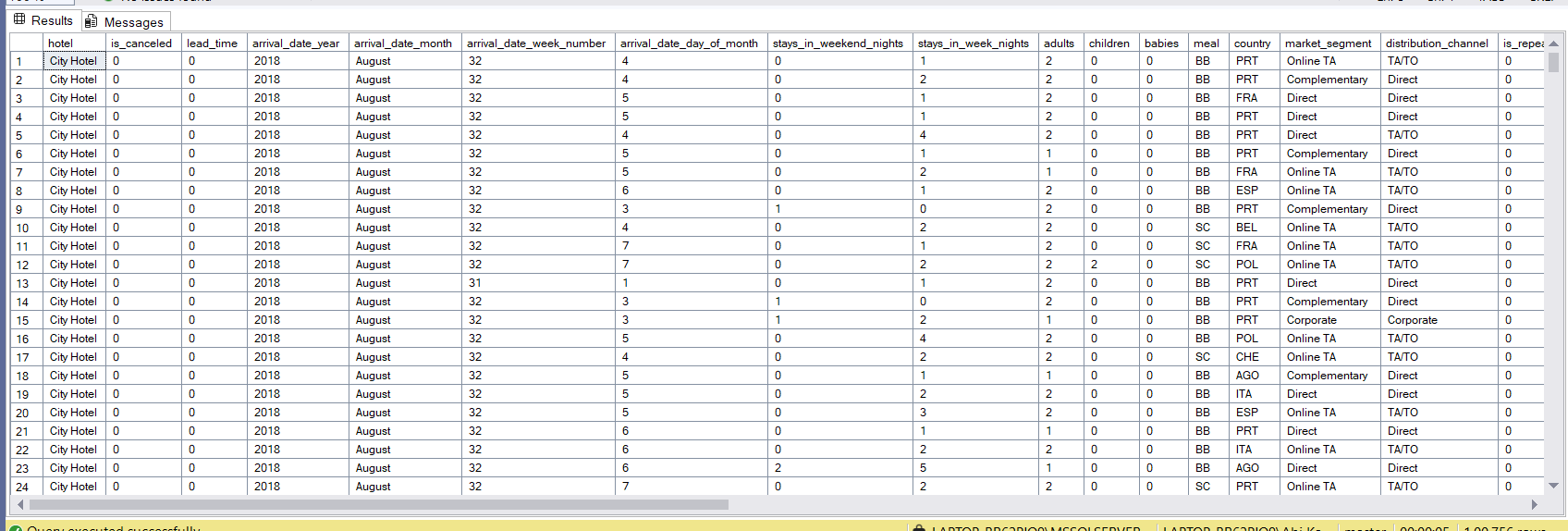
union

select \* from dbo.['2019$']

union

select \* from dbo.['2020$'])

select \* from hotels

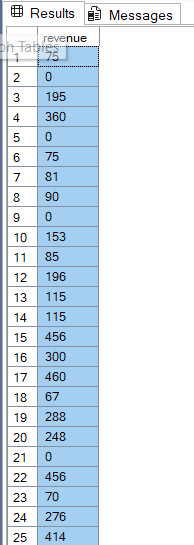
****

**Q.1: Is our hotel revenue growing yearly?**

select

(stays\_in\_week\_nights + stays\_in\_weekend\_nights) \* adr as revenue

from hotels;



**By revenue year:**

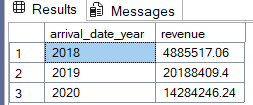
select

arrival\_date\_year,

sum((stays\_in\_week\_nights + stays\_in\_weekend\_nights) \* adr) as revenue

from hotels

group by arrival\_date\_year



**By hotel name:**

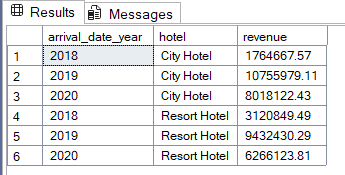
select

arrival\_date\_year, hotel,

sum((stays\_in\_week\_nights + stays\_in\_weekend\_nights) \* adr) as revenue

from hotels

group by arrival\_date\_year, hotel

****

**Q.2: Should we increase our parking lot size?**

select

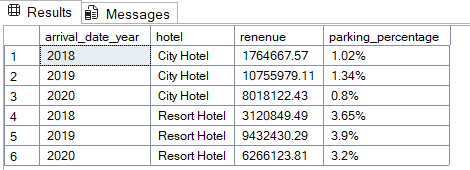
arrival\_date\_year, hotel,

sum((stays\_in\_week\_nights + stays\_in\_weekend\_nights) \* adr) as renenue,

concat (round((sum(required\_car\_parking\_spaces)/sum(stays\_in\_week\_nights +

stays\_in\_weekend\_nights)) \* 100, 2), '%') as parking\_percentage

from hotels group by arrival\_date\_year, hotel

****

**## Connect to Power BI through this query for further analysis:**

with hotels as(

select \* from dbo.['2018$']

union

select \* from dbo.['2019$']

union

select \* from dbo.['2020$'])

select \* from hotels

left join dbo.market\_segment$

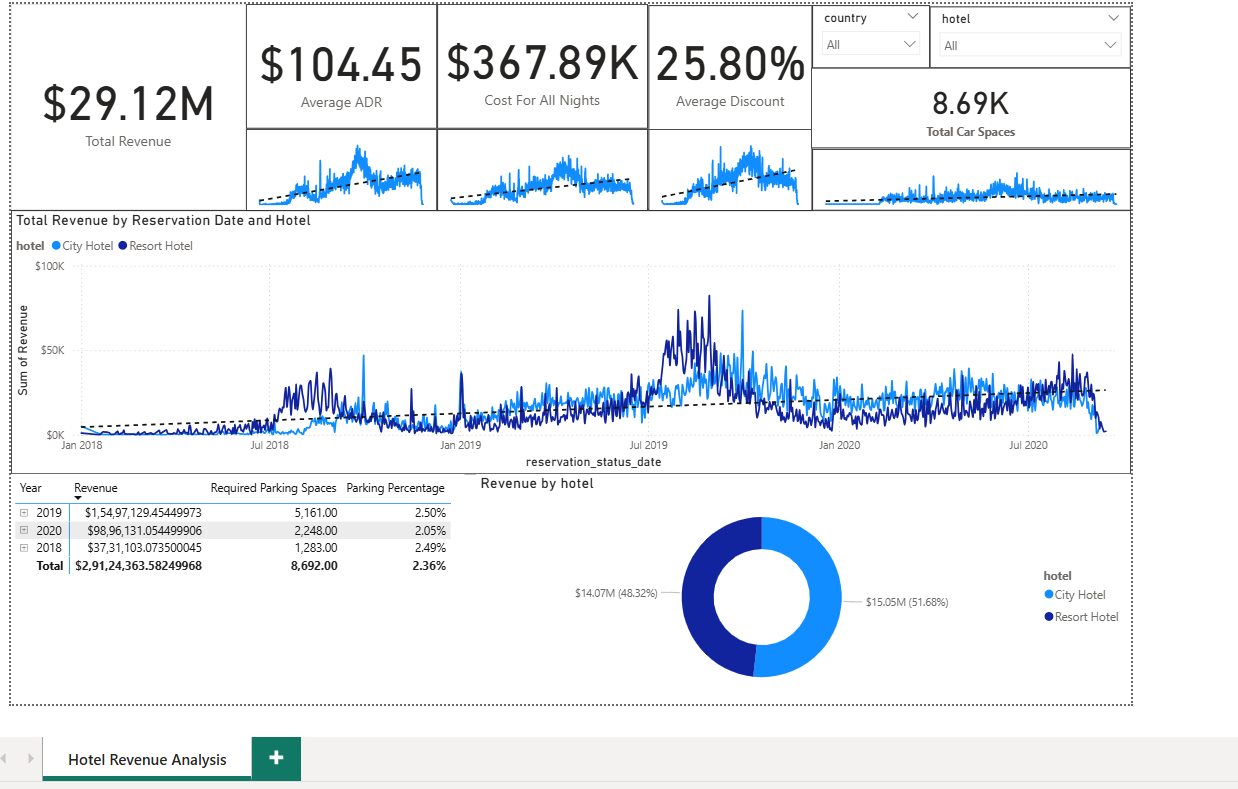
on hotels.market\_segment = market\_segment$.market\_segment

left join dbo.meal\_cost$

on meal\_cost$.meal = hotels.meal

**Q.3: What trends can we see in the data?**

1. **Revenue increased from 2018 to 2019, but it began to decrease from 2019 to 2020.**
2. **The average daily rate (ADR) has increased from 2019 to 2020, from $99.53 to $104.47.**
3. **Total number of nights booked by customers decreased from 2019 to 2020.**
4. **The discount percentage offered by the hotel has increased from 2019 to 2020 to attract more customers.**

****