Data Analyst project using SQL.

Develop a database to analyze and visualize hotel booking data.

1. Build a Database

2. Analyze and Retrieve Data with SQL

3. Connect Power BI to a Database

4. Visualize Data in Power BI

Requirements: Build a visual data dashboard using power BI to present to the stakeholders.

* Is your hotel revenue growing by years?
* Should you increase your parking lot size?
* What trends can help us increase our business?

Data analysis Project Pipeline:

1. Build a database.
2. Develop a SQL Query.
3. Connect Power BI to the database.
4. Visualize the trends.
5. Summarize the findings.

Dataset:



Concepts:

1.with

2.union

3.group by

4.orderby

Steps:

1. Merge the tables:

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

union

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

union

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

1. Create the table with merged data:

--with for temperory table

with hotels as

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

union

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

union

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

select \* from hotels

1. Calculate the revenue:

We don’t have any revenue column, but we can calculate the daily rate with the days anyone is staying.

with hotels as

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

union

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

union

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

select

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

from hotels

1. Find revenue by each year:

with hotels as

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

union

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

union

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

--use sum because we want to group it by years, if sum not used we will get the year for each revanue

select arrival\_date\_year,

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

from hotels

group by arrival\_date\_year

Table

Description automatically generated

1. Show the revenue by hotel type:

--with for temperory table

with hotels as

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

union

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

union

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

--use sum because we want to group it by years and hotel type, if sum not used we will get the year for each revanue

select arrival\_date\_year, hotel,

round(sum((stays\_in\_week\_nights+stays\_in\_weekend\_nights)\*adr),2)as revanue

from hotels

group by arrival\_date\_year, hotel

Table

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1. Merge all the column to add meal and market segment.

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= dbo.market\_segment$.market\_segment

left join dbo.meal\_cost$ on hotels.meal = dbo.meal\_cost$.meal

1. Import the data into power BI using SQL server import for our query.
2. Now transform the data to answer the requirements:

Create a new column and add revenue column by \* the adr with discount.

1. Final dashboard:

