Objective: Build a visual data story or dashboard using Power BI to present to your stakeholders

Questions:

* “Is our hotel revenue growing by year?”
* “Should we increase our parking lot size?”
* “What trends can we see in the data”

Action Plan:

1. Build a Database
2. Develop SQL Query
3. Connect Power BI to Database
4. Visualize
5. Summarize Findings

First Use SQL Server: DESKTOP-ABTDHFE\SQLEXPRESS

1. Create a Database before we import our tables
2. Graphical user interface, text, application, email

   Description automatically generatedBrowse to find our data.

Graphical user interface, text, application, email

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Graphical user interface

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Graphical user interface, application

Description automatically generated with medium confidence

1. Explore Data Using SQL query. Try to develop SQL query to get all the data into 1 unified data into Power BI

A screenshot of a computer

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1. Table

   Description automatically generatedNow combined the three tables using UNION SQL query
2. Now we can answer one of the questions using the table we just made

“Is our hotel revenue growing by year?”

Table

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1. We don’t have revenue column but create a new column for revenue (that equal the stay in week nights and weekend nights seen

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1. Now we use the ADR(daily rate) that we have to the hotels – now we can see the cost for the revenue

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Now name it as Revenue

Graphical user interface, application

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1. Now bring in another column, arrival year\_date\_year – now we get the year and each one of these

Graphical user interface, application

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1. Now wrap this, into a sum statement for and then I would group it by arrival date year and group by arrival\_date\_year. Now we can see that we have the sum of the revenue by each group arrival\_date\_year

Graphical user interface, application

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1. We see that have about 4 million in 2018 , 20 million in 2019 and 14 million in 2020 – we can say that our revenue is growing from the three hotels

Table

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1. Now our stakeholders want it broken down by hotel type – so bring in variable hotel from hotels table and add hotel to group by SQL query function

Graphical user interface, application

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1. Now to see the numbers clearer – round by 2 – we see that 2020 is a incomplete data set so we have to invalidate that one. We can see that 2018 there was a increase in the city hotel and resort hotel

Graphical user interface

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1. Now run a query for market segment – we can see the discount applied to each segment by booking type

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1. Now looking at dbo 2020 it also has market segment so we can join tables market\_segment and table hotels

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1. Save the previous query – to start new query to investigate step 14

select

arrival\_date\_year,

hotel,

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

from hotels

group by arrival\_date\_year,hotel

select \* from dbo.market\_segment$

1. Now we want to join market segment table to our market segment column in hotels. Now we have a new discount market.segment column

Graphical user interface, application, Word

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1. Now we use left\_join if we want to bring in all of the information if there’s a match or not – will bring some null

Graphical user interface, application, table

Description automatically generated

1. We want to left join our dbo.meals cost – join it on meal

Graphical user interface, application

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1. Now open PowerBI – Get Data – From SQL server – remember your server name

DESKTOP-ABTDHFE\SQLEXPRESS

Graphical user interface, text, application, email

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Table

Description automatically generated

1. Now build visuals – to answer our questions

* “Is our hotel revenue growing by year?”
* “Should we increase our parking lot size?”
* “What trends can we see in the data”

1. First factor in our discount for total revenue – add a new column in PowerBI called Revenue making a new formula ([stays\_in\_week\_nights]+[stays\_in\_week\_nights])\*([adr]\*[Discount])

Table

Description automatically generated

1. Now Close & Apply apply new column Revenue and start visualizing – what we’re looking for. Add the Sum of Revenue and Average of ADR

A picture containing text

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1. Now we’re adding the room nights

Graphical user interface, application

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Graphical user interface, application, Word

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1. Add discount on percentage

Graphical user interface, application

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25.

Graphical user interface, application

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Graphical user interface, chart

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1. Add hotel now
2. Graphical user interface, application

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