

Que 1. Explain M Query with an example and attach all the screenshot of the process ?**Answer:**

-Microsoft Power Query provides a powerful data import experience that encompasses many features. Power Query works with Analysis Services, Excel, and Power BI workbooks. A core capability of Power Query is to filter and combine, that is, to mash-up data from one or more of a rich collection of supported data sources.

-Query M Formula Language is a useful and expressive data mashup language. But it does have some limitations. For example, there is no strong enforcement of the type system. In some cases, a more rigorous validation is needed. Fortunately, M provides a built-in library with support for types to make stronger validation feasible.

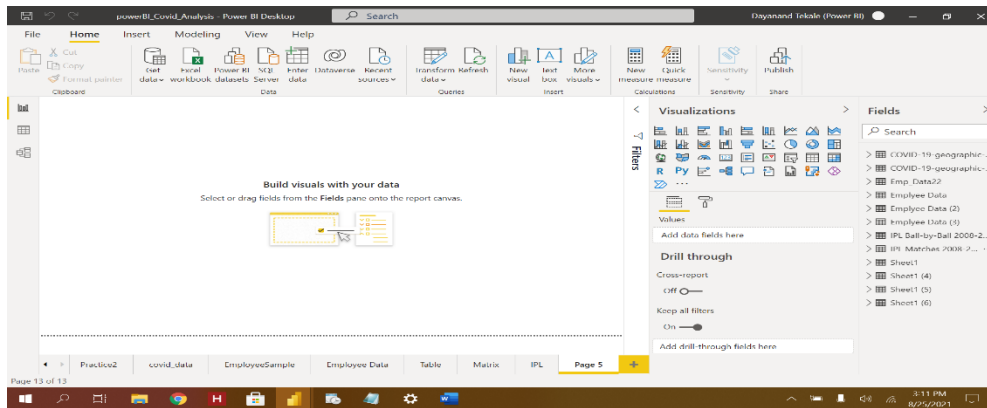
-Developers should have a thorough understanding of the type system in-order to do this with any generality. And, while the Power Query M language specification explains the type system well, it does leave a few surprises. For example, validation of function instances requires a way to compare types for compatibility.

-By exploring the M type system more carefully, many of these issues can be clarified, and developers will be empowered to craft the solutions they need.

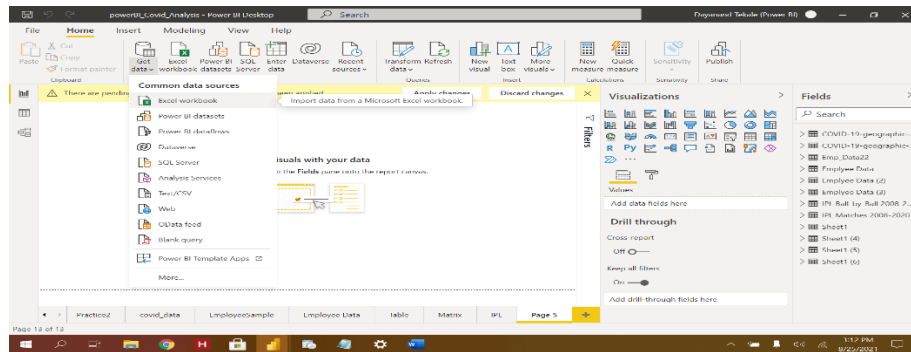
-Example:

-Open Power BI Desktop

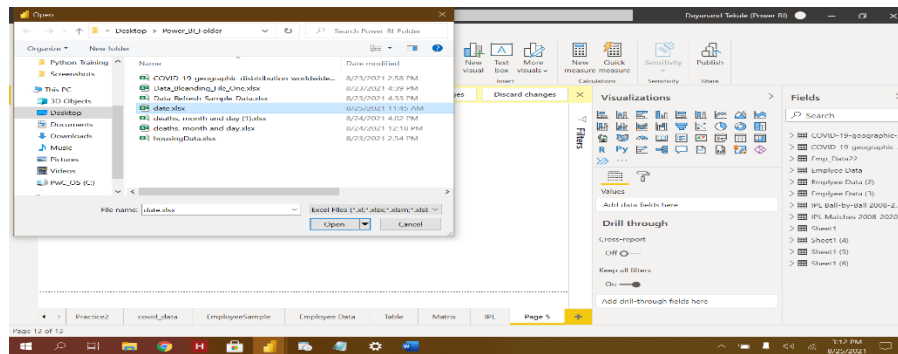
-Home



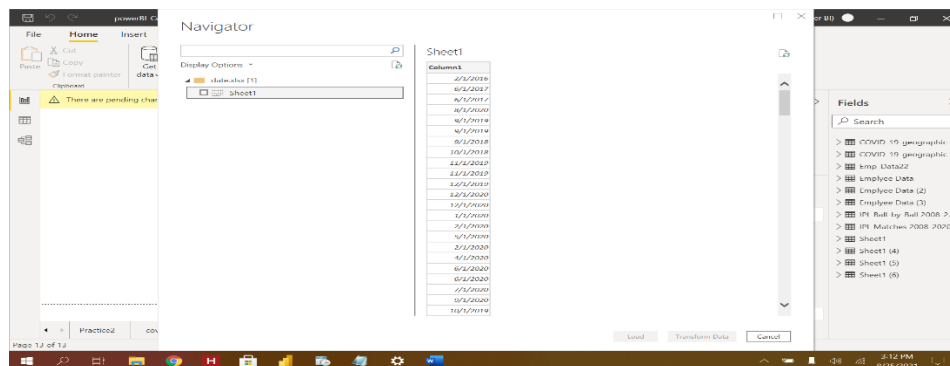
-Get data



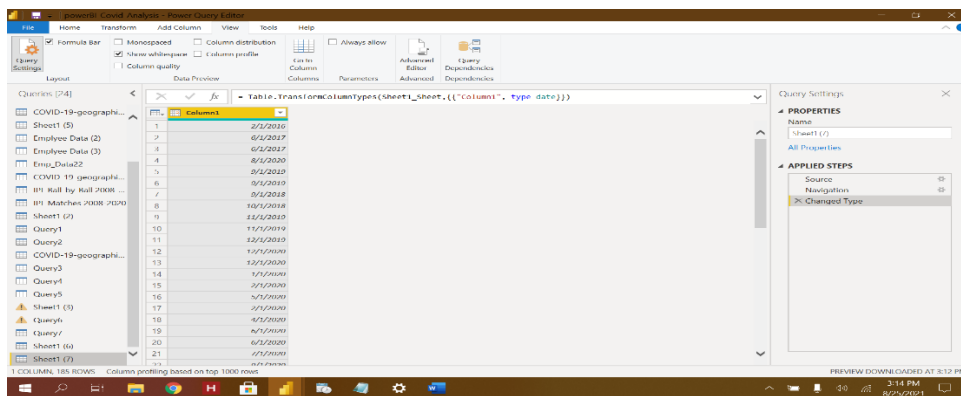
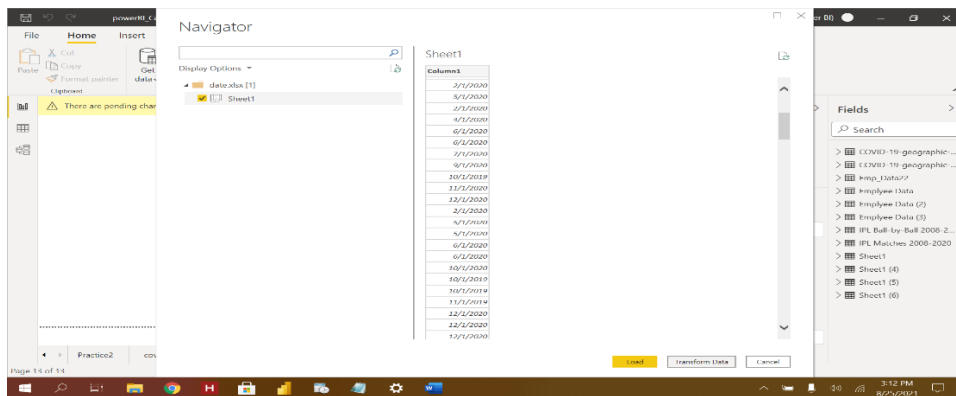
-upload file



-Select Sheet



=> Transform data



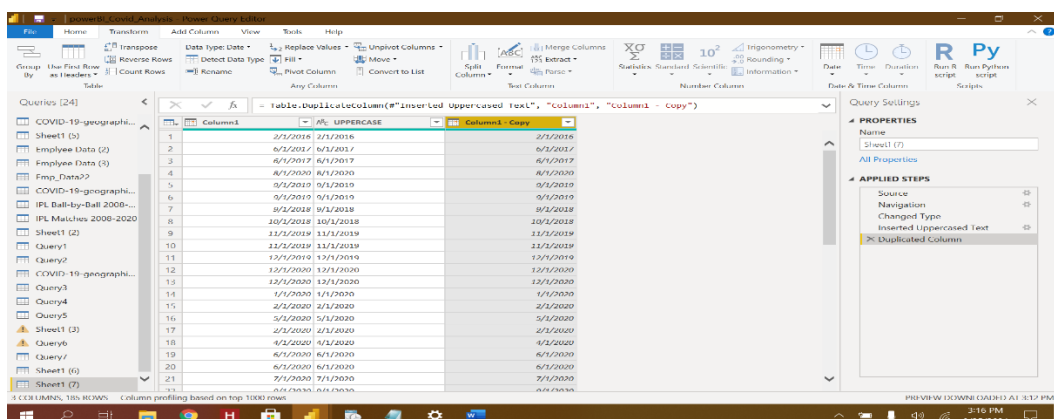
=>Home

=>remove table(other then first column)---select first column---remove other option choose

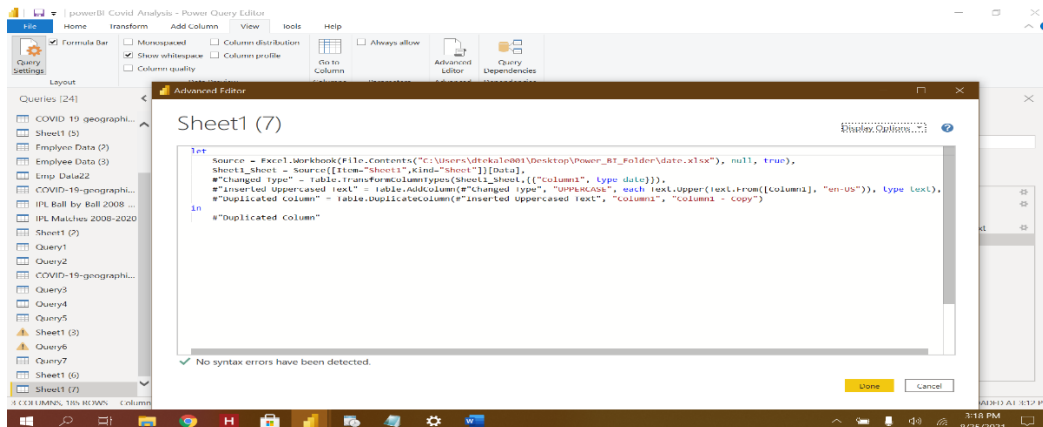
=>Perform Operation

=>Add Columns=>add duplicates----- (Means Perform Some Operation)

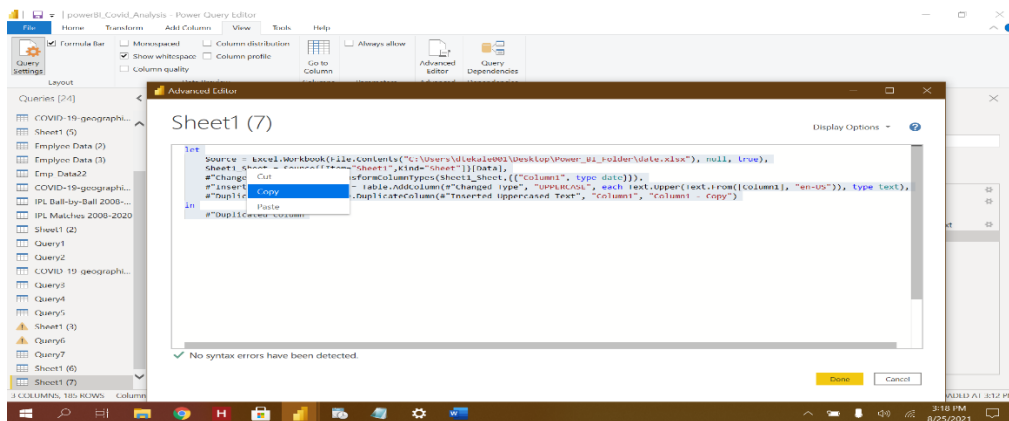
=>Transform=>Format=>Upper/Lower



=>View=>Advance Editor ----[see Query]



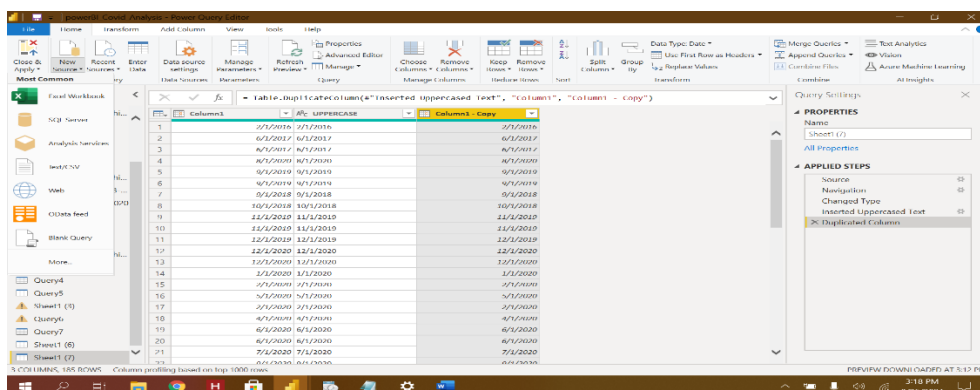
=>copy query(**)



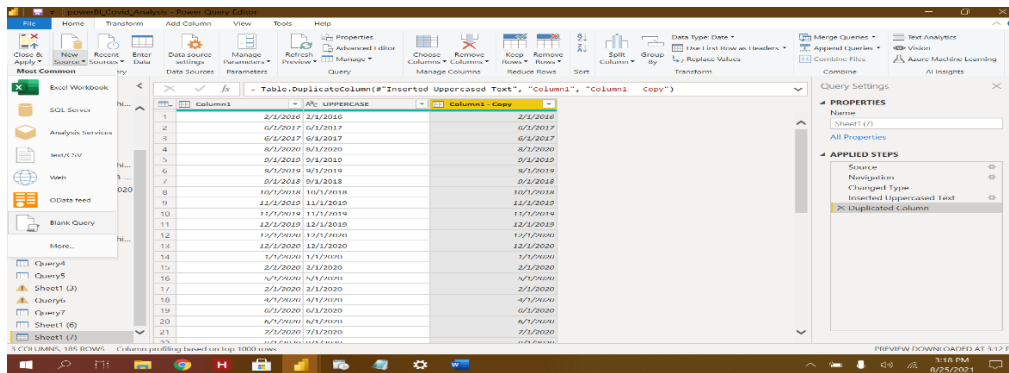
=>done

=>Go to home

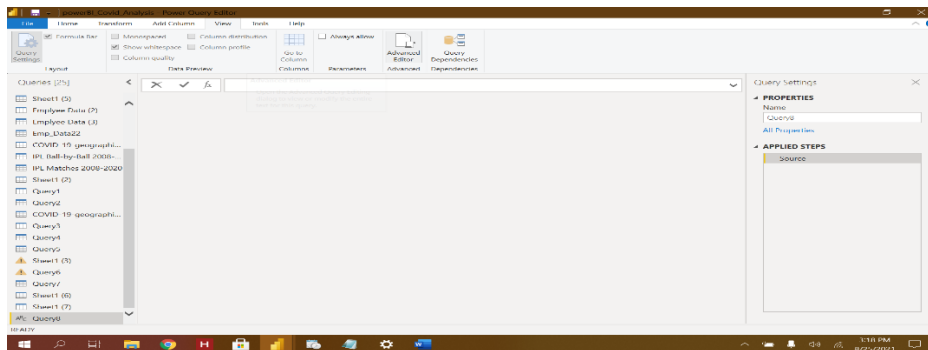
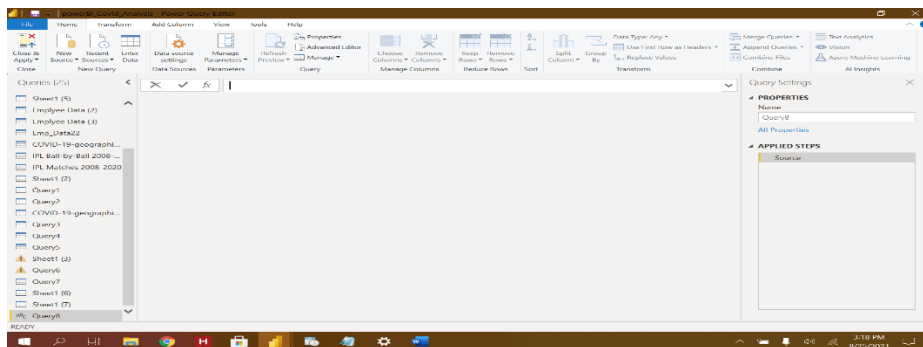
=>New Source



=>Blank Query

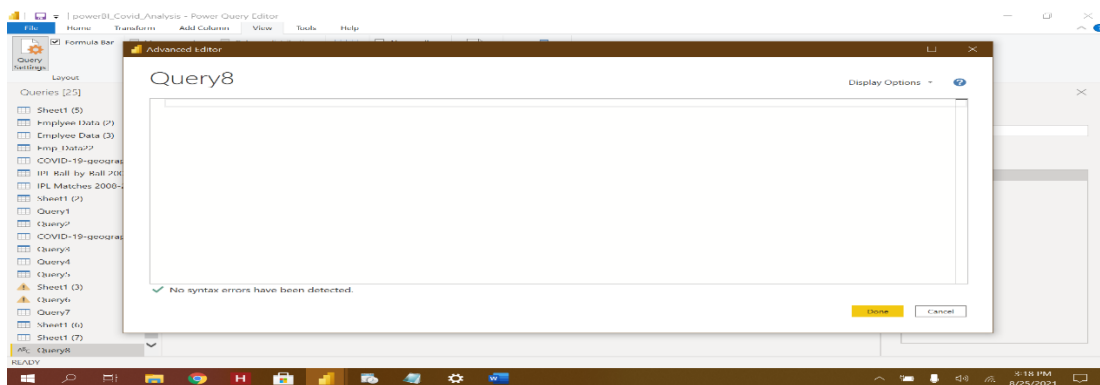
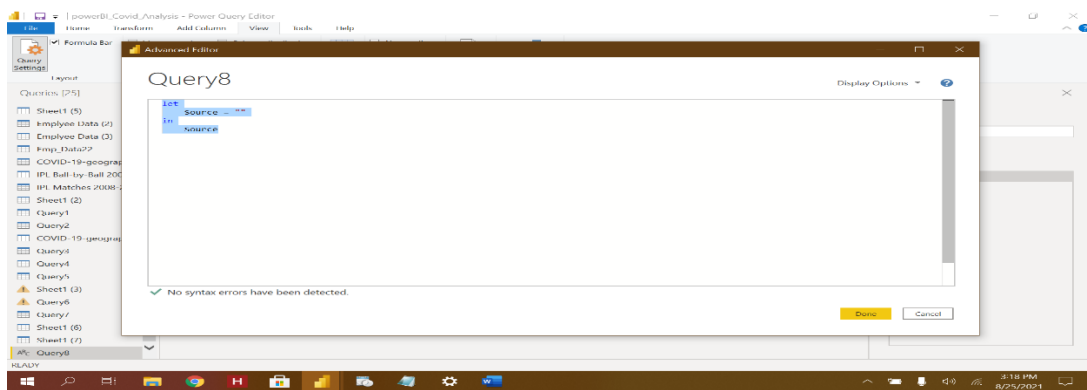
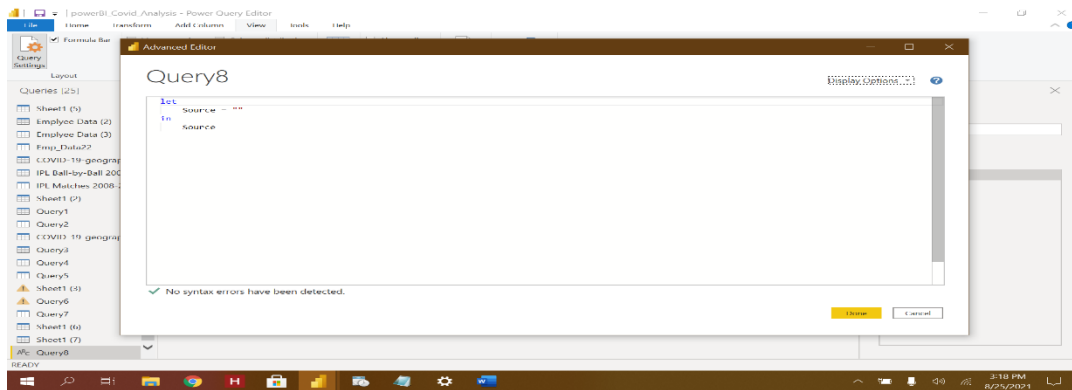


=>View=>Advance editor



=>Query....Remove

=>Their All-ready Query



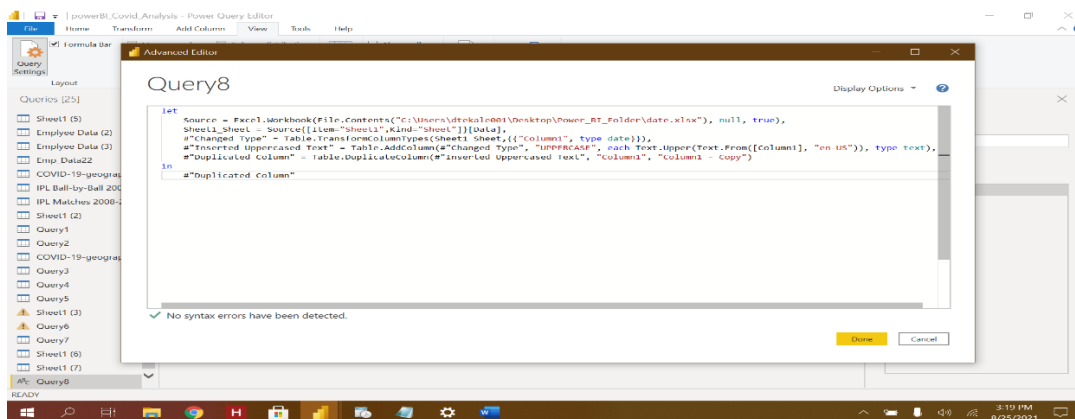
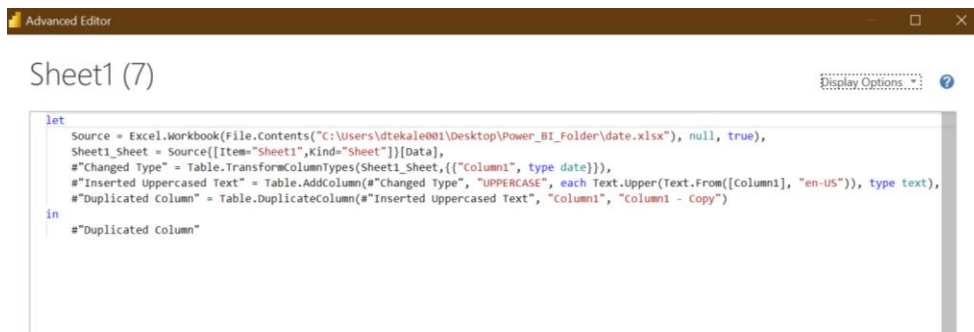
=> Paste copied Query(**)

=> As per requirement we make changes on Data

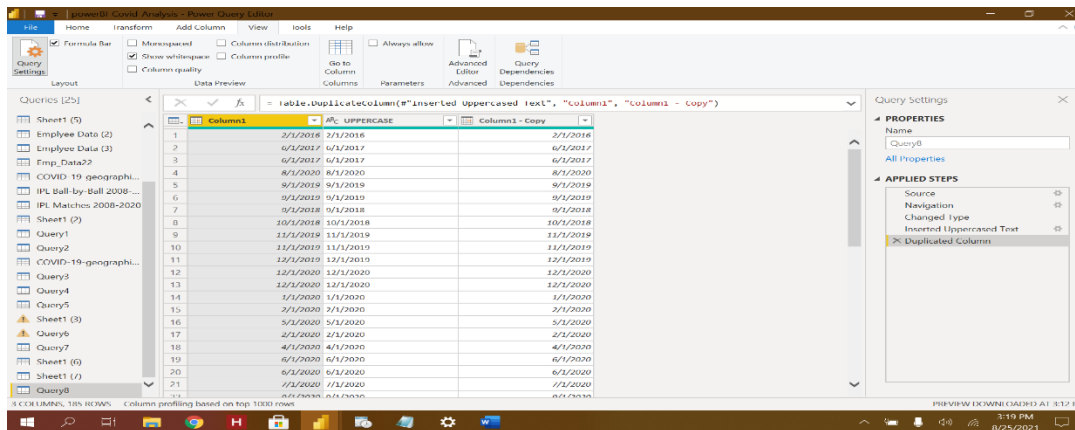
=> These all Steps are Added in our program Analyze Query

=> Query Having the first 2 lines for Sheet

=> Another all lines for the Changes we makes in our DataSheet



=> Done



=> See...Applied Step

=> See table Automatically Here

=> As per Query we can access the data or Tables for Visualization perpose

Que2. What is DAX? Why DAX Required?

Answer:

- Data Analysis Expressions (DAX) sounds a little intimidating at first, but don't let the name fool.
- DAX basics are quite easy to understand. First things first DAX is NOT a programming language.
- DAX is a formula language. You can use DAX to define custom calculations for Calculated Columns and for measures (also known as calculated fields).
- DAX includes some of the functions used in Excel formulas, and additional functions designed to work with relational data and perform dynamic aggregation.
- DAX formulas are very similar to Excel formulas.
- To create one, you type an equal sign, followed by a function name or expression, and any required values or arguments.
- Like Excel, DAX provides a variety of functions that we can use to work with strings, perform calculations using dates and times, or create conditional values.
- If We want to customize calculations on a row-by-row basis, DAX includes functions that let We use the current row value or a related value to perform calculations that vary by context.
- DAX includes a type of function that returns a table as its result, rather than a single value.
- These functions can be used to provide input to other functions.
- Time Intelligence Functions in DAX allow calculations using ranges of dates and compare the results across parallel periods.

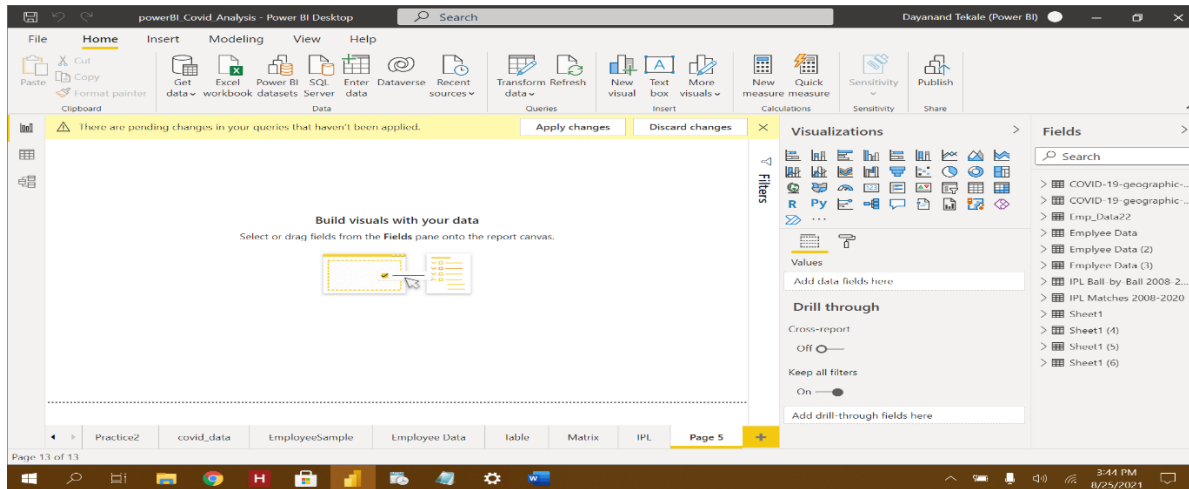
Que3. Explain Min, Max, Sum, Count with an example

Answer:

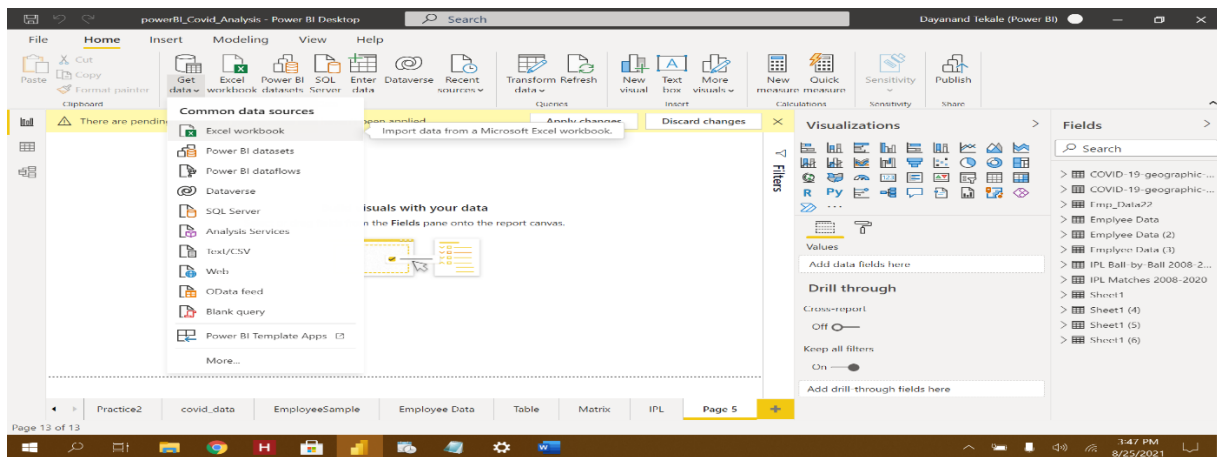
- Minimum, Maximum, Sum Function we can use directly in Power BI
 - It helps us for great visualization and Fast calculation
 - With the help of these function we can Make changes as per required in Data as well as in Visualization.
- Steps for **Min**:

=>Go to Power BI Desktop

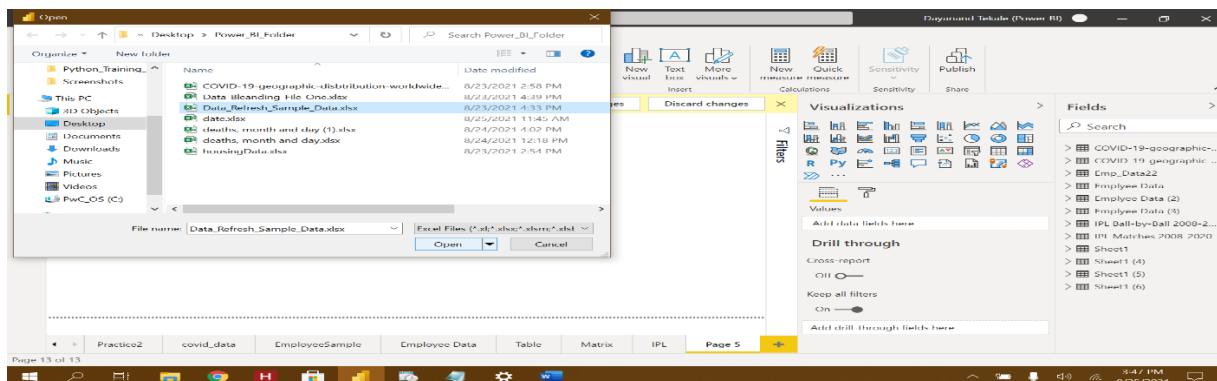
=>Report----(means Main Sheet of powerBI)



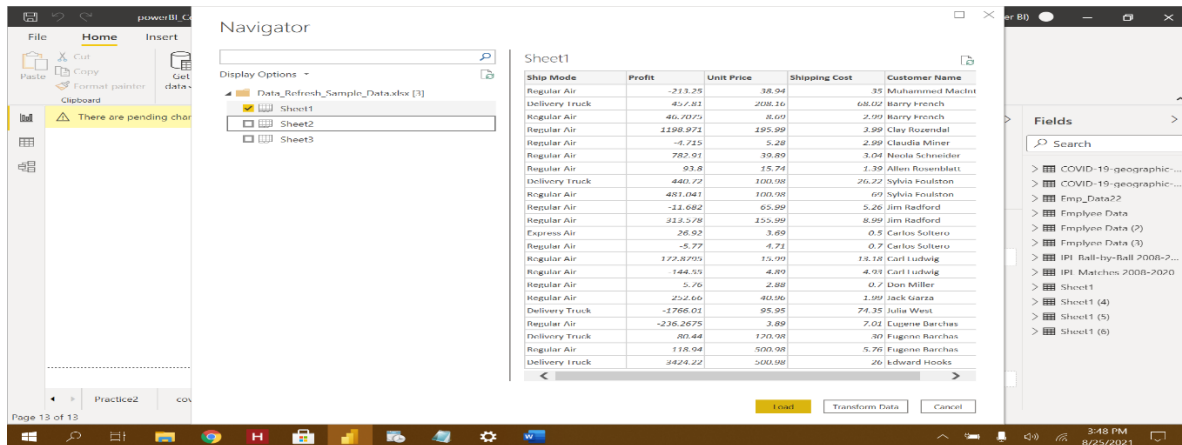
=>Get Data



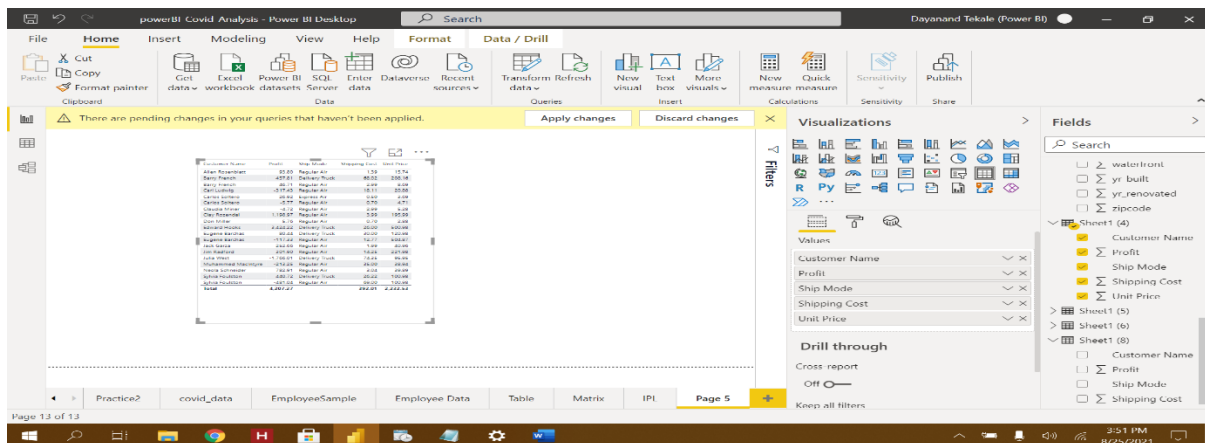
=>load Data



=>Upload



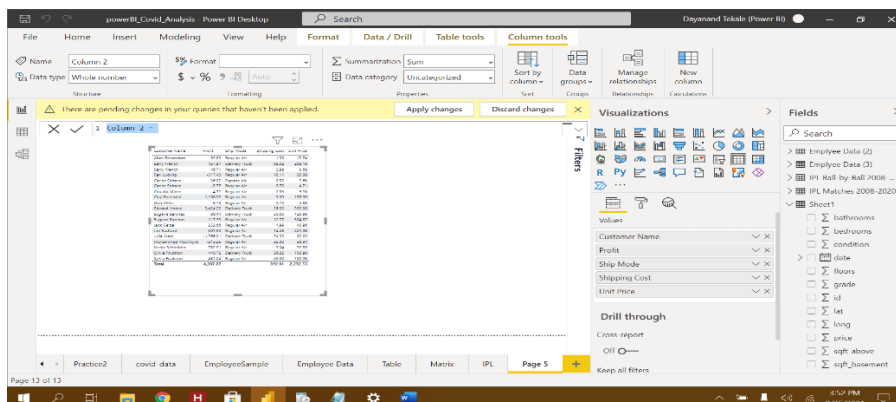
=>Load Sheet



=>Modelling

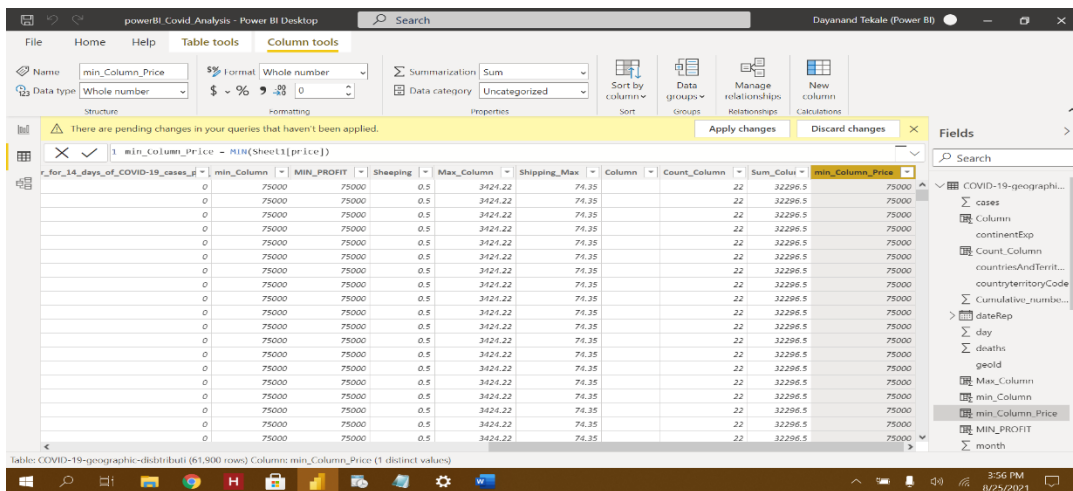
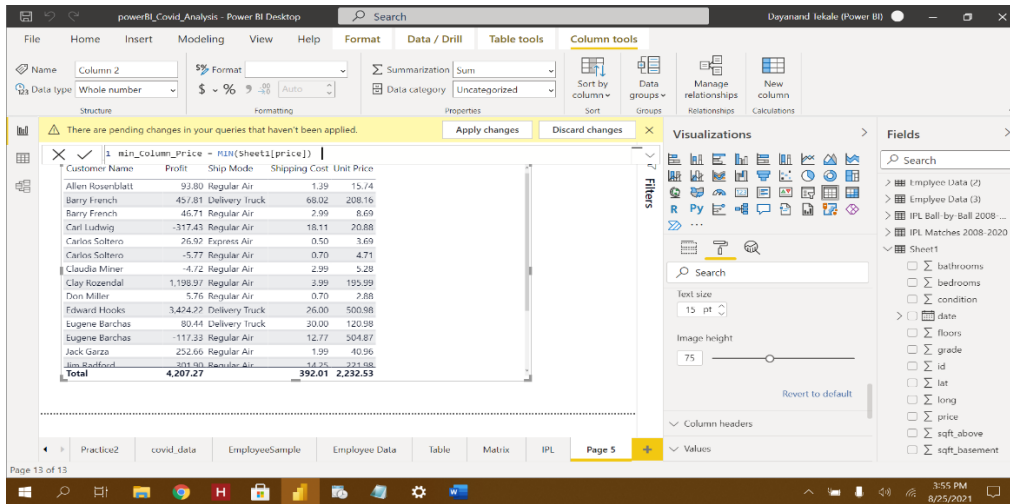
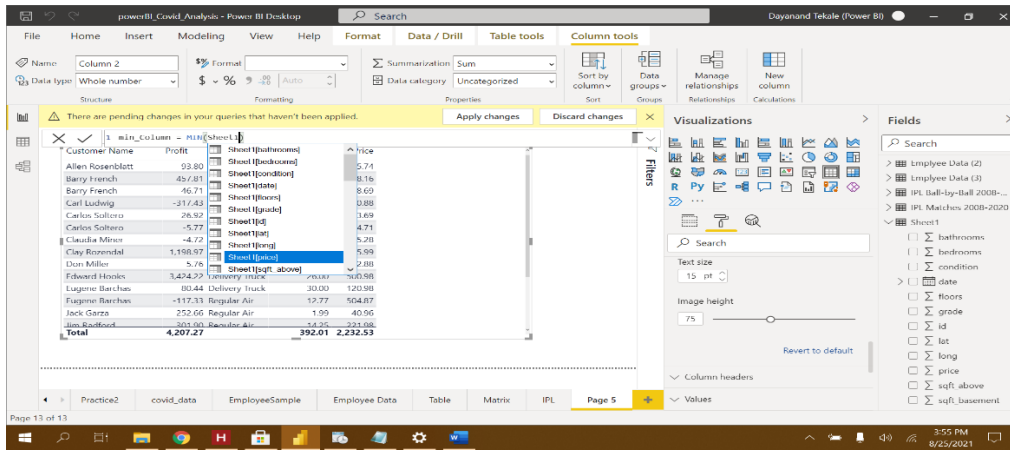
=>* New Columns*

=>Click



=>Specify.....(MIN,MAX,AVG)

=>MIN



=>See here in Data New Column is added

=>Min_Column_Price

=>For Max

=>GO to Modelling

=>New Column

powerBI_Covid_Analysis - Power BI Desktop

File Home Insert Modeling View Help Format Data / Drill Table tools Column tools

Name: Column 2 Format: % Summarization: Sum Data type: Whole number Data category: Uncategorized

There are pending changes in your queries that haven't been applied. Apply changes Discard changes

Visualizations Fields

Customer Name	Profit	Ship Mode	Unit Price
Carlos Soltero	-5.77	Regular Air	0.70
Claudia Miner	-4.72	Regular Air	2.99
Clay Rozendal	1,198.97	Regular Air	3.99
Don Miller	5.76	Regular Air	0.70
Edward Hooks	3,424.22	Delivery Truck	26.00
Eugene Barchas	80.44	Delivery Truck	30.00
Eugene Barchas	-117.33	Regular Air	12.77
Jack Garza	252.66	Regular Air	1.99
Jim Radford	301.90	Regular Air	14.25
Julia West	-1,766.01	Delivery Truck	74.35
Muhammed Macintyre	213.25	Regular Air	35.00
Nicola Schneider	782.91	Regular Air	3.04
Sylvia Foulston	440.72	Delivery Truck	26.22
Sylvia Foulston	-481.04	Regular Air	69.00
Total	4,207.27		392.01

Page 13 of 13

powerBI_Covid_Analysis - Power BI Desktop

File Home Insert Modeling View Help Format Data / Drill Table tools Column tools

Name: Shipping_Max_Column Format: General Summarization: Sum Data type: Decimal number Data category: Uncategorized

There are pending changes in your queries that haven't been applied. Apply changes Discard changes

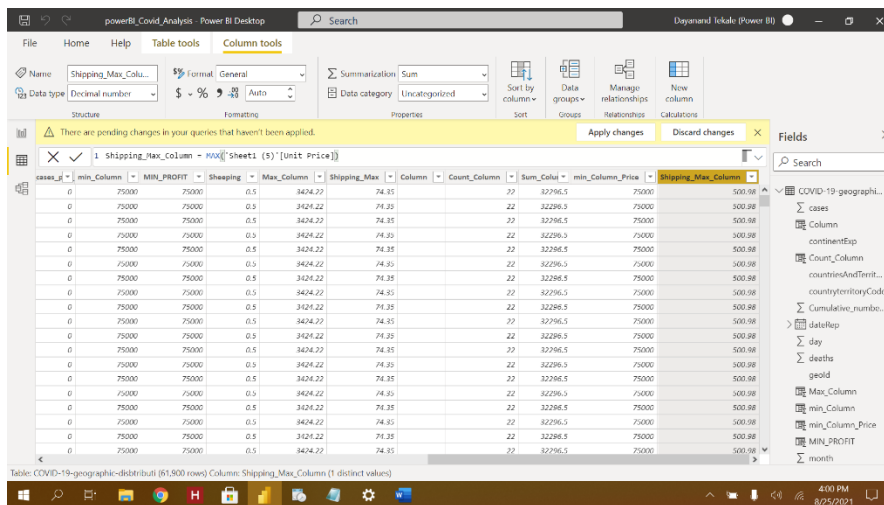
Visualizations Fields

Customer Name	Profit	Ship Mode	Shipping Cost	Unit Price
Carlos Soltero	-5.77	Regular Air	0.70	4.71
Claudia Miner	-4.72	Regular Air	2.99	5.28
Clay Rozendal	1,198.97	Regular Air	3.99	195.99
Don Miller	5.76	Regular Air	0.70	2.88
Edward Hooks	3,424.22	Delivery Truck	26.00	500.96
Eugene Barchas	80.44	Delivery Truck	30.00	120.98
Eugene Barchas	-117.33	Regular Air	12.77	504.87
Jack Garza	252.66	Regular Air	1.99	40.96
Jim Radford	301.90	Regular Air	14.25	221.98
Julia West	-1,766.01	Delivery Truck	74.35	95.95
Muhammed Macintyre	213.25	Regular Air	35.00	38.94
Nicola Schneider	782.91	Regular Air	3.04	39.99
Sylvia Foulston	440.72	Delivery Truck	26.22	100.96
Sylvia Foulston	-481.04	Regular Air	69.00	100.98
Total	4,207.27		392.01	2,232.53

Page 13 of 13

=>For Max Table added in sheet

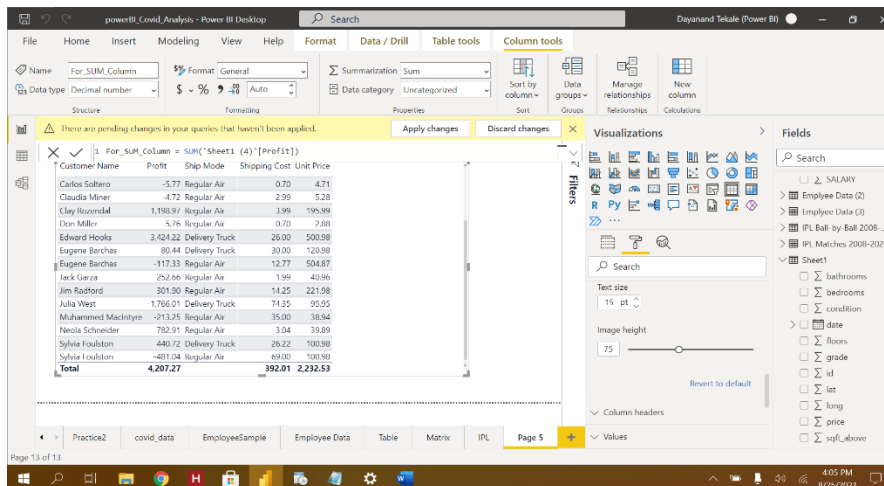
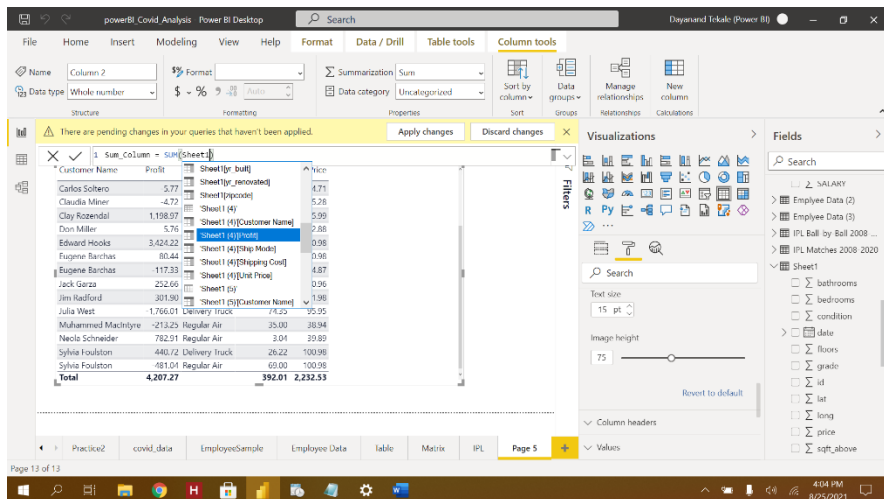
=>Check the visualization Calculation Table here also values changed.

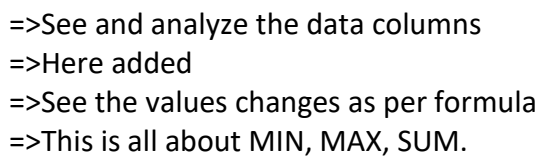


=>For SUM

=>Go to modelling

=>New Column





=>Here added

=>This is all about MIN, MAX, SUM.