

Custom Learnings

Day 11

Power BI

It is used to create reports based on data.

PBI Services: To publish reports for other people to view.

PBI Mobile: To have a mobile view of the reports.

We can create reports of well-enriched data, for that we need to transform the data.

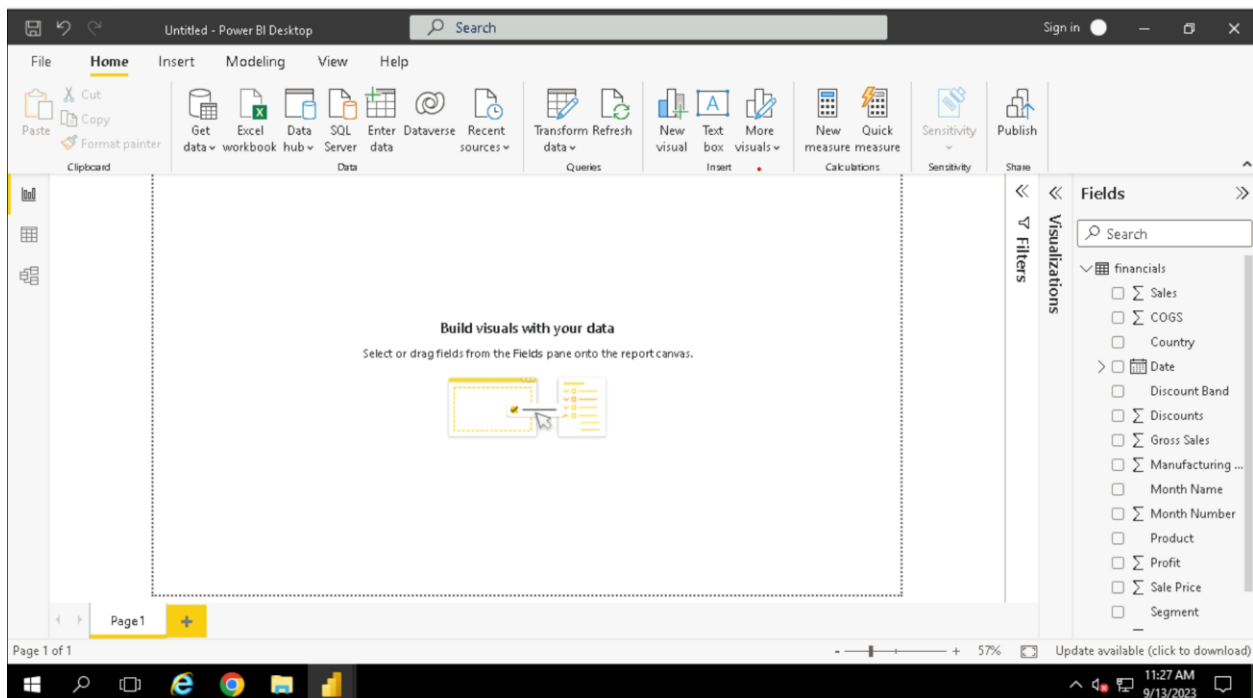
Power Query: It is used to transform the data in Power BI. It is also present in other Microsoft services.

Dashboard: Key points of all reports in a single view.

Power Query Editor: M(Mashup Query) Language is used in the backend.

Manage Parameters: For connection, we can create parameters, so that we can change the source environment/connection.

Introduction to Power BI:



Perform transformation of data:

Untitled - Power Query Editor

File Home Transform Add Column View Tools Help

Close & Apply New Source Recent Sources Enter Data Data source settings Manage Parameters Refresh Preview Advanced Editor Manage Columns Reduce Rows Sort Split Column Group By Data Type: Text Use First Row as Headers Replace Values Transform

Queries [1] financials

Table.ReplaceValue("#Changed Type", "United States of America", "USA", Replacer.ReplaceText, ...)

Segment	Country	Product	Discount Band	1.2 Units Sold
1 Government	Canada	Carretera	None	
2 Government	Germany	Carretera	None	
3 Midmarket	France	Carretera	None	
4 Midmarket	Germany	Carretera	None	
5 Midmarket	Mexico	Carretera	None	
6 Government	Germany	Carretera	None	
7 Midmarket	Germany	Montana	None	
8 Channel Partners	Canada	Montana	None	
9 Government	France	Montana	None	
10 Channel Partners	Germany	Montana	None	
11 Midmarket	Mexico	Montana	None	
12 Enterprise	Canada	Montana	None	
13 Small Business	Mexico	Montana	None	
14 Government	Germany	Montana	None	
15 Enterprise	Canada	Montana	None	
16 Midmarket	USA	Montana	None	
17 Government	Canada	Paseo	None	
18 Midmarket	Mexico	Paseo	None	
19 Channel Partners	Canada	Paseo	None	

16 COLUMNS, 700 ROWS Column profiling based on top 1000 rows

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Untitled - Power Query Editor

File Home Transform Add Column View Tools Help

Column From Custom Examples Column Invoke Custom Function Duplicate Column Conditional Column Index Column Merge Columns Format ABC 123 Extract Parse From Text Statistics Standard Scientific Trigonometry Rounding Information Date Time Duration Text Analytics Vision Azure Machine Learning

Queries [1] financials

Table.AddColumn("#Added Custom", "SegCountry", each [Segment] & " " & [Country])

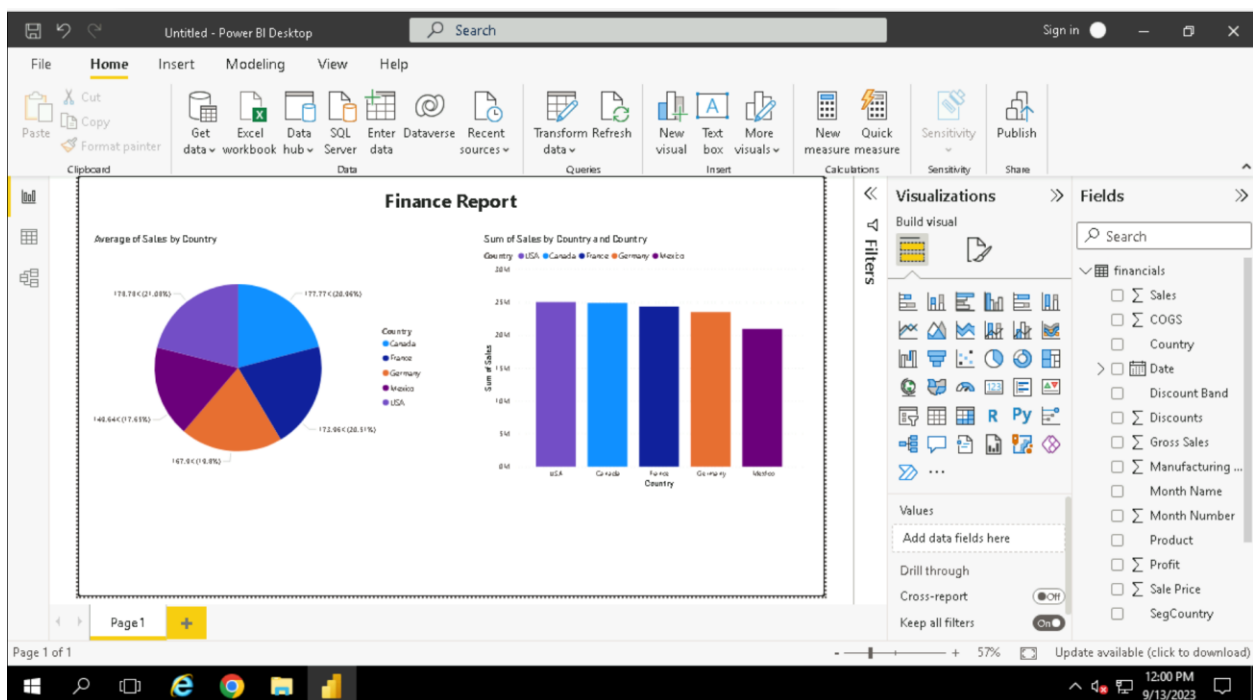
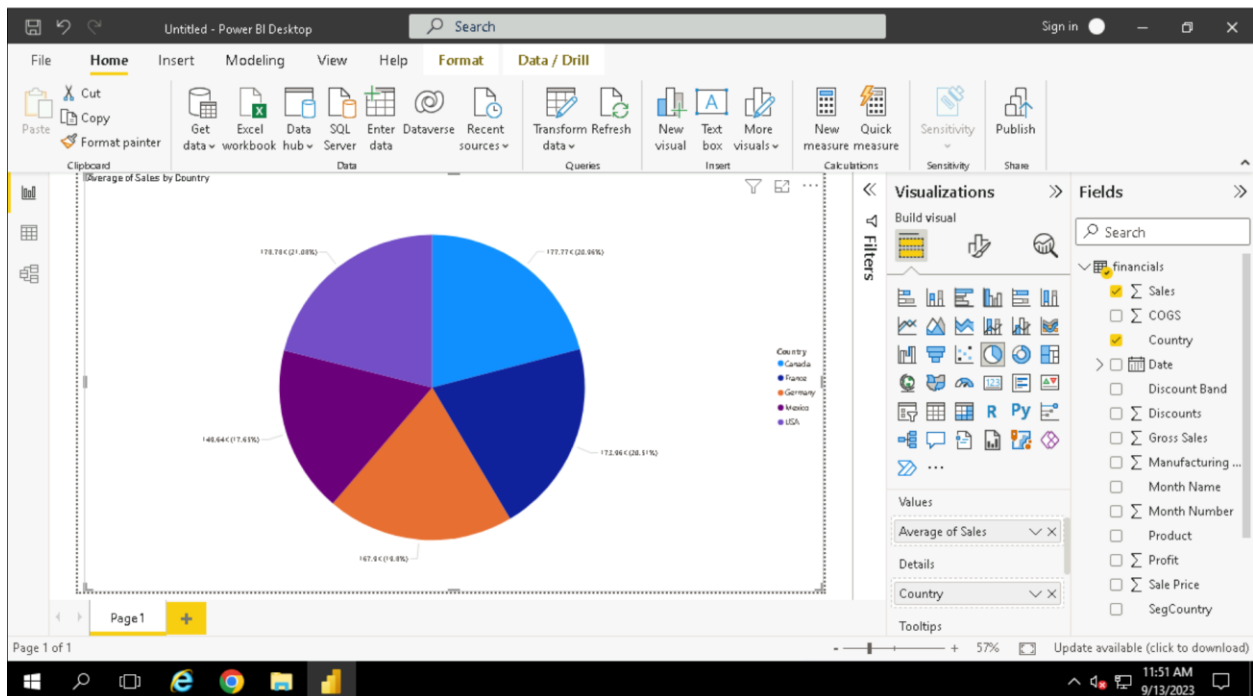
Month	Month Name	Year	Total Sales	SegCountry
1	1 January	2014	32390	Government Canada
2	1 January	2014	26440	Government Germany
3	6 June	2014	32685	Midmarket France
4	6 June	2014	13335	Midmarket Germany
5	6 June	2014	37065	Midmarket Mexico
6	12 December	2014	529900	Government Germany
7	3 March	2014	13830	Midmarket Germany
8	6 June	2014	30228	Channel Partners Canada
9	6 June	2014	38000	Government France
10	6 June	2014	18552	Channel Partners Germany
11	6 June	2014	37065	Midmarket Mexico
12	7 July	2014	333312.5	Enterprise Canada
13	8 August	2014	287700	Small Business Mexico
14	9 September	2014	15029	Government Germany
15	10 October	2013	43250	Enterprise Canada
16	12 December	2014	9240	Midmarket USA
17	2 February	2014	5860	Government Canada
18	2 February	2014	14625	Midmarket Mexico
19	6 June	2014	30778	Channel Partners Canada

18 COLUMNS, 700 ROWS Column profiling based on top 1000 rows

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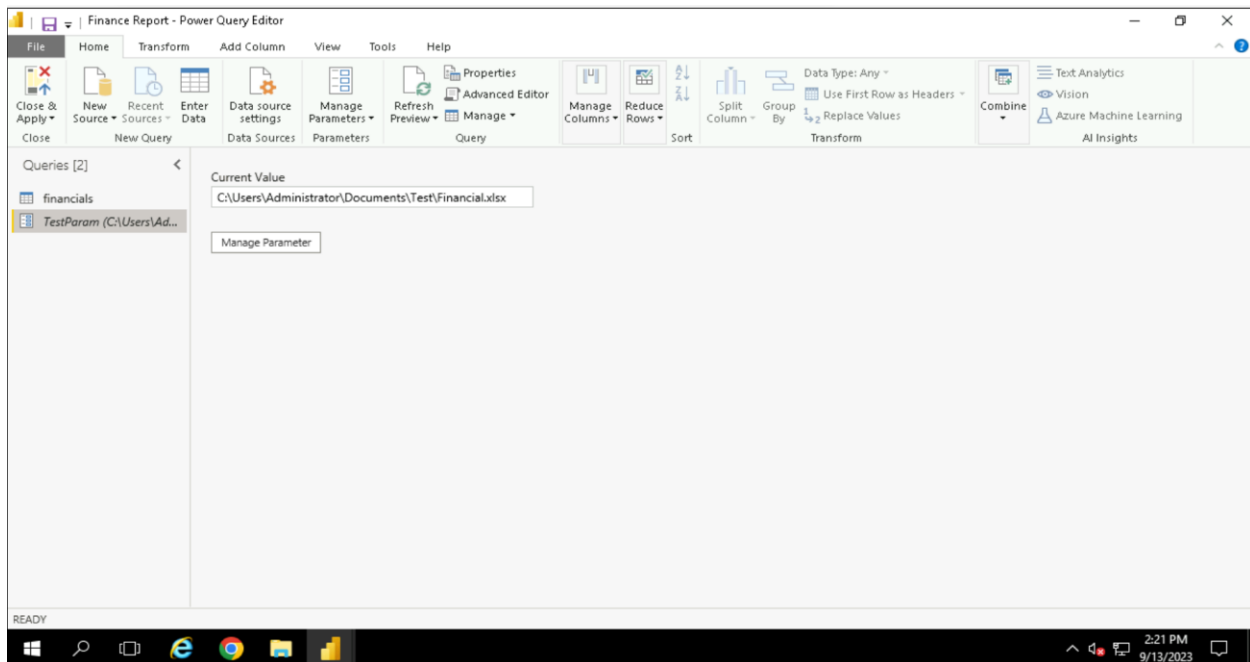
Creation of some Visuals:



Parameters: To change the data source or to make the data source path dynamic we can create parameters so that different teams can give their requirement specific path.

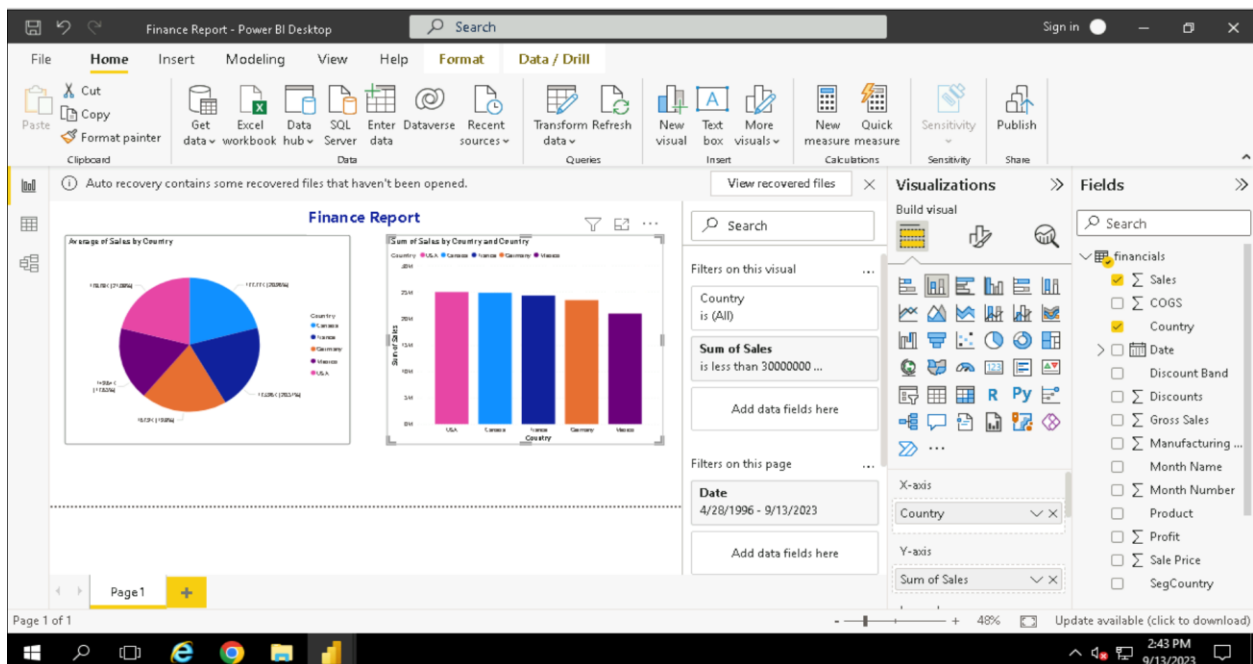
The number of columns and type should be same only rows can be different otherwise the reports won't work.

Creation of parameter:

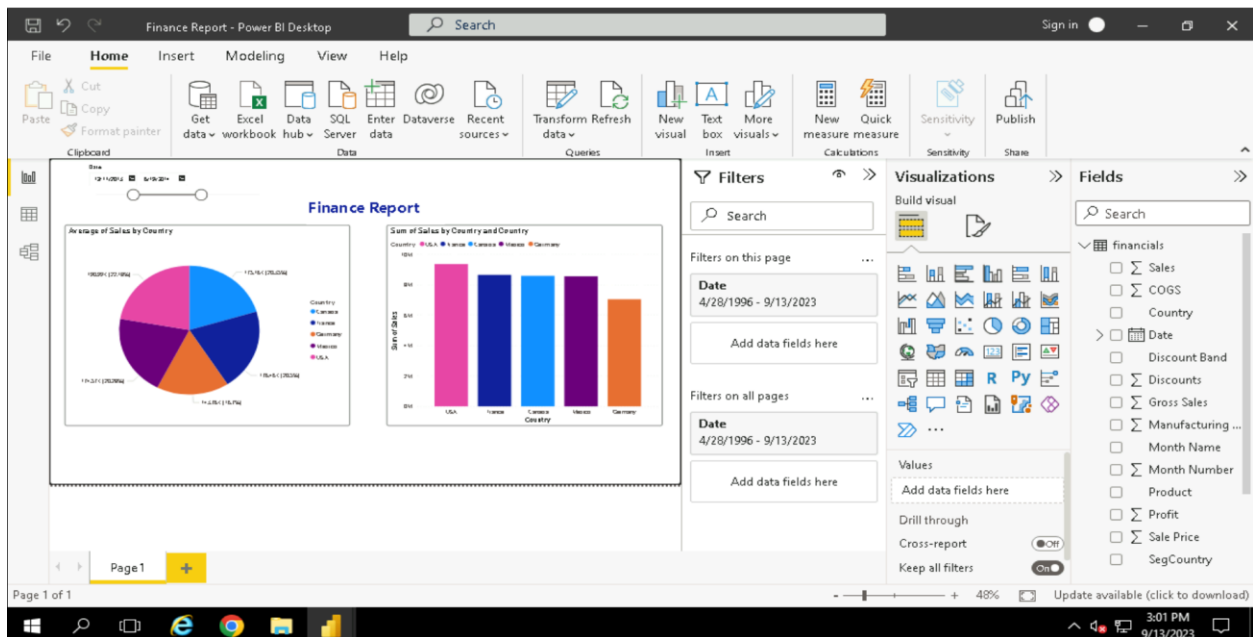


Filters: Used to filter data based on some requirement. Three types:

1. Visual Level
2. Page Level
3. Report Level



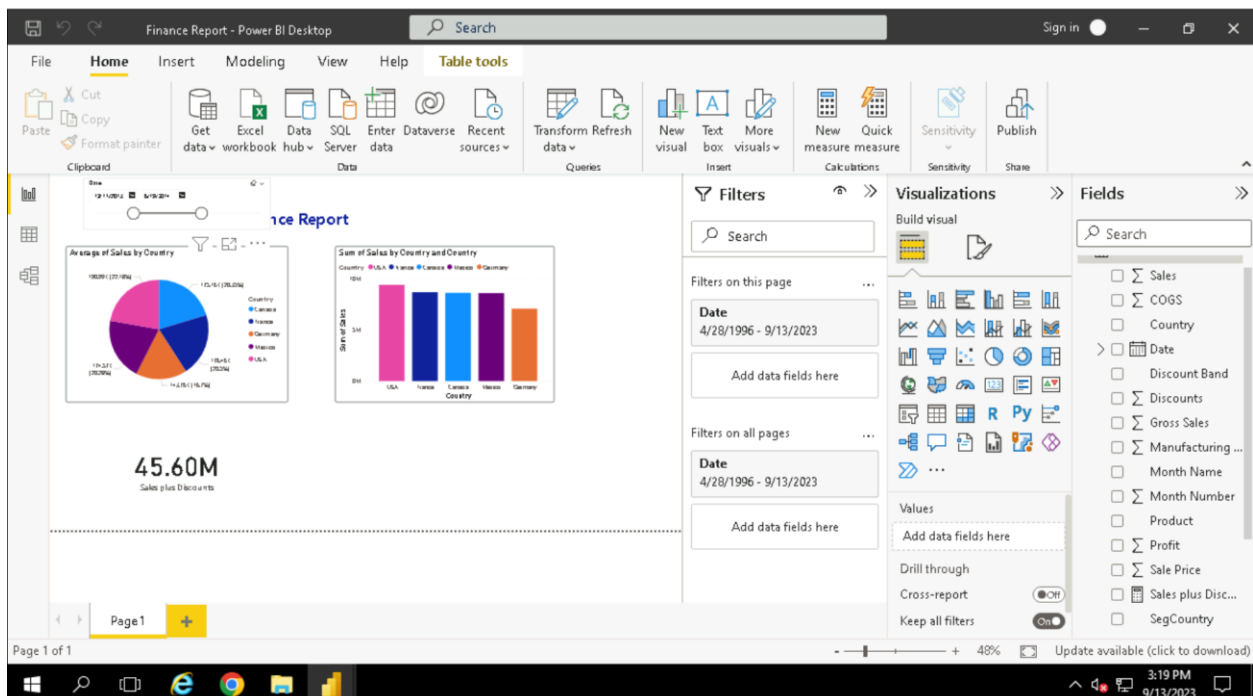
Slicer: Applies the filter on the overall report and increases user interactivity.



Measures: Two types:

1. Implicit Measure: PowerBI recognizes the columns of numeric type that are known as implicit measure.
2. Explicit Measure: User-defined measures. Uses DAX(Data Analytics Expression).

Calculated columns create overhead by taking space in the memory. Hence we prefer measures because it calculates at runtime.

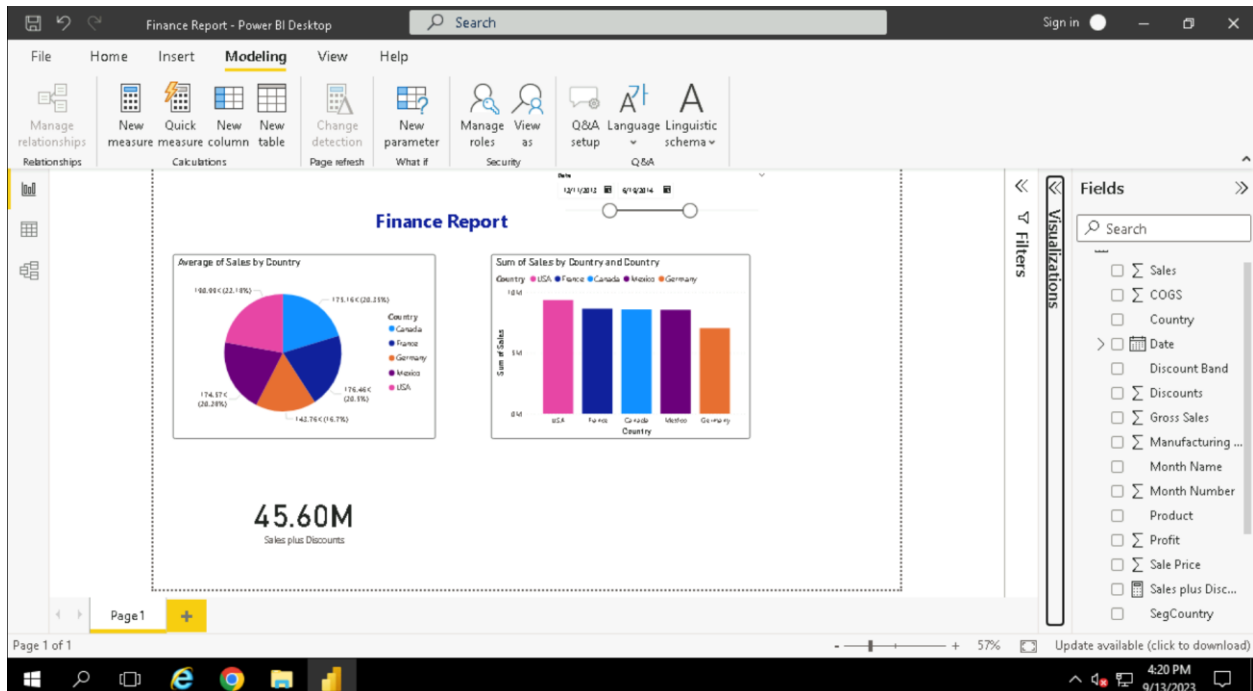


Security:

Show selected things to different level of users.

RLS(Row Level Security): Create groups to show selected data.

Manager View:



Employee View:

