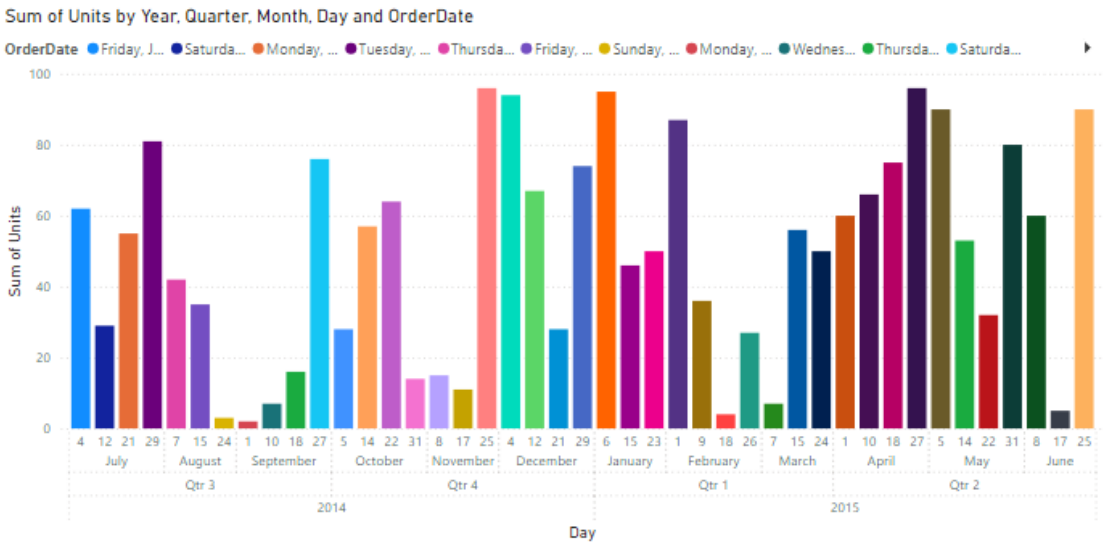
Power BI

Section 2

Who gets the annual reward/ bonus?

- **Drill Function**

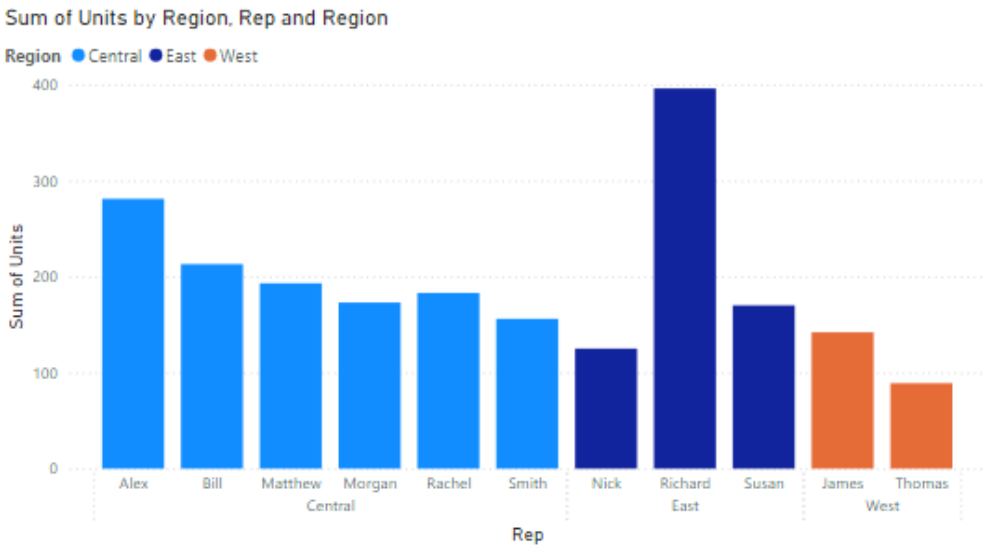
Breaks down graph into its modules or units for example for a year it highlights month, day etc.



- **Calculated measure**

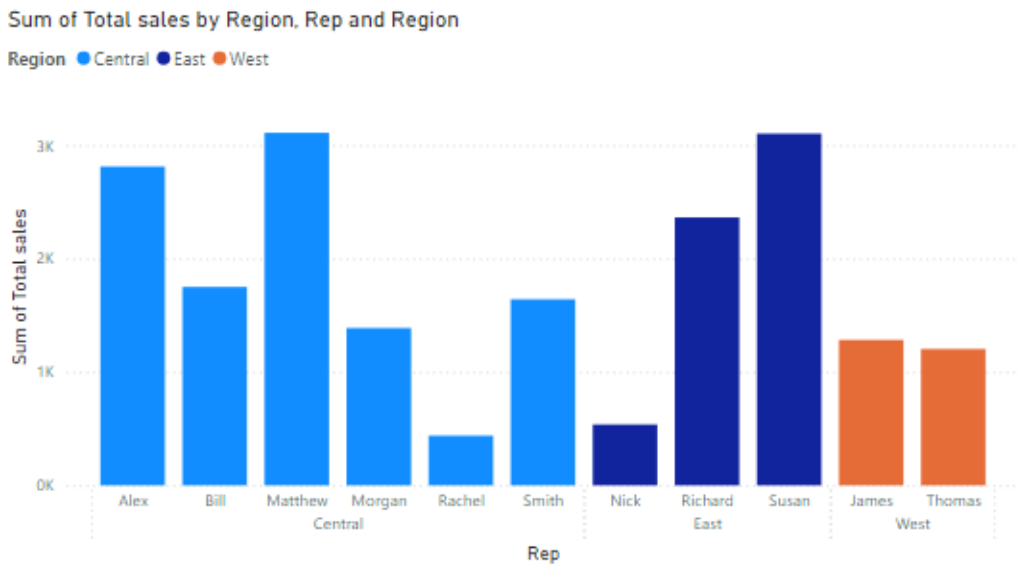
Introduced a new column with formula Total sale = Units * unit price

From



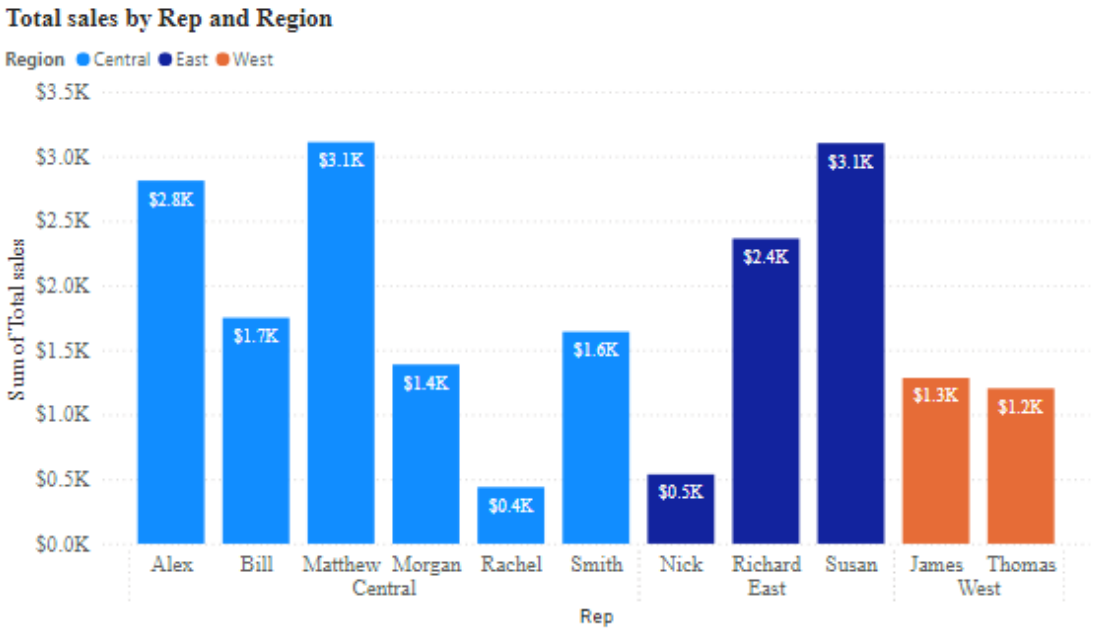
A Kibe Creation

To



Mathew gets the annual reward Susan as the runner up.

Format the chart to tell the story by itself as below (beautiful, right?)



Section 3

Timeseries, Aggregation and Filters

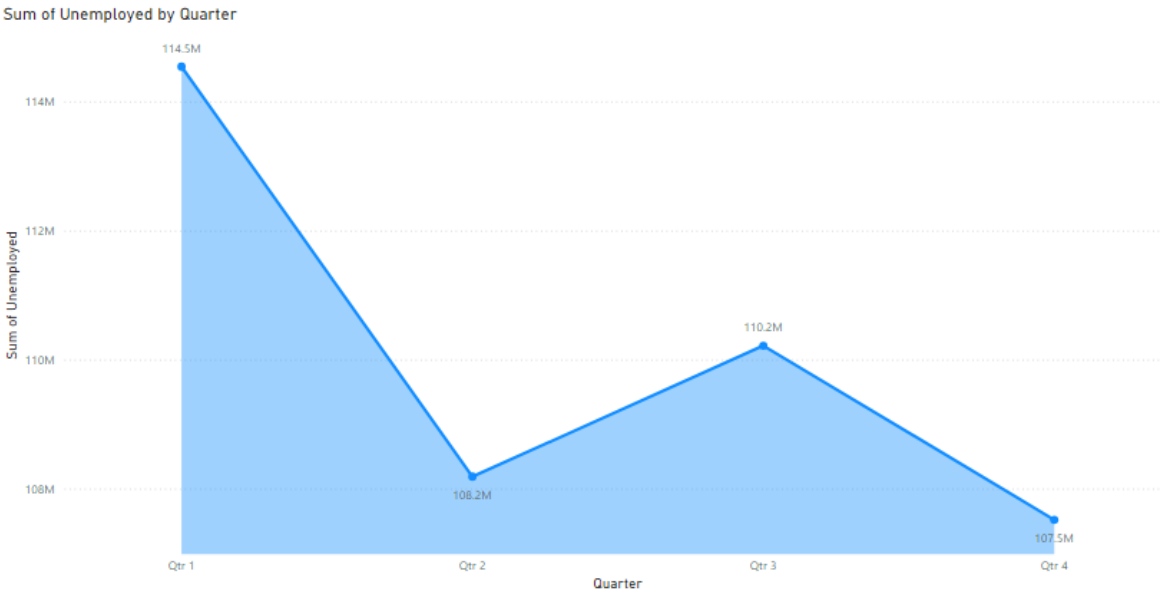
Actual long-term unemployment I the USA

Period vs unemployment

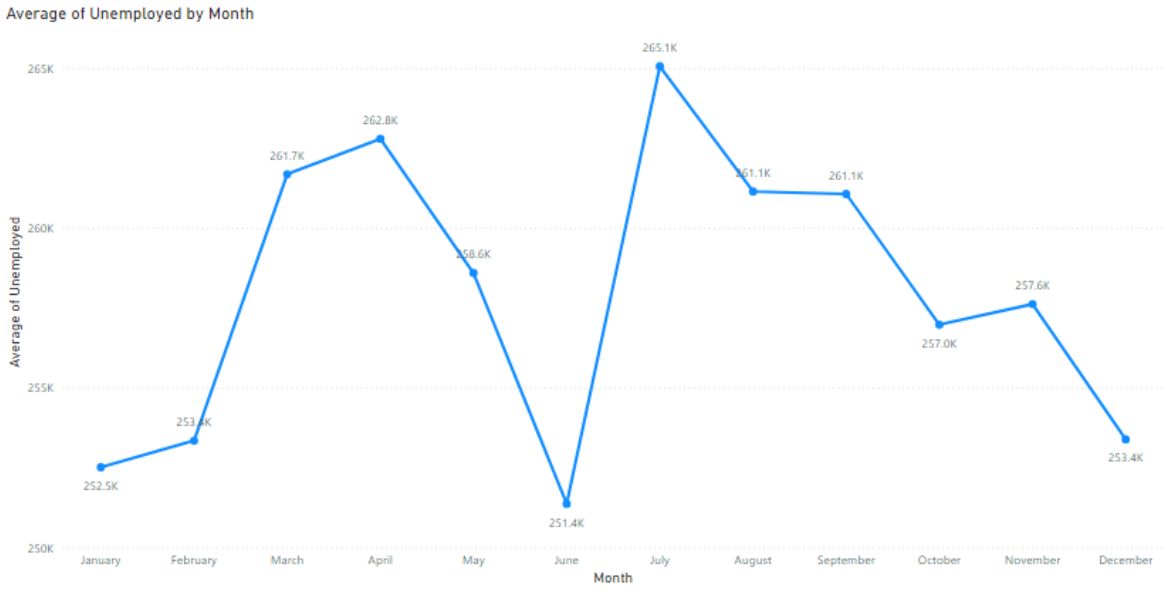
i. Time series as a categorical variable across different quarters

a

b. Area chart

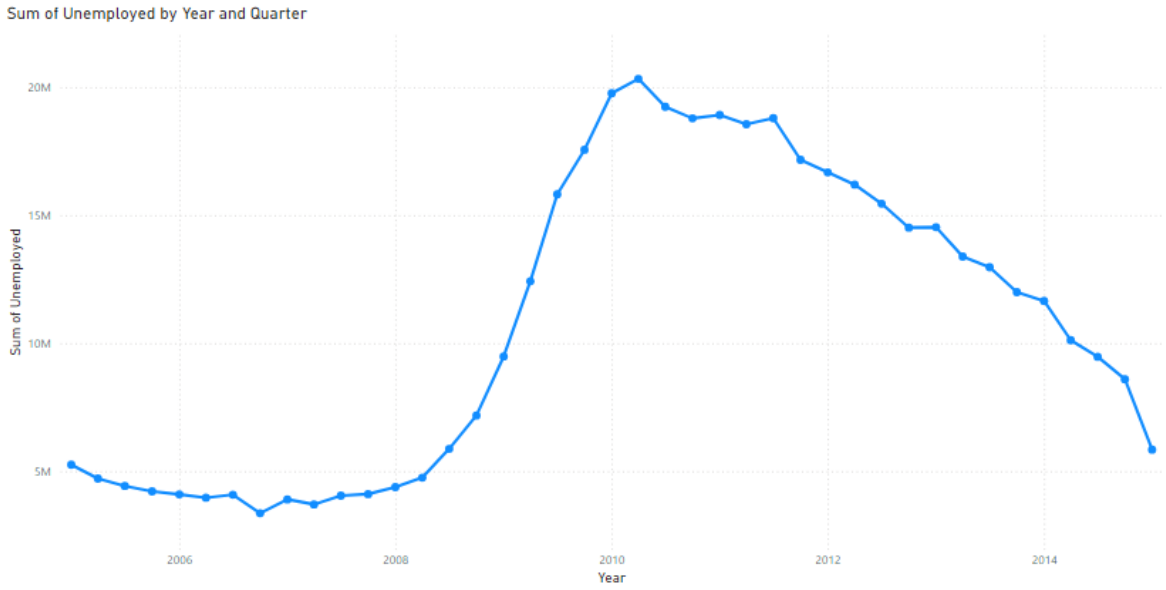


ii. Average unemployment by month (Use show next level option)

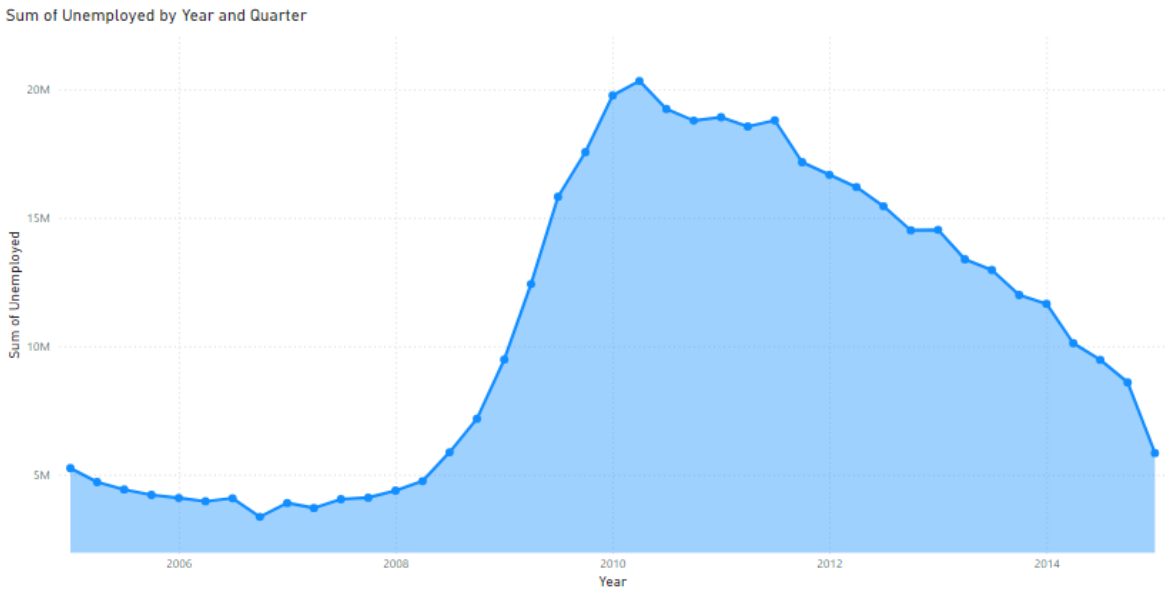


i. Unemployment by year and quarter (Use expand next level ~ X2)

a. Increases points on the X- axis ~ time series as a continuance variable



b. Area chart

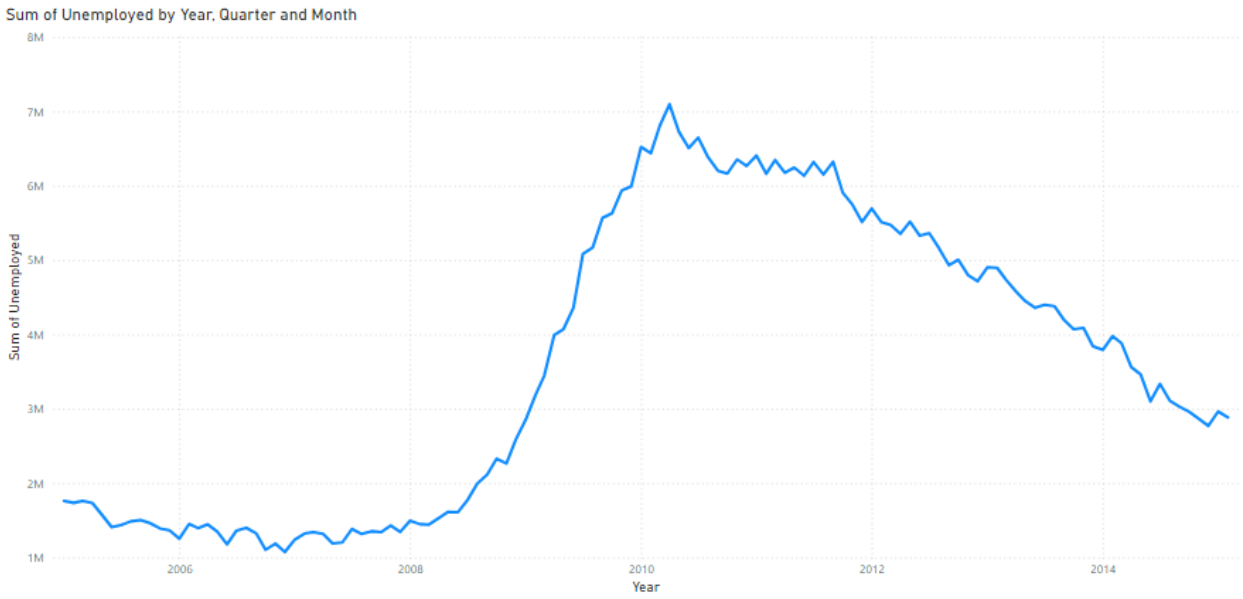


Aggregation and granularity

Question: How does power BI know we want to aggregate our data at monthly level?

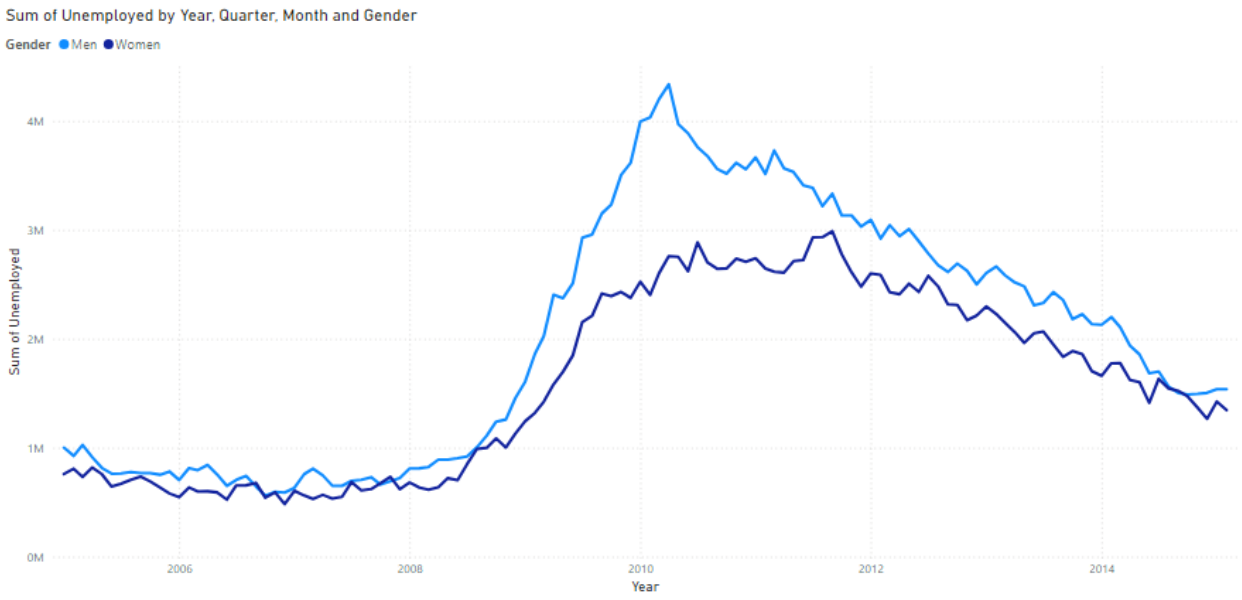
i. Unemployment by year, quarter and month

a.

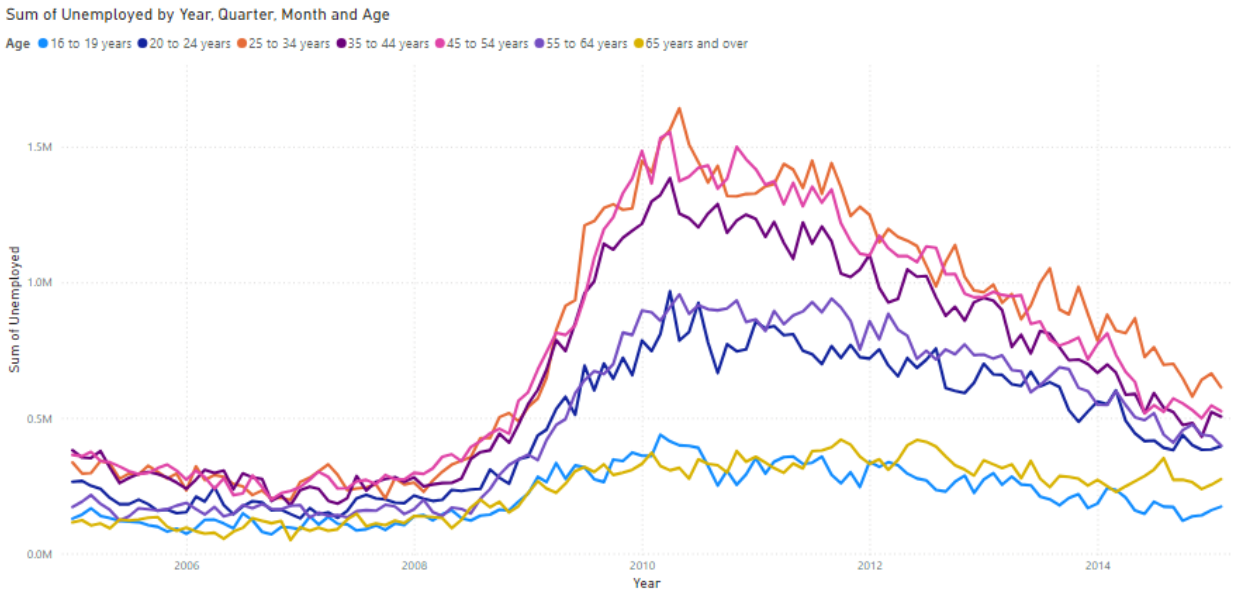


ii. Aggregate by Gender (use filters to include gender ~ legend)

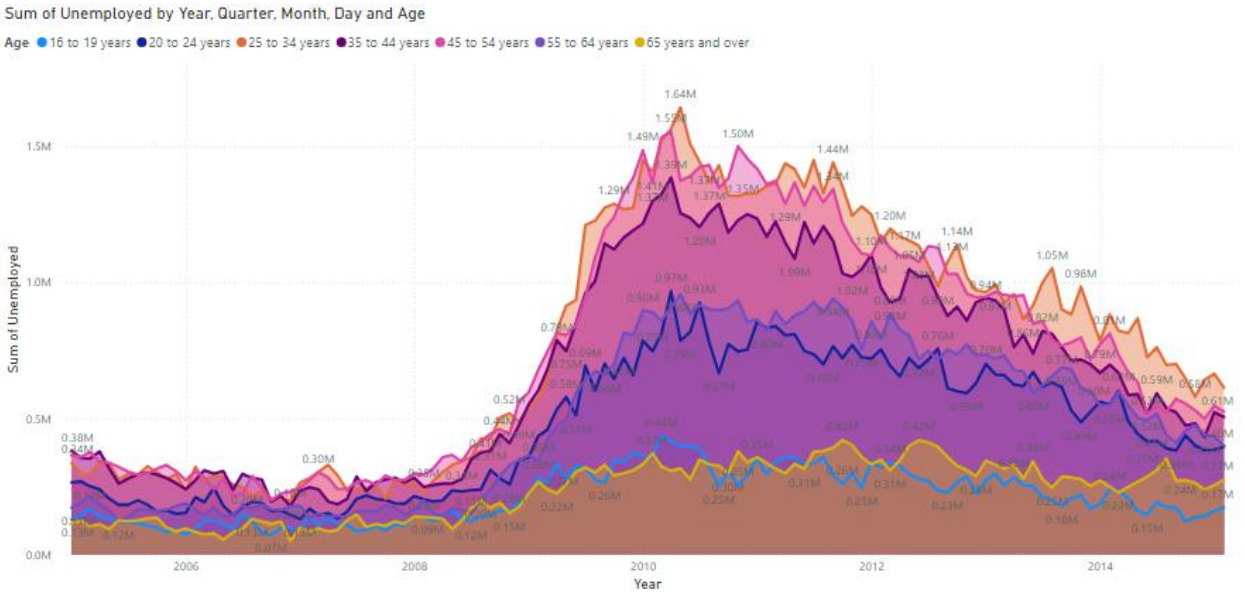
Period + Gender



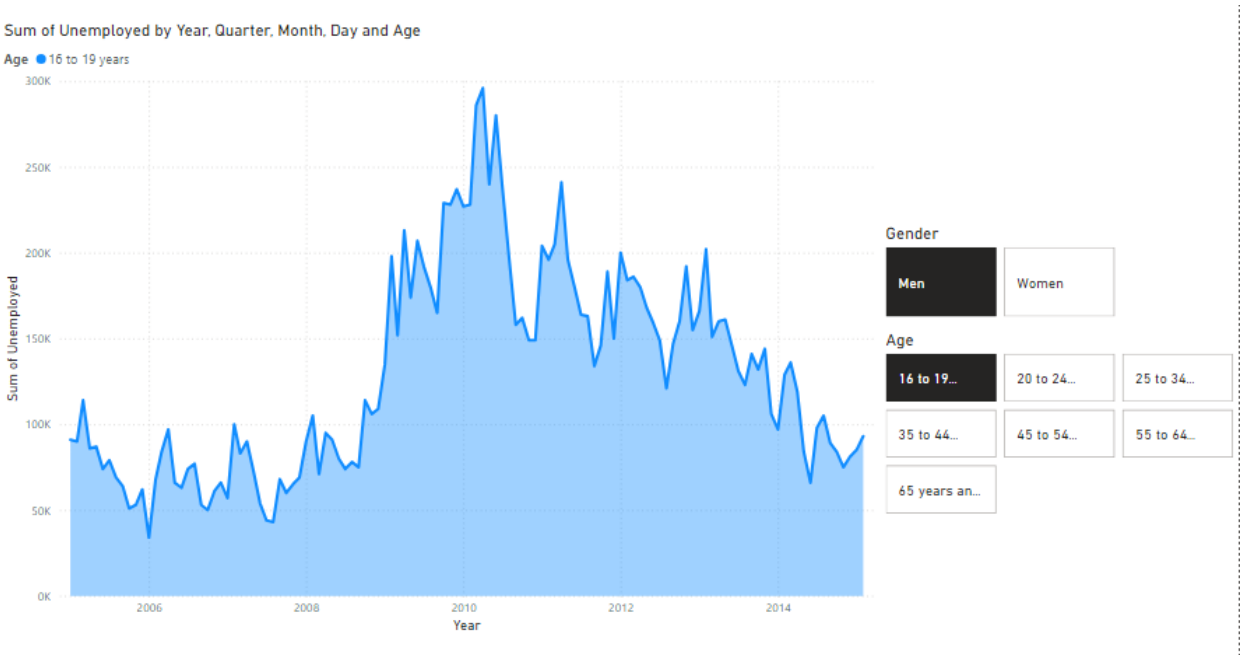
iii. Aggregate by Age



iv. Area chart



v. Filters (Hidden in the parameters) and slicers (On the left of our visualization)

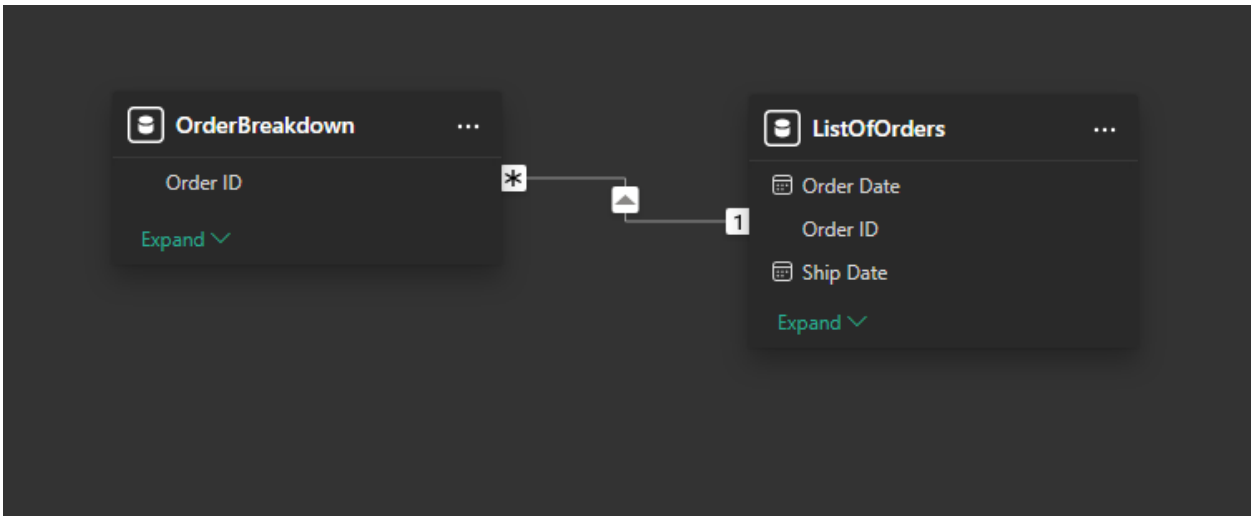


Section 4

Maps, Scatter plots and Interactive BI Reports

The attached excel file for this tutorial had two tabs. We needed to join the two tables in Power BI.

The two tables have been detected automatically and joined using the Order ID as below: -

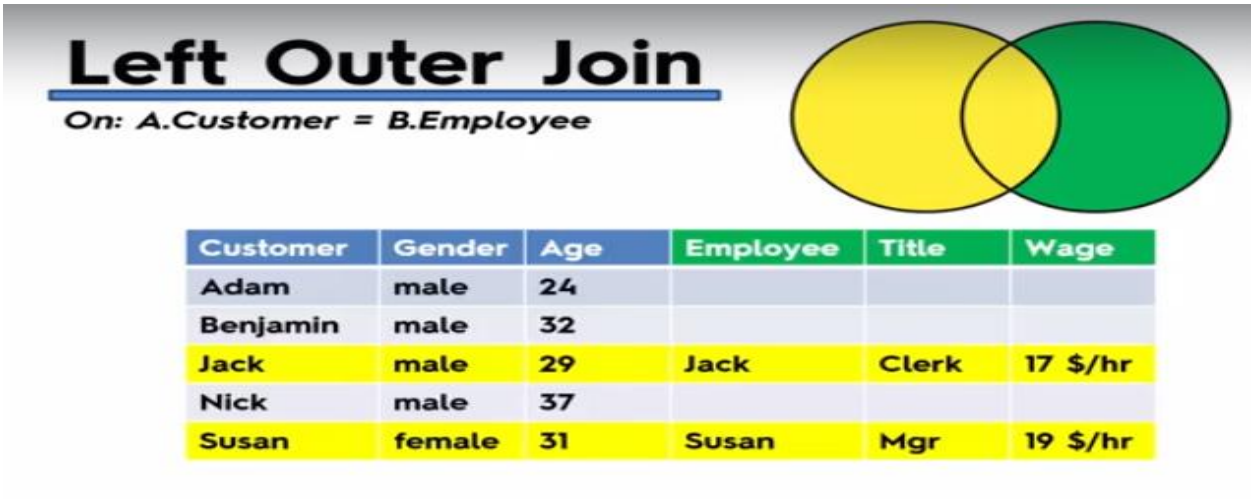


Types of joins

Suppose we have two tables A.Customer = B.Employee

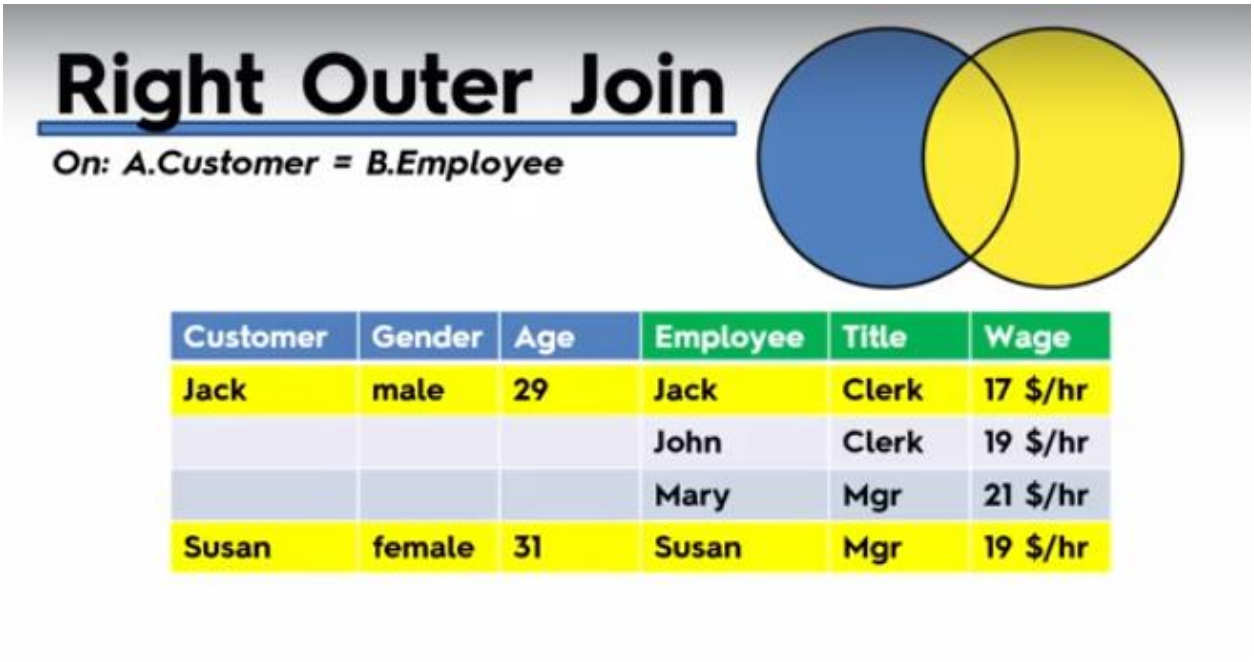
Inner join ~ Match is done on both, then those which do not match are discarded from both tables.

Left Outer join ~ Primary table is on the left so match is done from the left. Those that do not match are discarded but only on the non-primary right table, the primary left table remains the same and picks the matched item from right table as below:-



Customer	Gender	Age	Employee	Title	Wage
Adam	male	24			
Benjamin	male	32			
Jack	male	29	Jack	Clerk	17 $/hr
Nick	male	37			
Susan	female	31	Susan	Mgr	19 $/hr

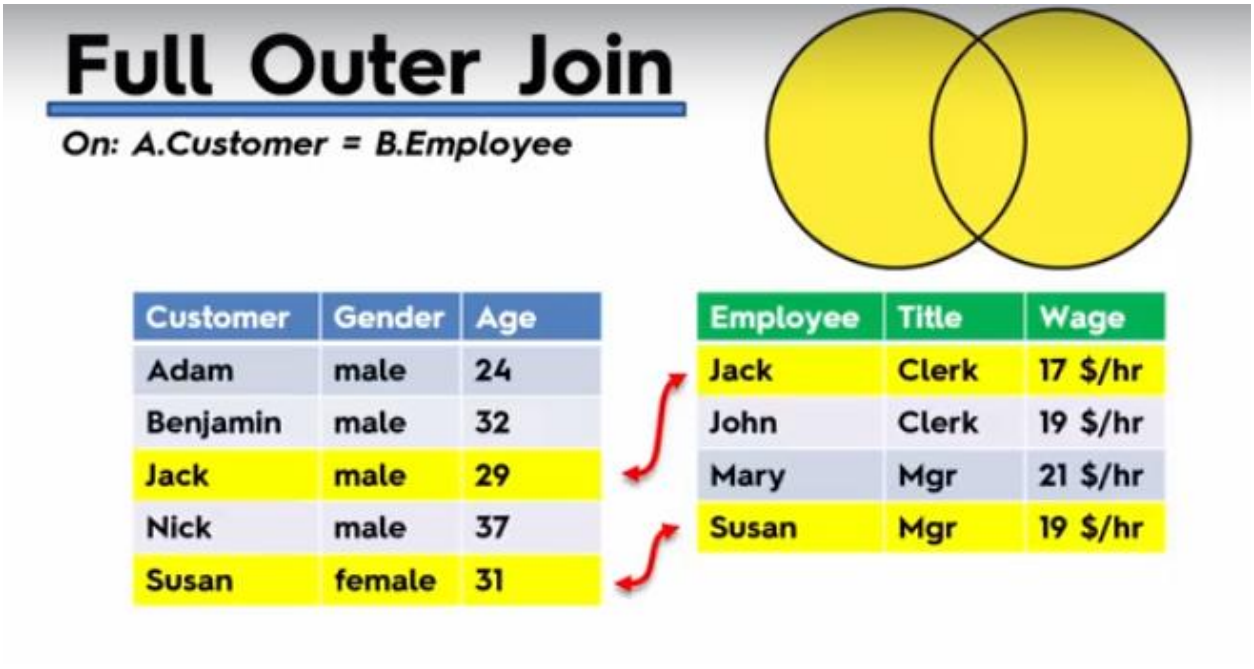
Right outer join ~ ~ Primary table is on the right so match is done from the right. Those that do not match are discarded but only on the non-primary left table, the primary right table remains the same and picks the matched item from right table as below: -



Customer	Gender	Age	Employee	Title	Wage
Jack	male	29	Jack	Clerk	17 $/hr
			John	Clerk	19 $/hr
			Mary	Mgr	21 $/hr
Susan	female	31	Susan	Mgr	19 $/hr

Full Outer Join **~** here joins do not discard any of the rows in any table after the match.

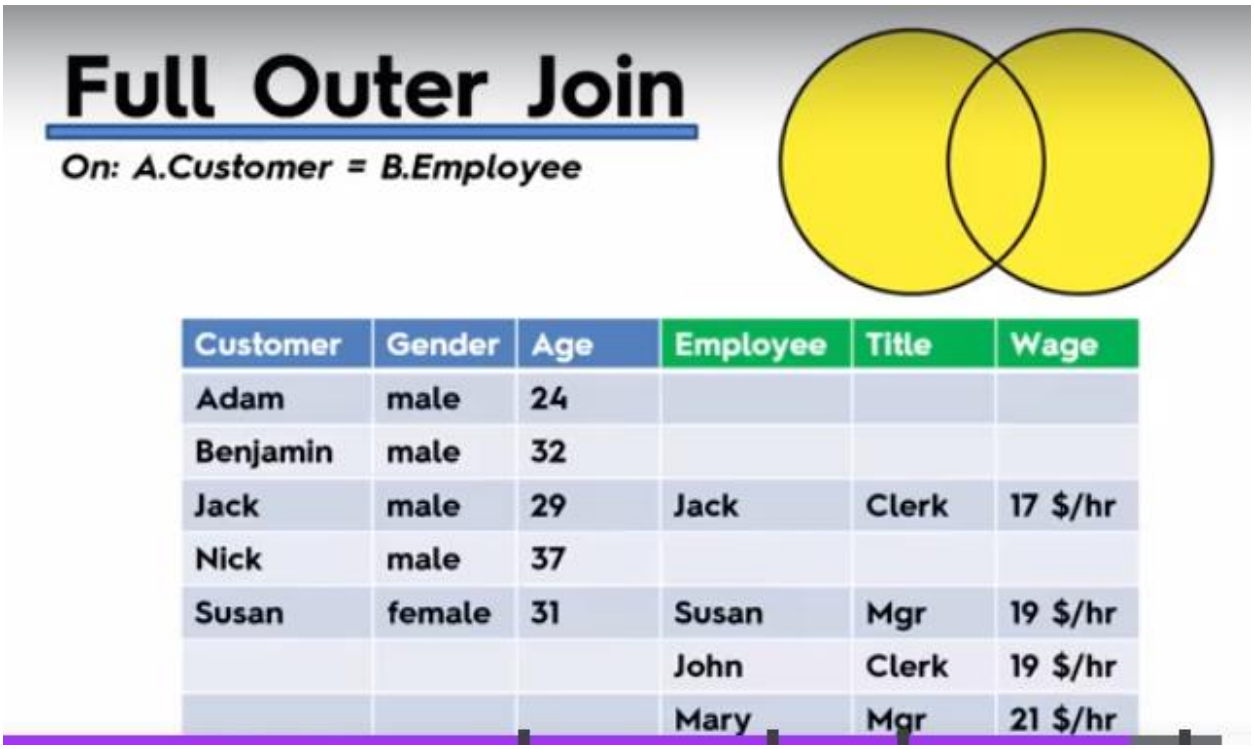
From a.



Customer	Gender	Age
Adam	male	24
Benjamin	male	32
Jack	male	29
Nick	male	37
Susan	female	31

Employee	Title	Wage
Jack	Clerk	17 $/hr
John	Clerk	19 $/hr
Mary	Mgr	21 $/hr
Susan	Mgr	19 $/hr

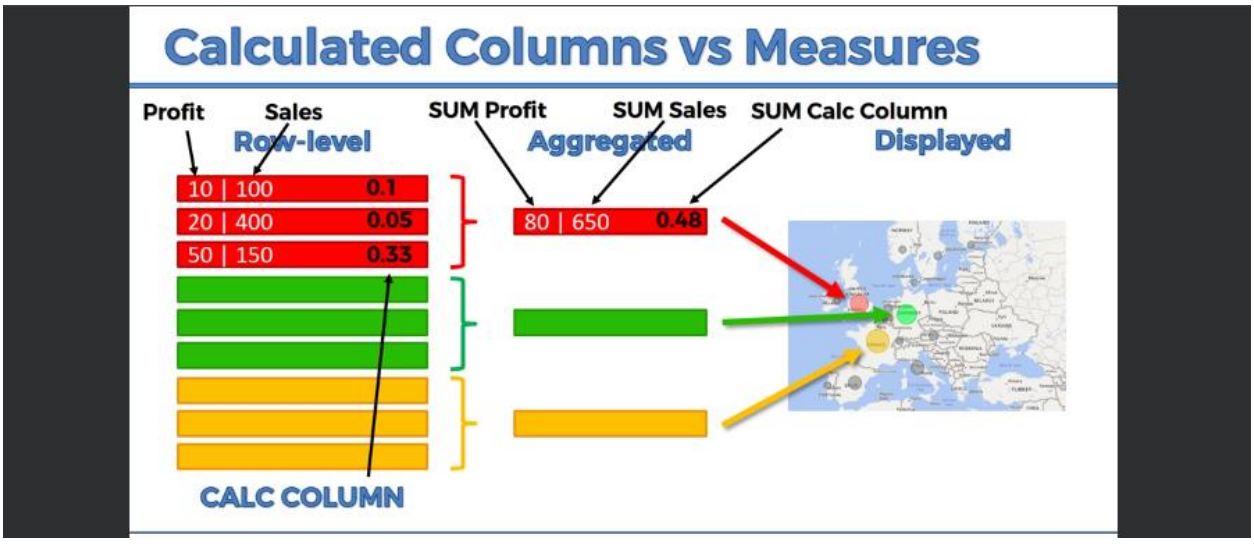
To b.



Customer	Gender	Age	Employee	Title	Wage
Adam	male	24			
Benjamin	male	32			
Jack	male	29	Jack	Clerk	17 $/hr
Nick	male	37			
Susan	female	31	Susan	Mgr	19 $/hr
			John	Clerk	19 $/hr
			Mary	Mgr	21 $/hr

Maps working with hierarchies' latitude and longitude

Calculated columns vs Measures example below,

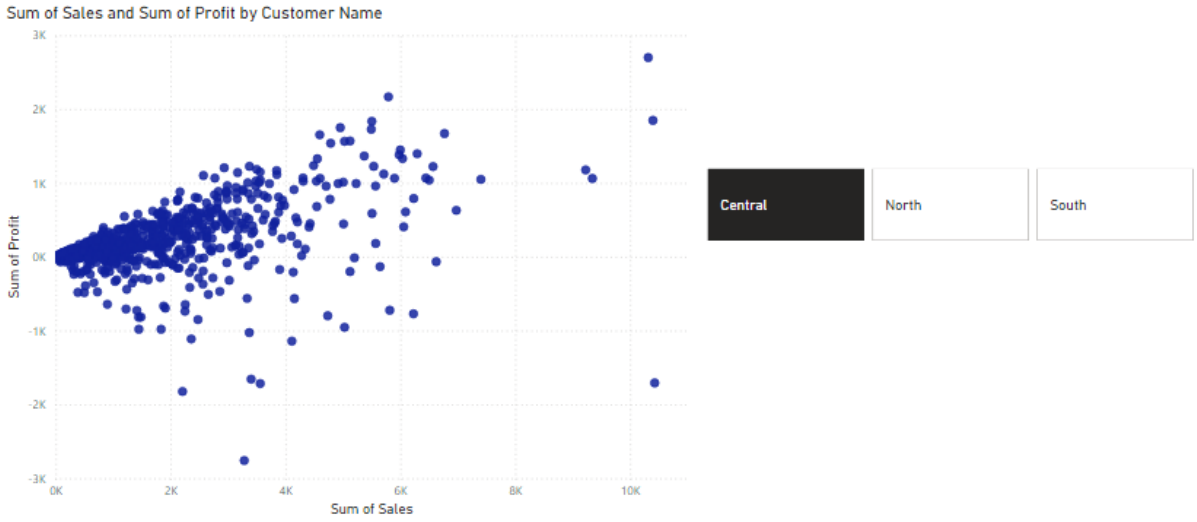


Profit Margin is the Calculated measure given by below example

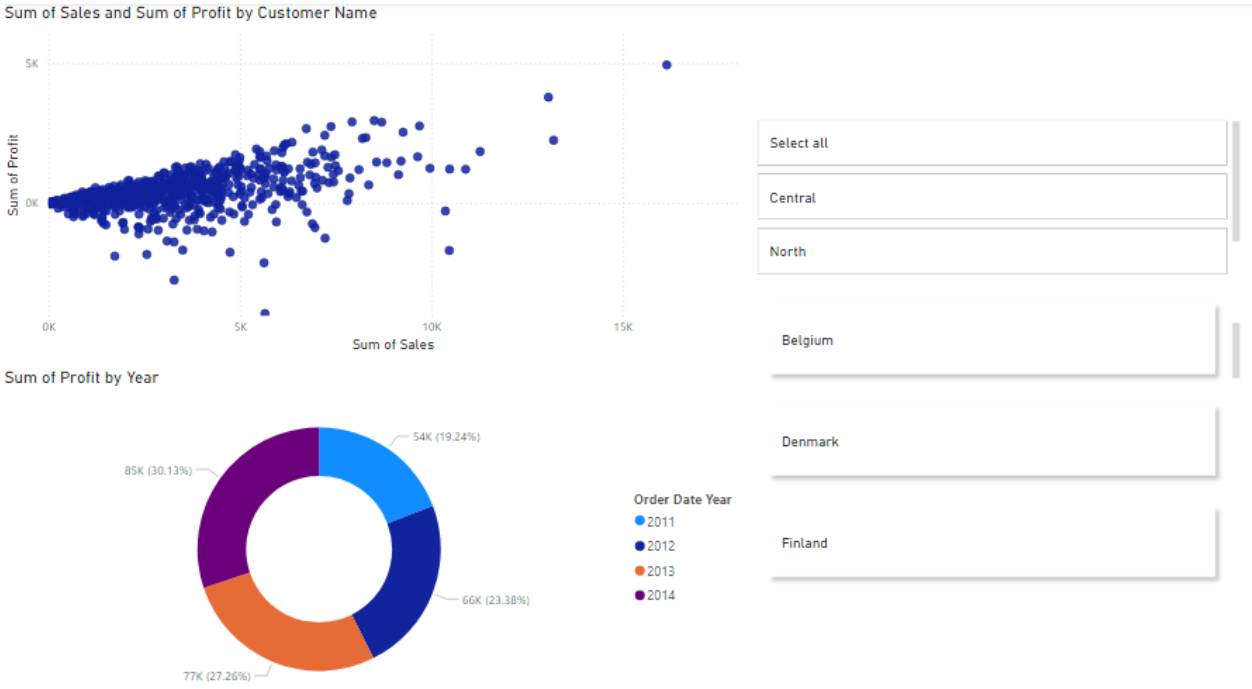
Profit Margin = SUM (OrderBreakdown [Profit]) / SUM (OrderBreakdown [Sales]) 80/650 = 0.12. Measure is calculated after aggregation, column is calculated before aggregation.

A Kibe Creation

Scatter Plot/Chart with slicers



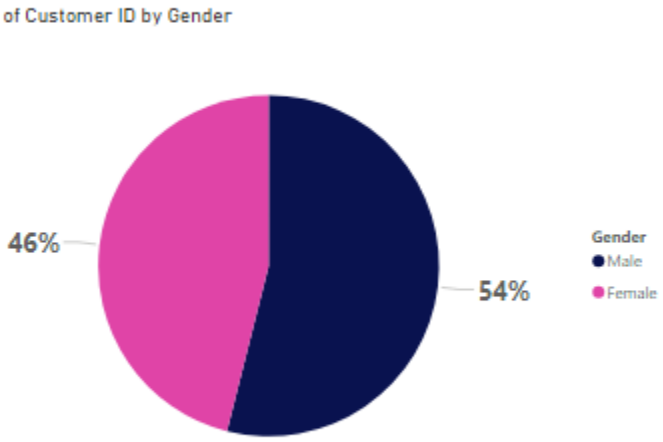
Donut Chart. Plus, slicers in a mini dashboard



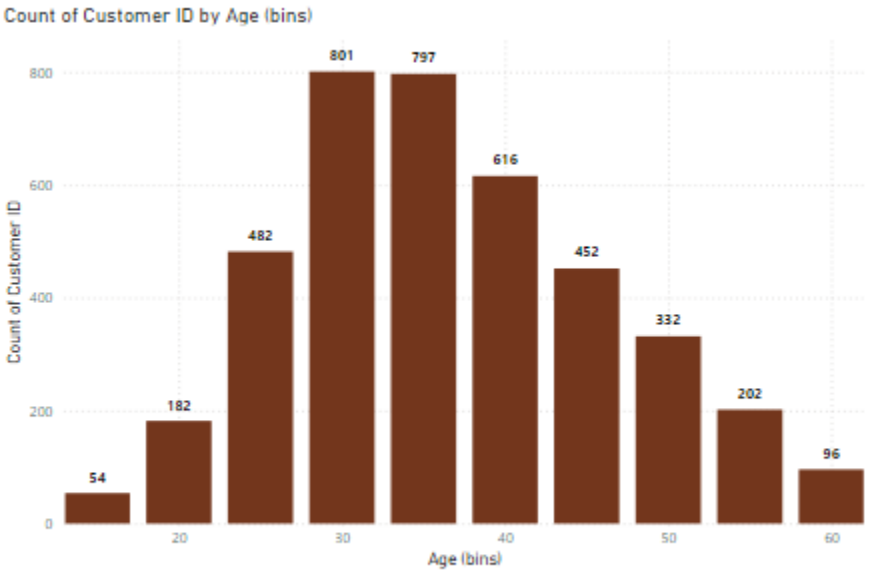
Section 5

Creating Interactive Business Intelligence Report I.e. Building a robust BI Dashboard

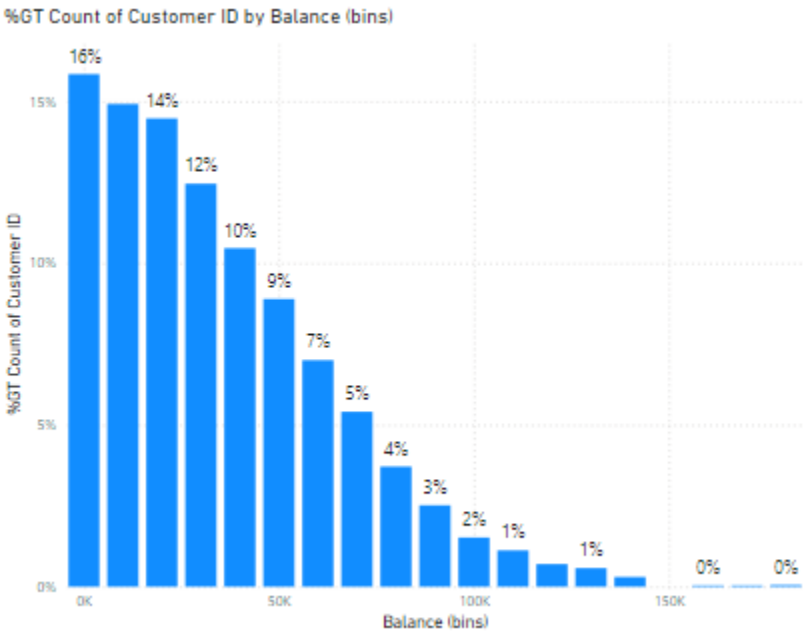
a) Calculation for gender



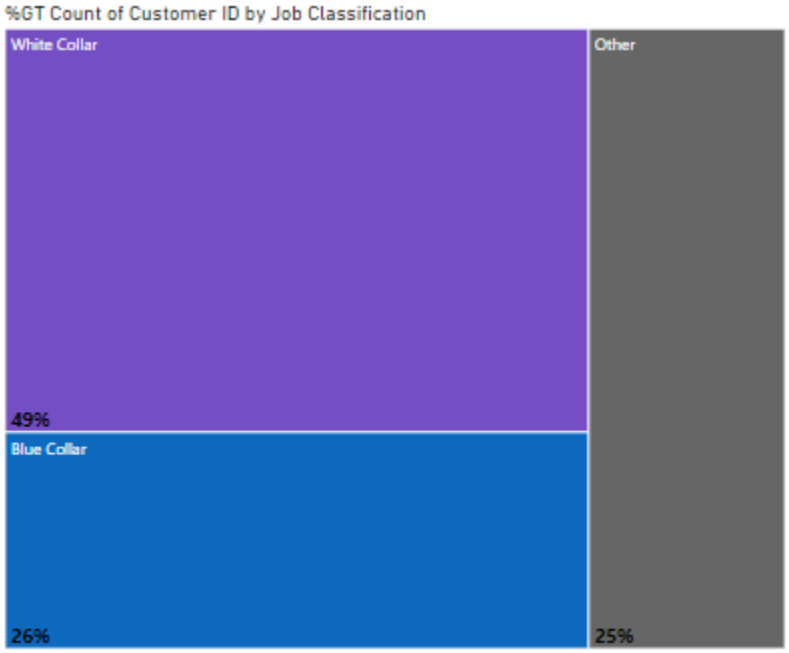
b) Distribution for age



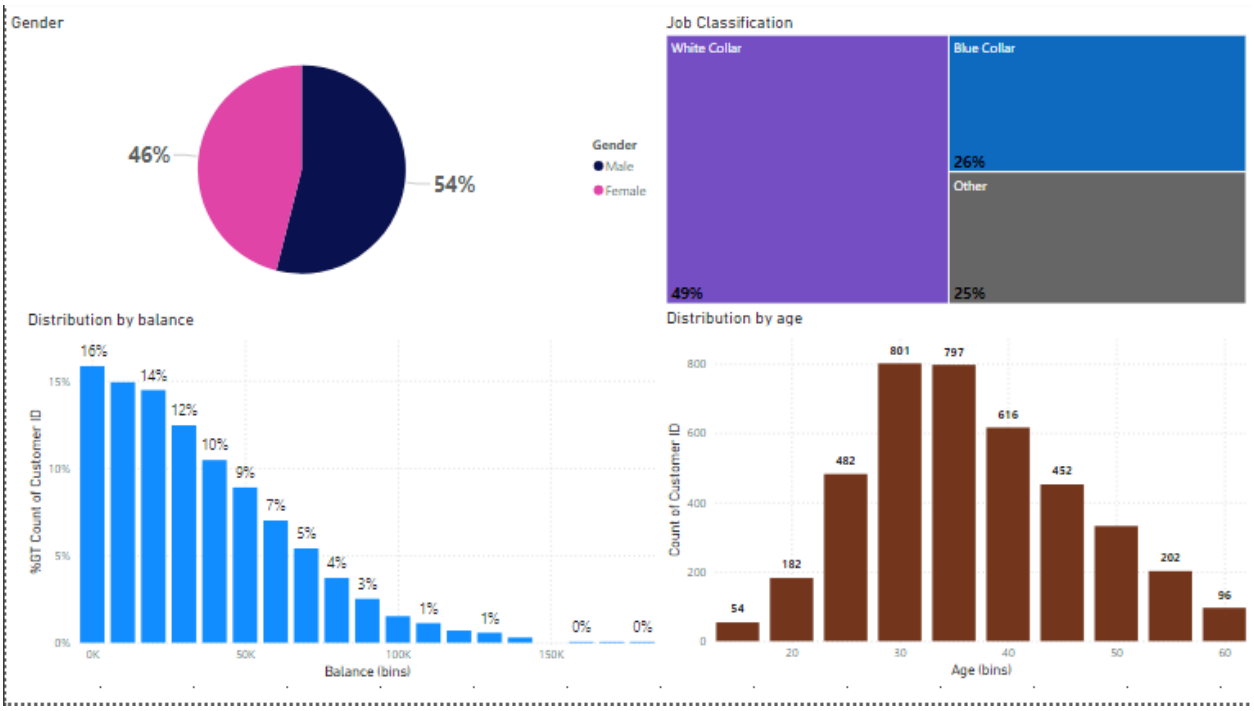
c) Distribution for balance



d) Treemap chart



Interactive Report (Dashboard)



Section 6

Leveraging Custom Visuals ~ European dept crisis as of 2011 (dataset) Challenge: Visualizing the European Debt crisis, Chord chart + Treemap