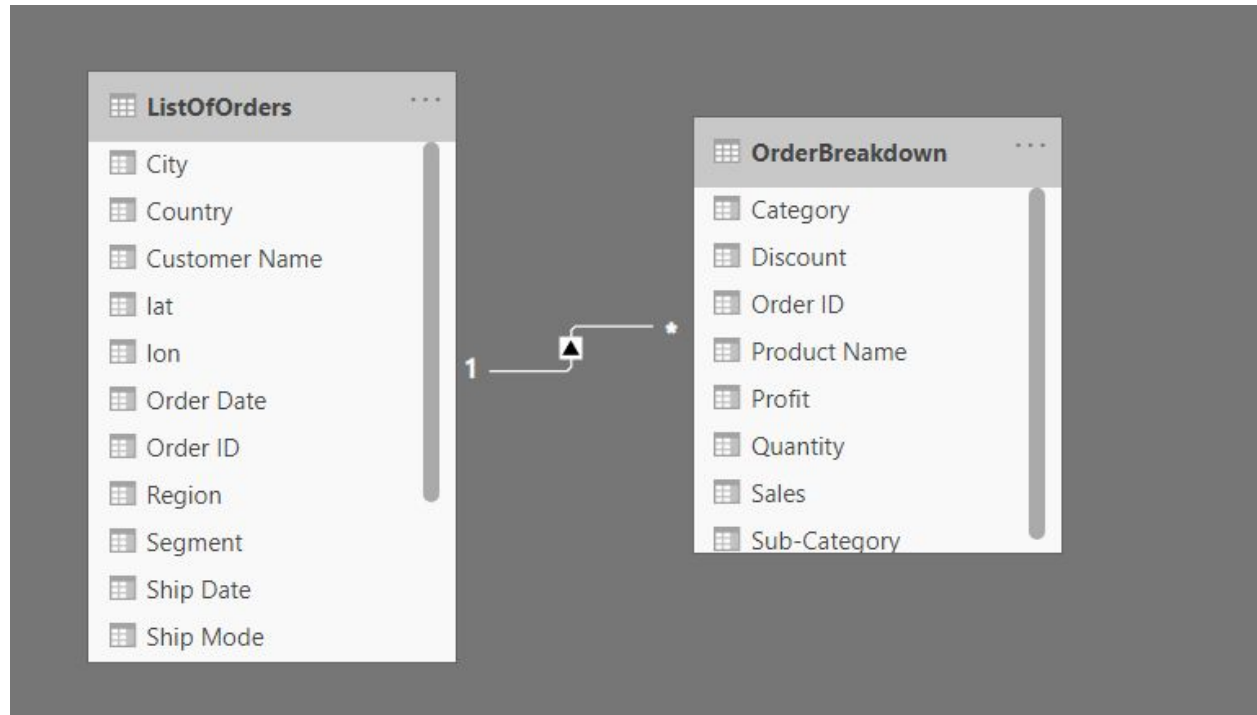


## Challenge:

To prepare a visualizing BI report for finding profit margin regions in Europe from below dataset:



## Analysis:

1) Add the desired data file into the Power BI, in this case we have Excel file which contains following columns:

Order ID	Order Date	Customer Name	City	Country	Region	Segment	Ship Date	Ship Mode	State	lon	lat
AZ-2011-2002251	20 January 2011	Nathan Iqbal	Villiers-sur-Marne	France	Central	Consumer	25 January 2011	Economy	Ile-de-France	2.546798	48.825787
AZ-2011-5010109	25 January 2011	Walter Coley	Maisons-Alfort	France	Central	Consumer	30 January 2011	Economy	Ile-de-France	2.429443	48.801148
AZ-2011-9155070	18 February 2011	Julian Mack	Paris	France	Central	Consumer	23 February 2011	Economy	Ile-de-France	2.3522219	48.856614

2) Load the data into Power BI, now it will be visible in Report, Data and Model sections.

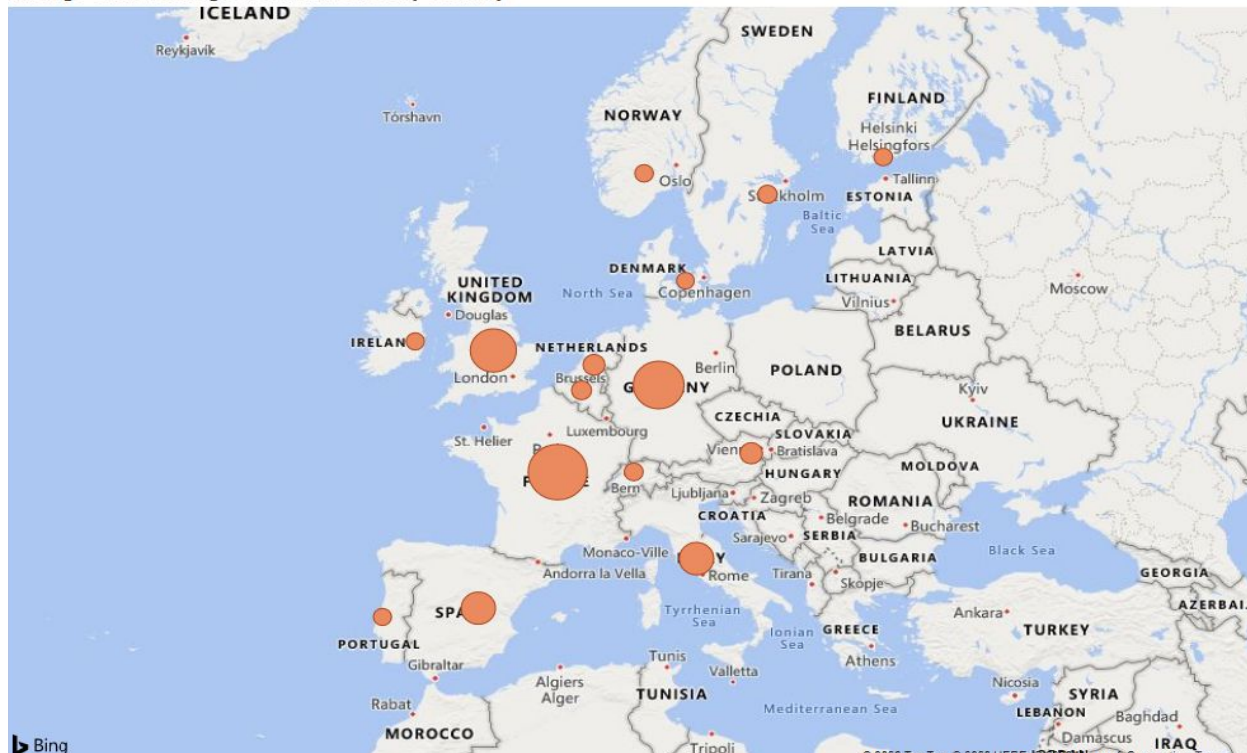
3) Add a Map on the workspace from the Visualization window.

4) Create a hierarchy 'Geography' in which add columns (country, state, city) and add in the Location section.

5) Add Latitude and Longitude columns in the respective sections for better accuracy of the locations.

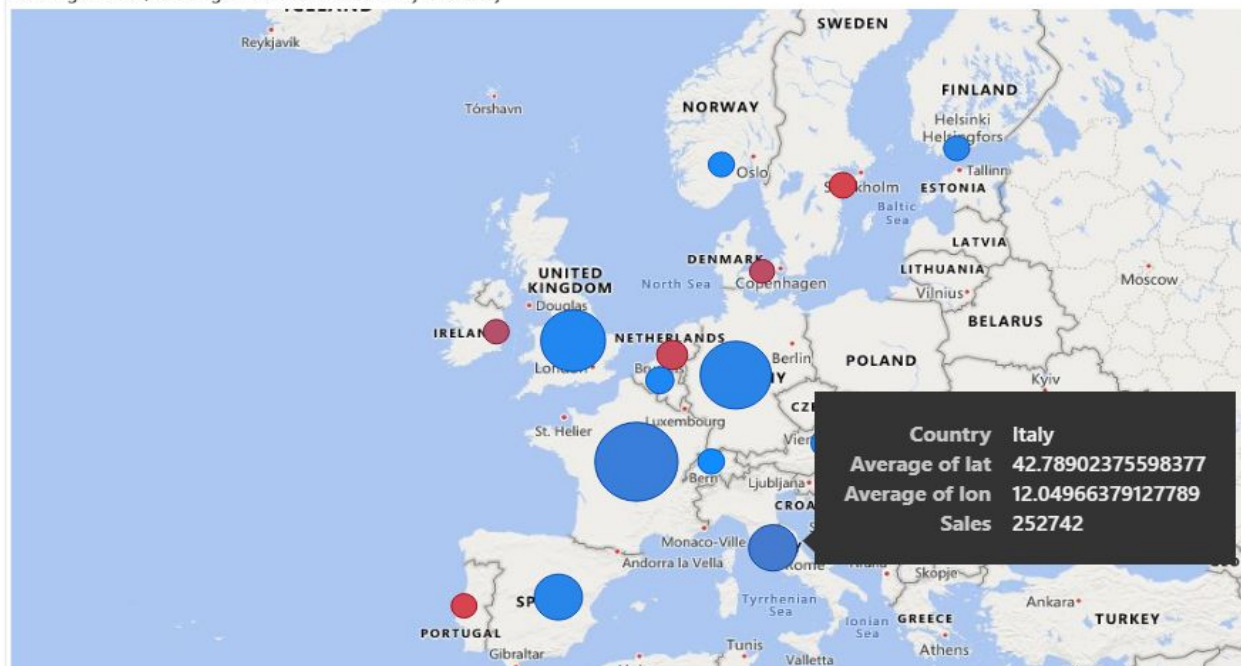
6) Now, put the Sales column in the Size section.

Average of lat, Average of lon and Sales by Country



6) For calculating profit margin we need to create a new column in our data set 'NewMeasure'. **Profit Margin = SUM(OrderBreakdown[Profit]) / SUM(OrderBreakdown[Sales])**

Average of lat, Average of lon and Sales by Country



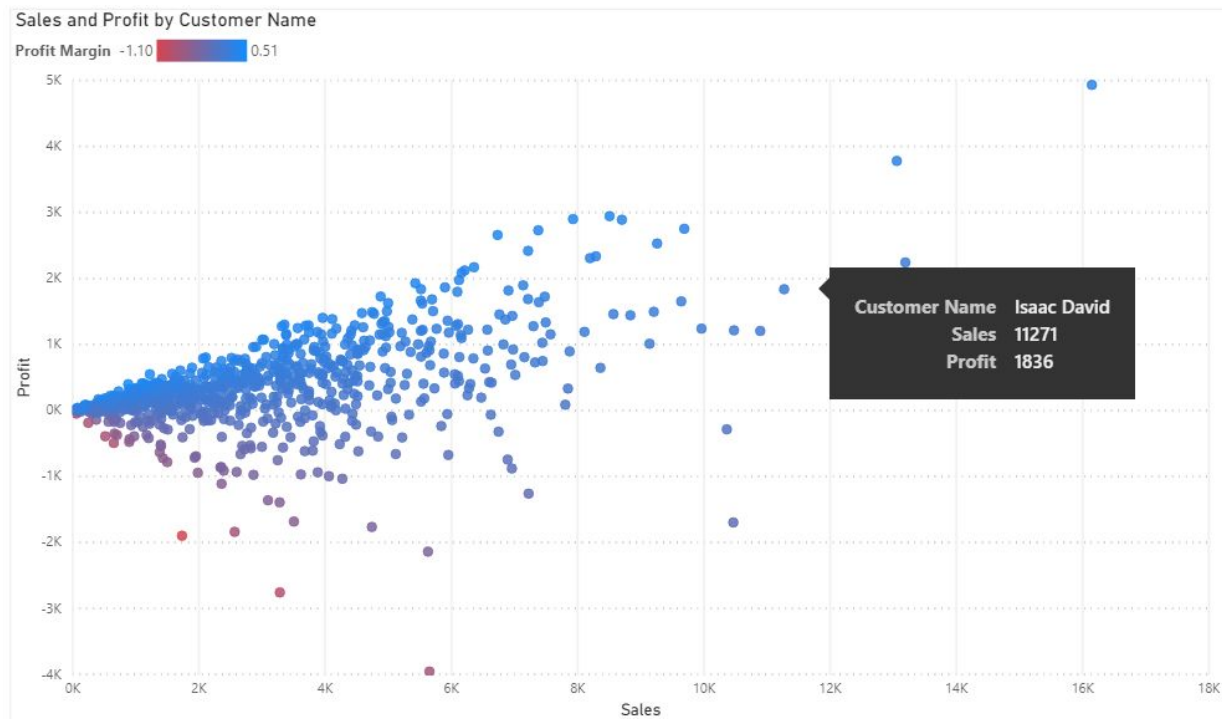
In the above chart, **blue** circles are profit regions and **red** circles are loss regions.

7) Now, let's create a Scatter chart, for getting the profit margins in respect to customers.

> add 'Scatter Chart' on the workspace, with Sales on X axis and Profit on Y axis.

> for color saturation add profit margin column.

Here how visualization will appear:



> Now for the final bi report we need to add these above two charts on the final workspace,

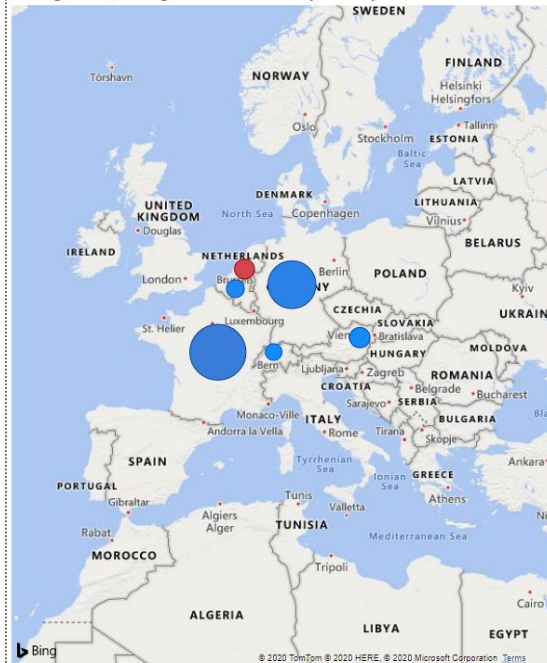
> For adding just copy these charts and paste on the final chart workspace.

> Now we will add some filters of Region and Order Date using Slicer, on the final chart and a Donut Chart.

> With help of filters, we can see profit margins with desired Order Date or respective regions, by selecting any of them changes will be reflected on all charts accordingly.

> Here final report for getting visualisation of profit margins:

Average of lat, Average of lon and Sales by Country

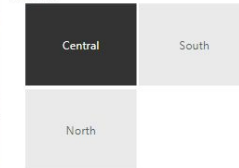


Order Date

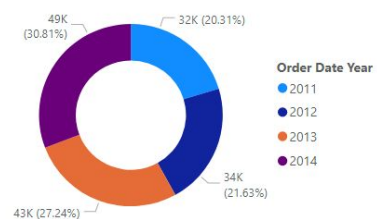
01-01-2011 31-12-2014



Region



Profit by Year



Sales and Profit by Customer Name

Profit Margin -1.25 0.49

