SALES DATA ANALYSIS (DASHBOARD CREATION)

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1. Dataset description

The dataset used is Amazon sales dataset. This data set includes 2 tables "List of orders" and "Orders breakdown" which are connected by the key "Order ID". The first table contains the following attributes:

- Order ID (Nominal)
- Order Date (Interval)
- Customer Name (Nominal)
- City (Nominal)
- Country (Nominal)
- Region (Nominal)
- Segment (Nominal)
- Ship Date (Interval)
- Ship Mode (Categorical)
- State (Nominal)
- Lon (Longitude) (Numeric)
- Lat (Latitude) (Numeric)

The second table contains the following attributes:

- Order ID (Nominal)
- Product Name (Nominal)
- Discount (Numeric)

- Sales (Numeric)
- Profit (Numeric)
- Quantity (Numeric)
- Category (Categorical)
- Sub-Category (Categorical)

Head of "List of Orders" Table

Order ID	Order Date	Customer Name	City	Country	Region	Segment	Ship Date	Ship Mode	State	lon	lat
BN-2011-7407039	01-01-2011	Ruby Patel	Stockholm	Sweden	North	Home Office	05-01-2011	Economy Plus	Stockholm	18.06858	59.32932
AZ-2011-9050313	03-01-2011	Summer Hayward	Southport	United King	North	Consumer	07-01-2011	Economy	England	-3.01011	53.64571
AZ-2011-6674300	04-01-2011	Devin Huddleston	Valence	France	Central	Consumer	08-01-2011	Economy	Auvergne-Rhône-Alpes	4.89236	44.93339
BN-2011-2819714	04-01-2011	Mary Parker	Birmingham	United King	North	Corporate	09-01-2011	Economy	England	-1.8904	52.48624
AZ-2011-617423	05-01-2011	Daniel Burke	Echirolles	France	Central	Home Office	07-01-2011	Priority	Auvergne-Rhône-Alpes	5.718034	45.14215
AZ-2011-2918397	07-01-2011	Fredrick Beveridge	La Seyne-sur-Mer	France	Central	Corporate	08-01-2011	Priority	Provence-Alpes-Côte d'A	5.878219	43.10298
BN-2011-3248724	08-01-2011	Archer Hort	Toulouse	France	Central	Consumer	14-01-2011	Economy	Languedoc-Roussillon-M	1.444209	43.60465,

Head of "Orders Breakdown" Table

Order ID	Product Name	Discount	Sales	Profit	Quantity	Category	Sub-Category
BN-2011-7407039	Enermax Note Cards, Premium	0.5	$45.00	-$26.00	3	Office Supplies	Paper
AZ-2011-9050313	Dania Corner Shelving, Traditional	0	$854.00	$290.00	7	Furniture	Bookcases
AZ-2011-6674300	Binney & Smith Sketch Pad, Easy-Erase	0	$140.00	$21.00	3	Office Supplies	Art
BN-2011-2819714	Boston Markers, Easy-Erase	0.5	$27.00	-$22.00	2	Office Supplies	Art
BN-2011-2819714	Eldon Folders, Single Width	0.5	$17.00	-$1.00	2	Office Supplies	Storage
AZ-2011-617423	Binney & Smith Pencil Sharpener, Water Colc	0	$90.00	$21.00	3	Office Supplies	Art

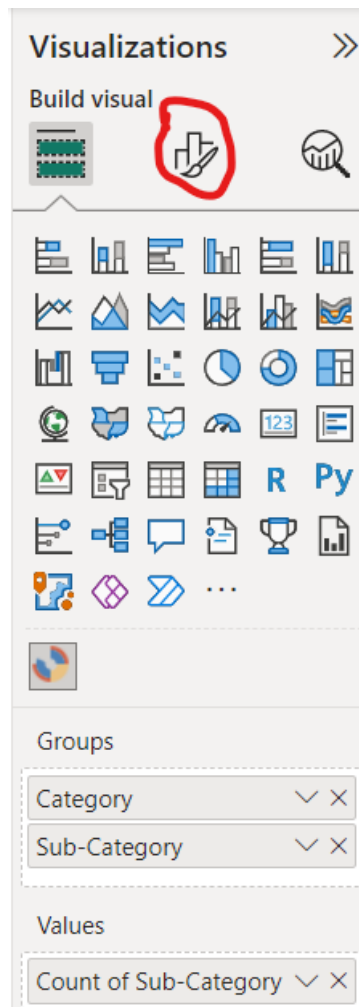# 2. Dashboard Creation

Tool used: Power BI

Steps to create the dashboard:

- Open Microsoft Power BI and click on the icon showed below to import data from excel
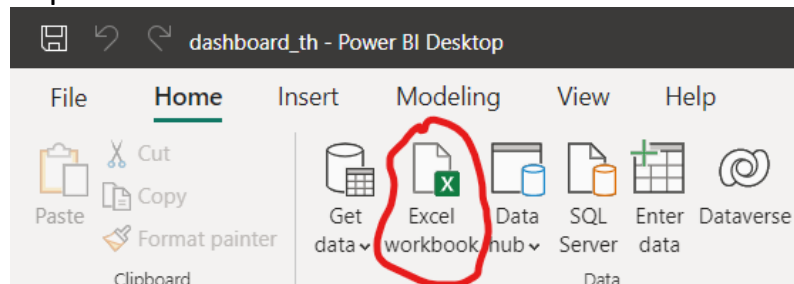
- After loading the data into power BI, Drag the visualizations required from the 'Visualizations' panel that is on the right side
- After selecting the required visual, populate it with appropriate data fields by dragging the data fields from the dataset to the field bars associated with the visualization.
Example: Here the selected idiom is sunburst map and the necessary data fields are dropped under 'Groups' and 'Values'.

- After building the visual you can format it using the format your visual button circled in the above image.
- Create multiple necessary visuals to complete your dashboard.
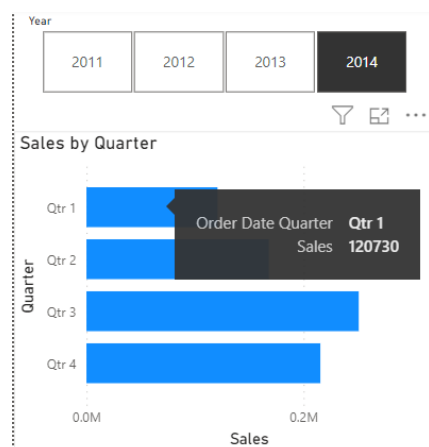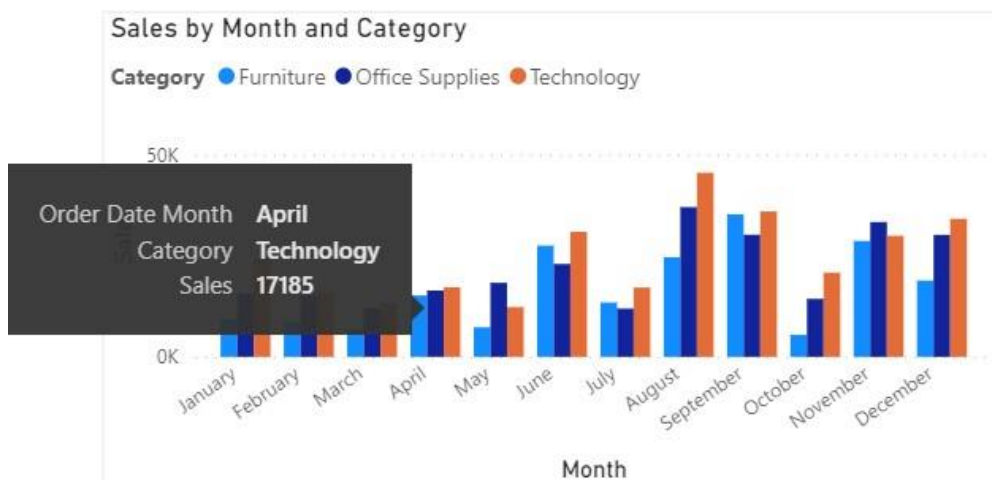
3. The Dashboard
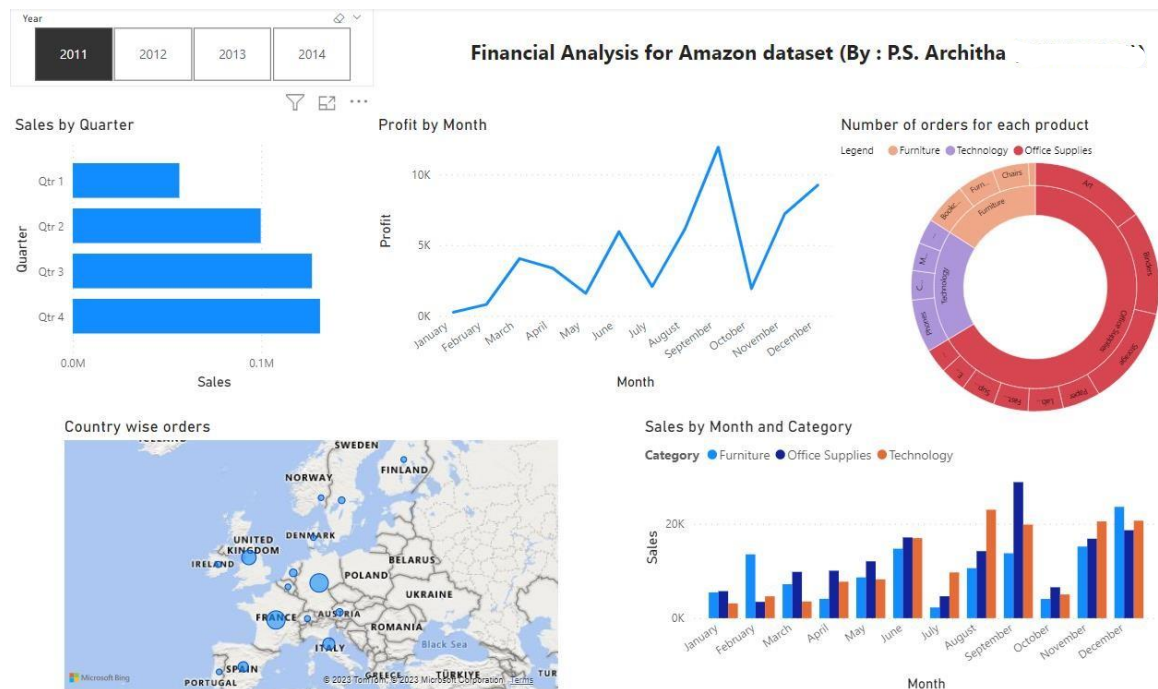
The above dashboard contains the following visualizations:

- Horizontal Bar Chart
- Line chart
- Sunburst map
- Symbol map
- Grouped bar chart

The dashboard is helpful for financial analysis of this sales dataset. It includes a filter that can show these visualizations for different years from 2011 to 2014. The above image showcases the financial analysis for the year 2011. When hovered over each visualization it gives us more information
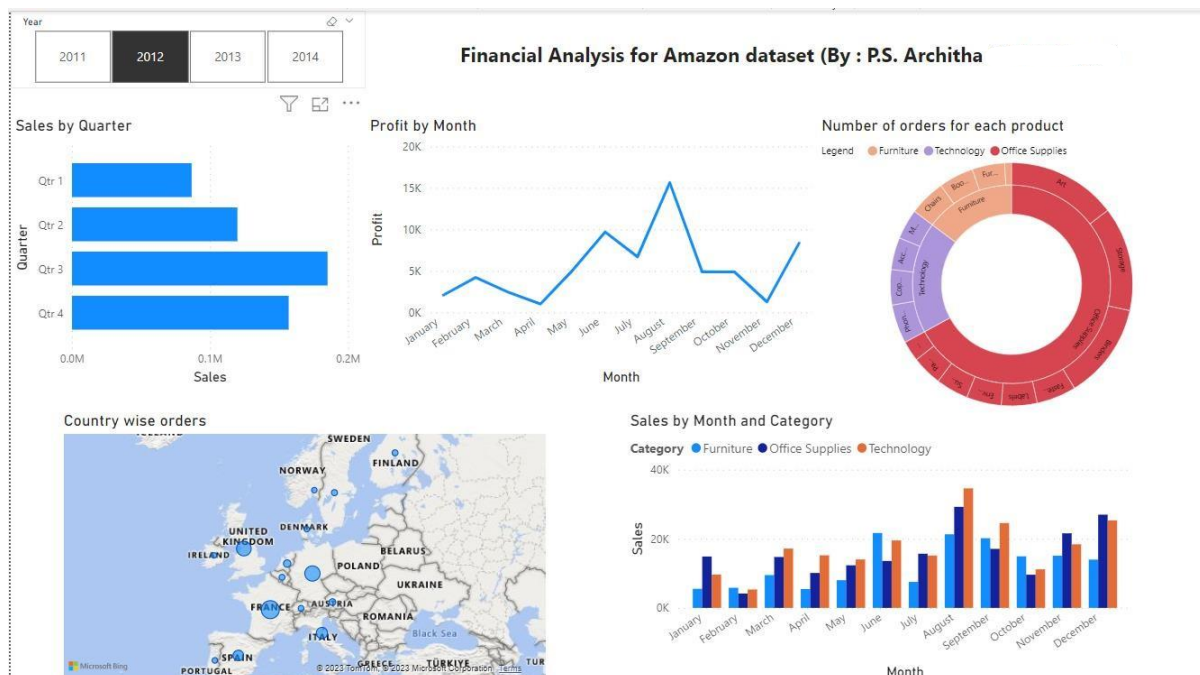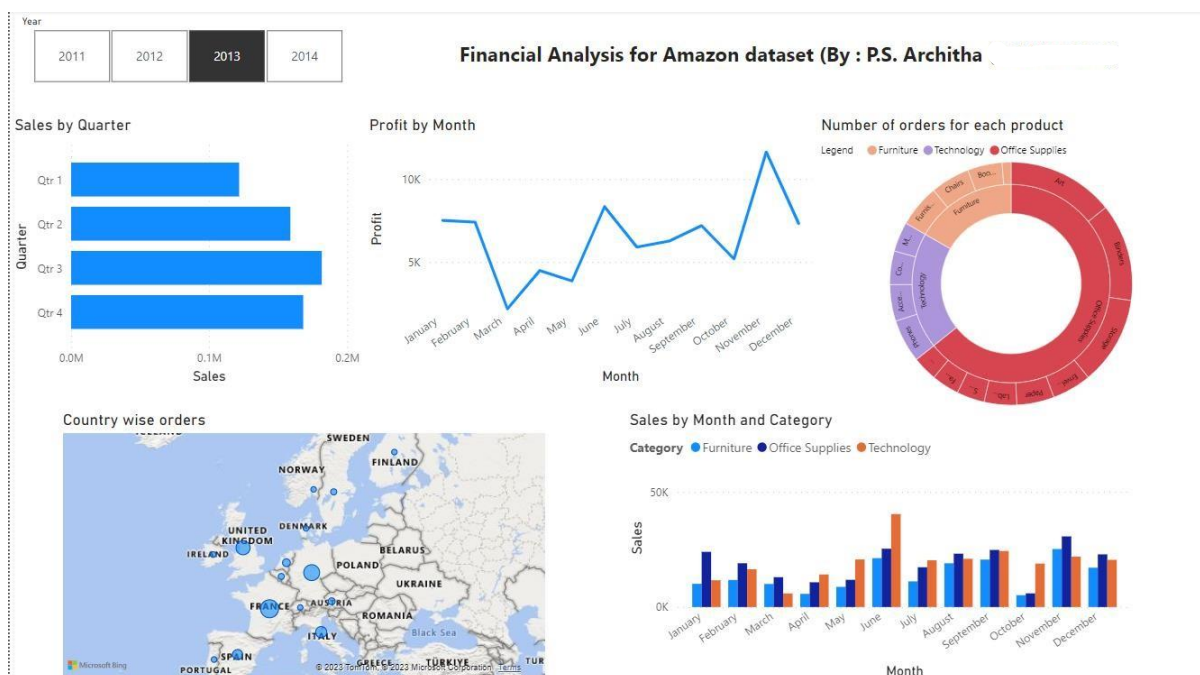Examples:

Profit by Month

Profit

10K

5K

April
● Profit 7157

January February March April May June July August September October November December

Month

Number of orders for each product

Legend ● Furniture ● Technology ● Office Supplies

Office Supplies 1710.00

Country wise orders

Country **Germany**
Count of Order ID **228**

Microsoft Bing

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Sales by Month and Category

Category ● Furniture ● Office Supplies ● Technology

50K

Order Date Month **April**
Category **Technology**
Sales **17185**

0K

January February March April May June July August September October November December

Month

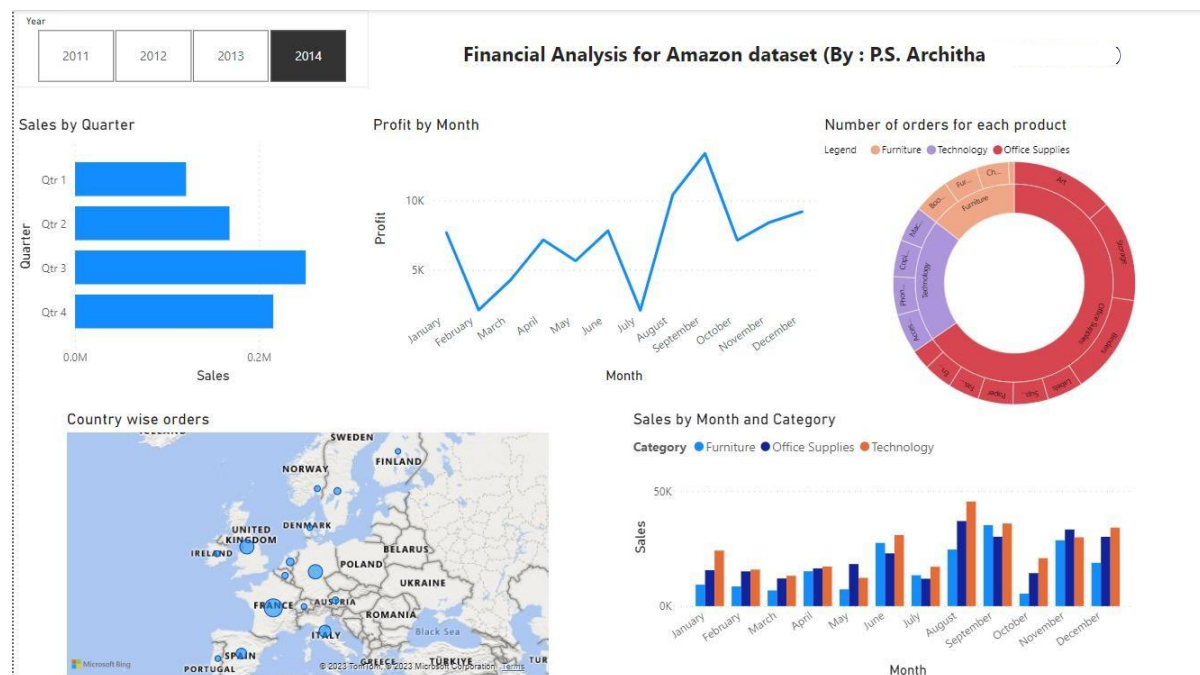The financial analyses for the other years are attached below.

Year 2012

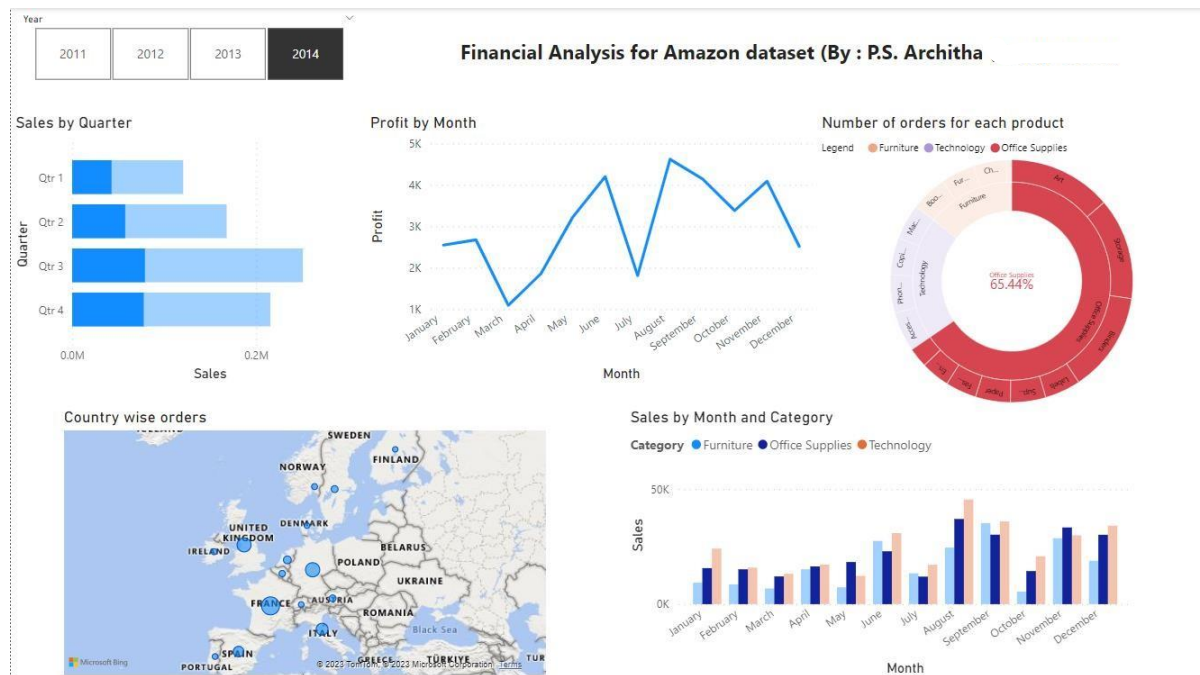## Year 2013

Year 2014

When each region of visualization is clicked, all visualizations show corresponding changes

Example:

When 'Office supplies' is clicked on the sunburst map. The 'Sales by Quarter' bar chart shows the sales of office supplies by quarter. The 'profit by month' line chart shows the profit gained each month due to sale of office supplies. The 'Country wise orders' map shows the country wise orders of office supplies. The 'Sales by Month and Category' bar chart shows the sales of office supplies by month and category.

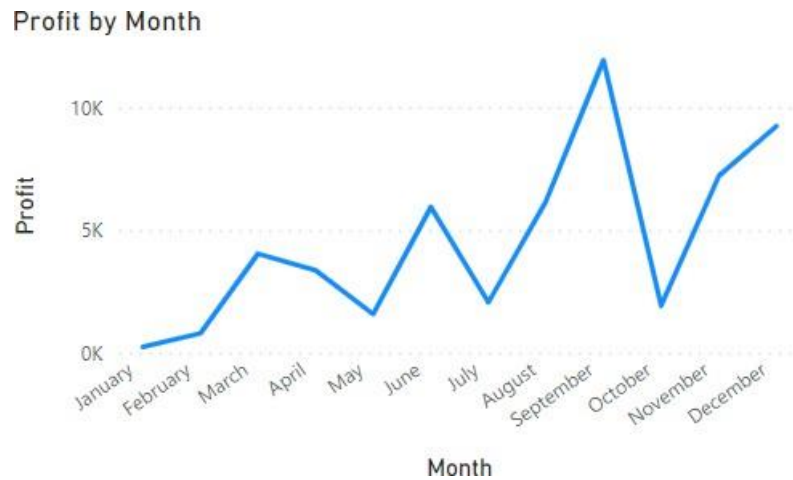Screenshot of the above explanation is attached below:

4. Inferences (For the year 2011)

A. Horizontal Bar Chart
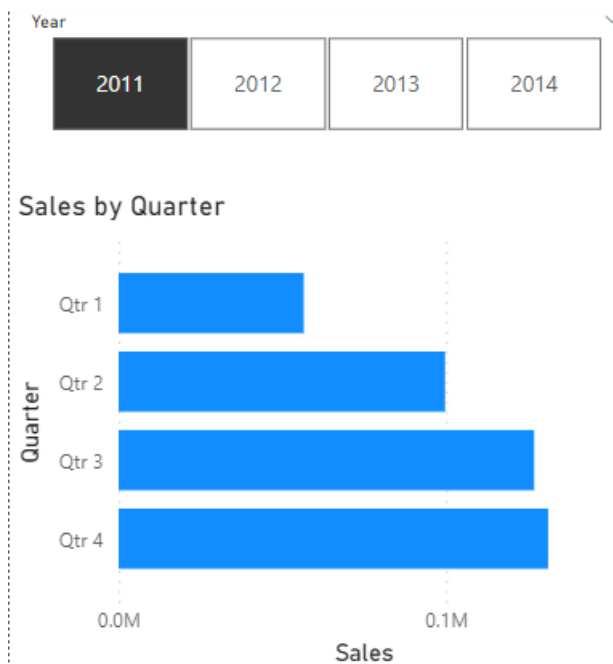
From the above Horizontal Bar Chart, we can infer that the quarterly sales of Amazon increased each quarter consistently for the year 2011.

B. Line Chart

Profit by Month

From the above line chart, we can infer that the Amazon sales increased in from January to December during the year 2011. It reached its peak during September. There was a sharp decline in sales the very next month i.e in October. However, The sales drastically increased in November.

C. Sunburst Chart

Number of orders for each product

Legend ● Furniture ● Technology ● Office Supplies
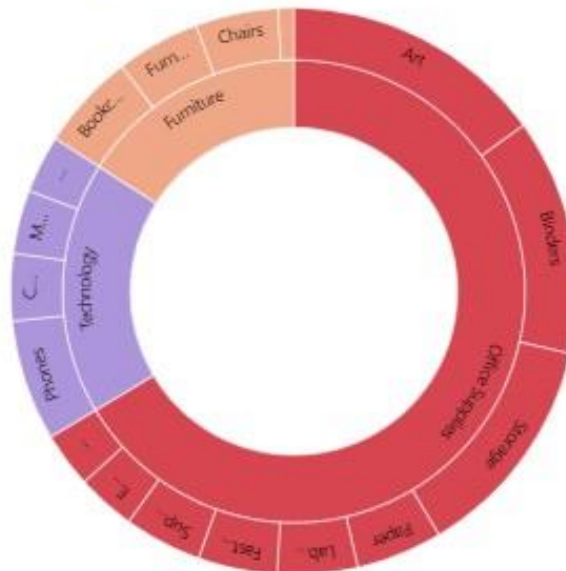
From the above Sunburst Chart, we can infer that Office supplies were ordered the most and within office supplies Art supplies, Binders and Storage items have more demand

D.Symbol Map
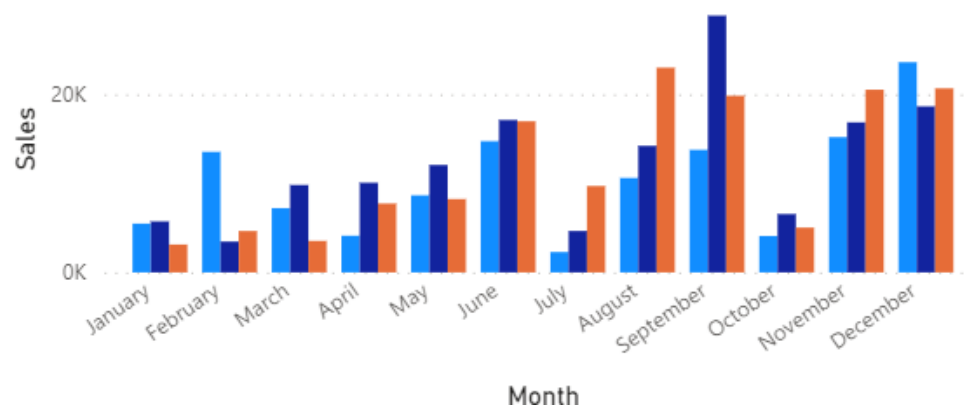
Country wise orders

From the above Symbol map, we can infer that most of the orders are from France and Germany. There are comparatively less orders from Portugal, Norway, Finland and Ireland

E. Grouped Bar Chart

Sales by Month and Category

From the above grouped bar chart, we can infer those sales of Office Supplies was highest in September. Technology sales were highest inAugust and Furniture sales were highest in December.