Advanced Data Visualization - EXPT 1

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AIM/OBJECTIVE:
Create basic charts using Tableau / Power BI / R / Python / D3.js to be performed on the dataset of Ecommerce field
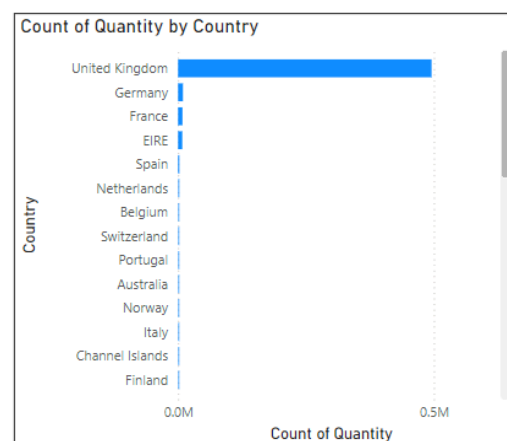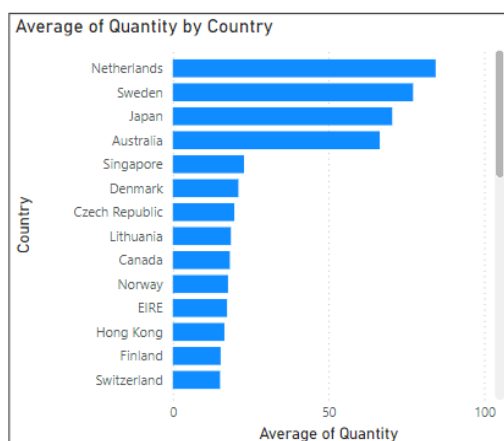
- Complete all plots on practice dataset and reproduce on e-commerce dataset.
- Basic - Bar chart, Pie chart, Histogram, Timeline chart, Scatter plot, Bubble plot
- Calculate Product wise sales, region wise sales
- Write observations from each chart

DATASET_LINK :
https://www.kaggle.com/datasets/carrie1/ecommerce-data?resource=download

**SOFTWARE USED**: Power BI

1) Bar Chart:

Y-Axis (Categorical) - Country, X-Axis (Numerical) - Quantity

This graph shows how the quantity of products (Count and Average) Differ from country to country.
In the left graph we can see that the Netherlands leads the chart in having the highest average of quantity by country.
But in the Right graph we can notice that most of the Ecommerce data is sold in the United Kingdom, giving us a fair idea of where and how the products are deported to which part of the world.

2) Pie_Chart
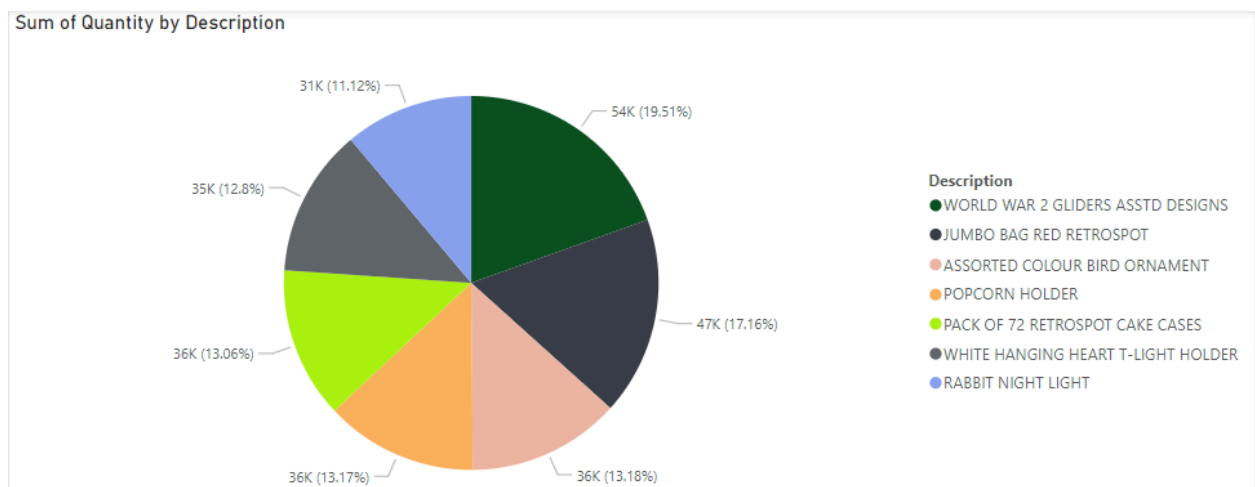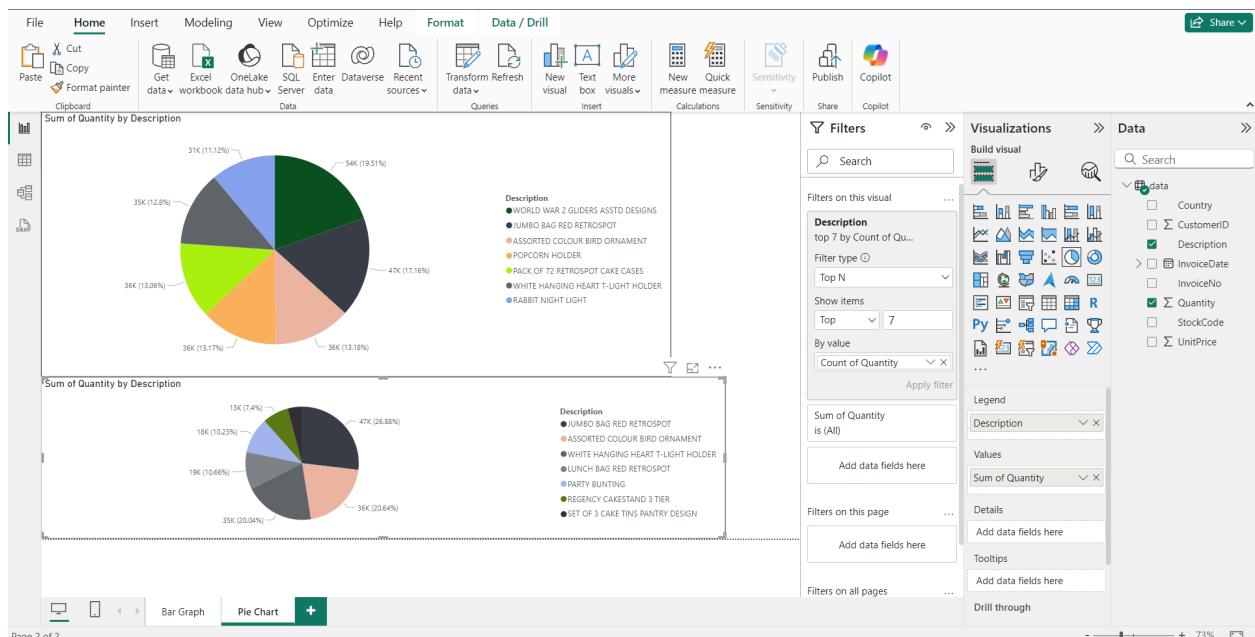
This chart shows us the top 7 products which have been sold the most.

Value is Sum of Quantity which implies that these are the top 7 products sold.
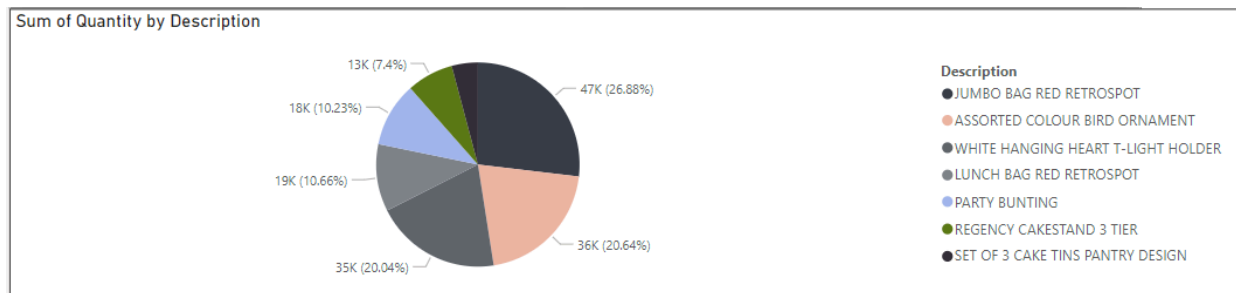
This shows us the count of the most famous products sold.

3) TimeLine chart
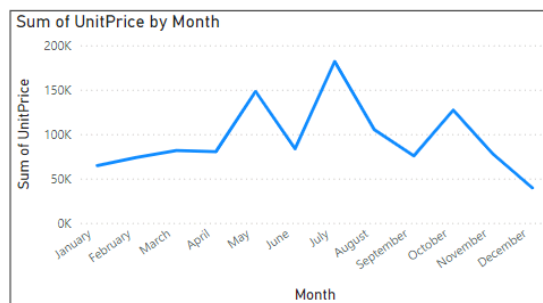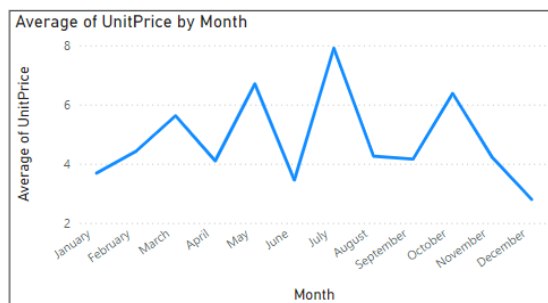
This shows us the Average and Sum of unit Price by Month. It looks like in the months of July, August and September the price of the product goes high as there must be high demand for it during that time.

4) Geographical Plot:

The countries which are involved in the sales of product.

5) TreeMap:

Sum of Quantity by Description

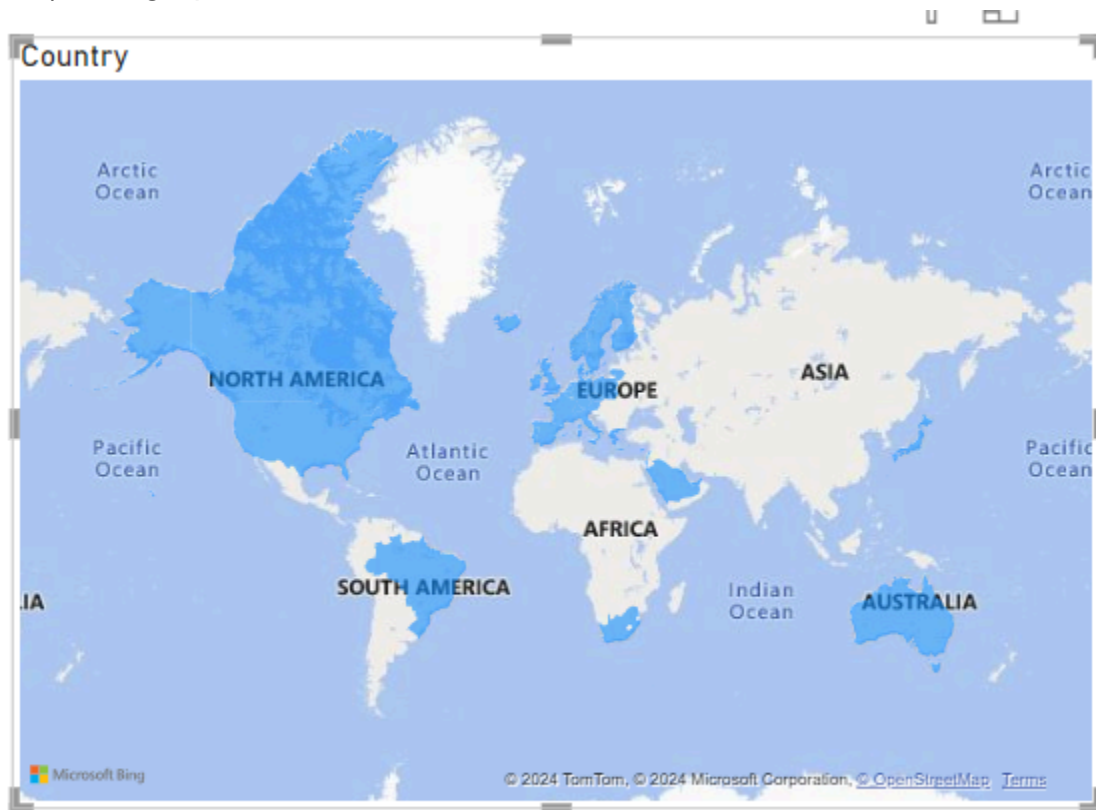|			
WORLD WAR 2 GLIDERS ASSTD DESIGNS	ASSORTED COLOUR BIRD ORNAMENT	PACK OF 72 RETROSPOT CAK...	WHITE HANGING HEART T-LI...
JUMBO BAG RED RETROSPOT	POPCORN HOLDER	RABBIT NIGHT LIGHT	

Description   JUMBO BAG RED RETROSPOT
Sum of Quantity   47363

Sum of Quantity by Description

JUMBO BAG RED RETROSPOT	ASSORTED COLOUR BIRD ORNAME...	WHITE HANGING HEART T-LIGHT ...	LUNCH BAG RED RETROSPOT	REGENCY CAKEST...
			PARTY BUNTING	SET OF 3 CAKE TIN...

Same as the Pie Chart but in Tree Map Visualization.

Region wise Sales:

```
 5     EVALUATE
 6  ∨  ADDCOLUMNS(
 7         SUMMARIZE('data', 'data'[Country]),
 8         "Total Sales", SUMX('data', 'data'[UnitPrice] * 'data'[Quantity])
 9     )
10
```

Results | Result 1 of 1 ∨   🗌 Copy ∨

	data[Country]	[Total Sales]
1	United Kingdom	9747747.93
2	France	9747747.93
3	Australia	9747747.93
4	Netherlands	9747747.93
5	Germany	9747747.93
6	Norway	9747747.93
7	EIRE	9747747.93
8	Switzerland	9747747.93

Product wise Sales:

```
1    // Learn more about DAX queries at https://aka.ms/dax-queries
2
3    // Here is a sample DAX query from your model, click 'Run'
4    // Try other DAX queries by right clicking a table, column, or measure in the
5    EVALUATE
6    ADDCOLUMNS(
7    ····SUMMARIZE('data', 'data'[Description]),
8    ····"Total Sales", SUMX('data', 'data'[UnitPrice] * 'data'[Quantity])
9    )
10
```

Results

Result 1 of 1 ∨   📋 Copy ∨

⊞	data[Description]	[Total Sales]
1	WHITE HANGING HEAR...	9747747.93
2	WHITE METAL LANTERN	9747747.93
3	CREAM CUPID HEARTS ...	9747747.93
4	KNITTED UNION FLAG ...	9747747.93
5	RED WOOLLY HOTTIE W...	9747747.93
6	SET 7 BABUSHKA NESTI...	9747747.93
7	GLASS STAR FROSTED T...	9747747.93
8	HAND WARMER UNION...	9747747.93