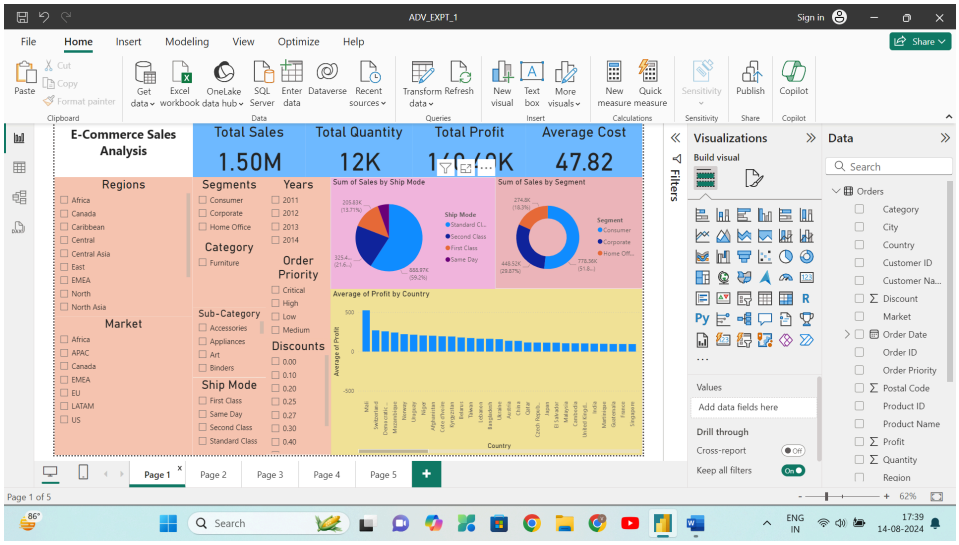
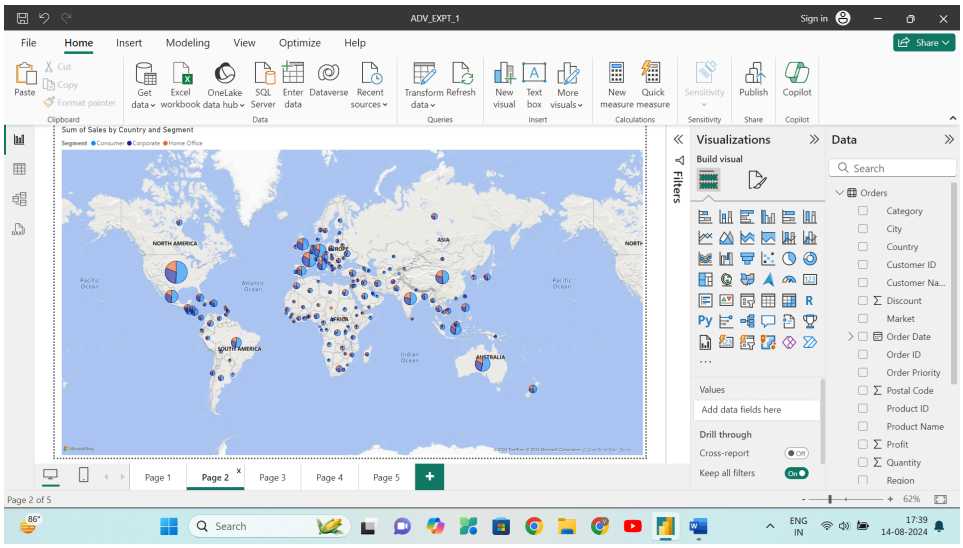
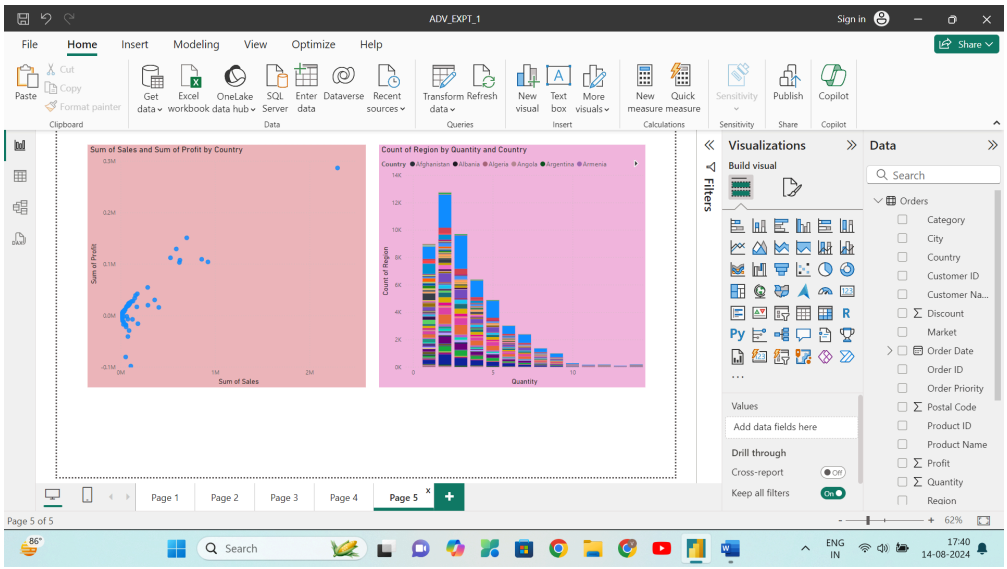
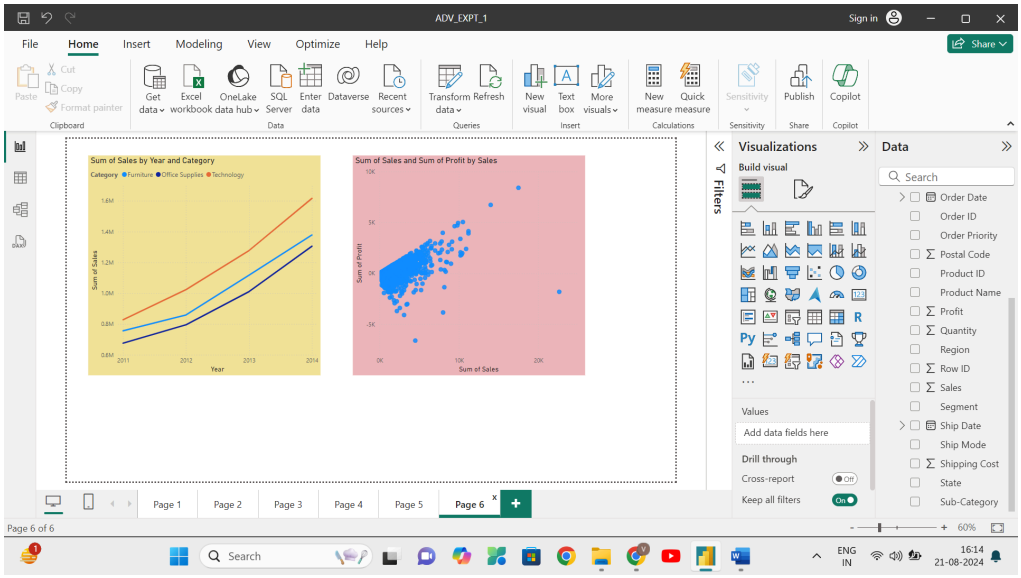
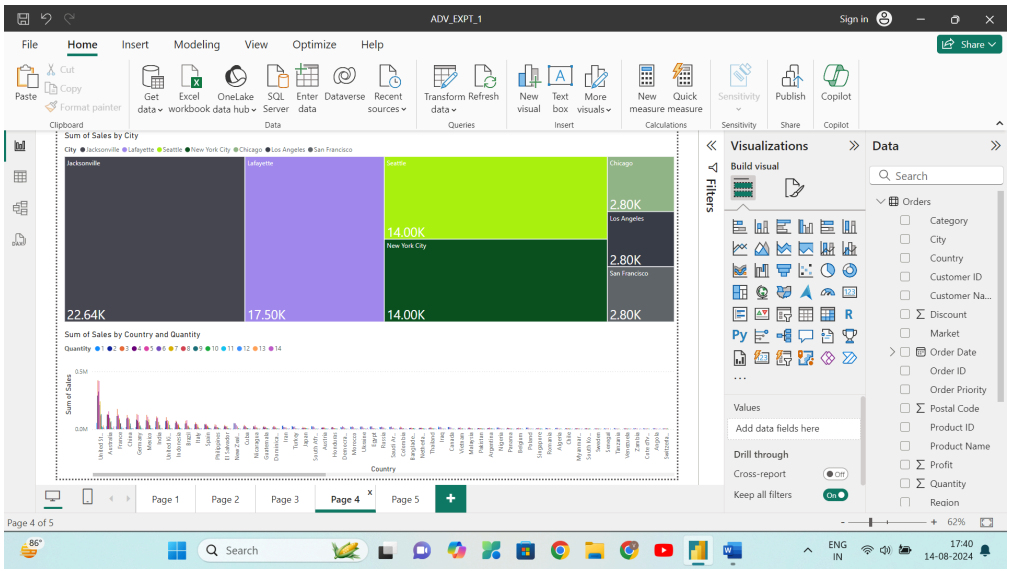
Name:	Prashil Deepak Kadam
UID:	2021600031
Experiment No:	1
AIM:	To visualize data from an e-commerce dataset and perform a comparative analysis on the Product wise sales and region wise sales distribution.
Results / Outputs:	 Sales Overview in General. All the Regions, Market, Segments, Category, Sum of sales by ship mode, Sum of sales of segment, Average profit by Country.  Consumer, Corporate, Home Office Sales in all the Countries.



Sum of sales with the Sum of profit.
Count of Order Priority and Country.



Sum of Sales by Year.
Sum of Sales and Sum of Profit generated.



Top 5 sales in cites and their numbers.

Conclusion

In this experiment we got to learn about different data visualization techniques using different plots and charts. The dataset was **Ecommerce Dataset ,** it which had different fields like Sales, Discounts, Order details as per the region, by product category and sub category.

- **Overall Sales Performance**:
  - **Total Sales**: The company has achieved significant sales of 1.5 million units across various regions.
  - **Total Profit**: The profit stands at 1.16 million units, indicating a healthy profit margin relative to sales.
- **Segment-wise and Ship Mode Analysis**:
  - **Segment Contribution**: Different segments such as Consumer, Corporate, and Home Office contribute variably to the total sales, with noticeable differences in sales distribution.
  - **Ship Mode Efficiency**: The pie charts indicate the proportion of sales attributed to various shipping modes, helping in understanding the preference or efficiency of each mode.
- **Geographical Sales Distribution**:
  - The world map visualization shows the global distribution of sales, segmented by regions and countries. The larger concentrations of sales are evident in North America, Europe, and parts of Asia, indicating strong market presence in these areas.
- **Sales vs Profit Correlation**:
  - The scatter plot on the final page illustrates the relationship between the sum of sales and profit, revealing a positive correlation—higher sales generally lead to higher profits, but there are some outliers.
- **Regional Performance**:
  - The bar chart represents the count of orders across different regions and countries. It highlights regions with the highest and lowest number of orders, providing insights into regional performance.

	1. Sum of Sales by Sub-Category • **High Sales Categories**: The data highlights that certain sub-categories, likely including office supplies like Phones and Copiers, are performing exceptionally well. • **Low Sales Categories**: Some categories like Furniture items (possibly Tables) and Art supplies show lower sales, indicating niche markets or less demand. • **Mid-Range Sales**: Categories such as Binders and Bookcases might be performing moderately, indicating a steady but not top-tier performance. **2. Sum of Sales by Region** • **High Sales Regions**: North America and some parts of Europe (possibly including EMEA as a whole) are depicted as high sales regions, reflecting robust market penetration and customer demand. • **Low Sales Regions**: Africa, Central Asia, and the Caribbean appear to be regions with lower sales, which may be due to economic factors, market saturation, or limited presence. • **Moderate Sales Regions**: Asia, including East and Southeast Asia, shows moderate sales levels, suggesting areas of potential market expansion or growth. **3. High Sales Concentration** • **Product Sub-Category**: High sales concentrations in certain tech-oriented products like Phones and office machinery like Copiers suggest a strong demand for these types of goods. • **Region**: High sales in North America and key European markets indicate strong regional performance. • **Insight**: The success in these regions may be driven by a combination of high consumer spending power and effective market strategies. **4. Low Sales Distribution** • **Product Sub-Category**: Lower sales in categories such as Tables and Art supplies might reflect lower demand or possibly higher competition. • **Region**: The low sales figures in regions like Africa and the Caribbean could suggest challenges such as lower economic activity or less effective distribution channels. • **Insight**: Strategies may need to be reassessed in these regions, possibly focusing on market-specific needs and consumer preferences. **5. Moderate Sales Potential** • **Product Sub-Category**: Binders and Bookcases falling into the moderate sales category might benefit from targeted marketing campaigns or new product features. • **Region**: Asian regions showing moderate sales might be ripe for strategic initiatives aimed at boosting market share, such as localized marketing efforts or expanded distribution networks. • The success in these regions may be driven by a combination of high consumer spending power and effective market strategies.