**Project Title: Retail sales 2024**

**Step 1: Data Acquisition and Preparation**

The first step is to load your data into Power BI or Tableau.

* **For Power BI**: Open Power BI Desktop and select 'Get Data' from the Home ribbon. Choose 'Text/CSV' and navigate to your retail\_sales\_2024.csv file.
* **For Tableau**: Open Tableau Desktop and connect to 'Text file'. Find and select your retail\_sales\_2024.csv file.

After loading the data, ensure the data types are correctly interpreted (e.g., order\_date as a date, and numeric fields as decimals or whole numbers). The SQL queries suggest rounding decimal values for unit\_price, discount, revenue, cost, and profit to two decimal places for cleaner data.

**Step 2: Data Analysis and Calculations**

The retail\_sales\_analysis\_queries.sql file provides the queries you need to perform the core analysis for the report. Use these queries as a guide to create the necessary measures and calculated fields.

* **Total Revenue**: Calculate the sum of the revenue column.
* **Total Profit**: Calculate the sum of the profit column.
* **Monthly Revenue Trend**: Group your data by month and year (order\_date) and sum the revenue to show the trend over time.
* **Profit by Region**: Aggregate the profit by the region column.
* **Top 10 Products by Revenue**: Filter your data to show the top 10 products based on the sum of revenue.
* **Category Mix**: Analyze the revenue, units, and profit by category.
* **Segment Performance**: Group by segment and calculate the revenue, profit, and profit margin percentage. The margin percentage is calculated as (SUM(profit) / SUM(revenue)) \* 100.

**Step 3: Visualization**

The retail\_sales\_presentation\_2024.pptx file provides the structure for the final report. Create visualizations for each of the key analyses you performed in the previous step.

* **Dashboard Overview**: Create a dashboard or a main report page with key performance indicators (KPIs) showing the Total Revenue and Total Profit. The retail\_sales\_presentation\_2024.pptx lists key metrics like Total Revenue: 2,348,363.17 and Total Profit: 658,333.01.
* **Revenue by Month**: Use a line chart to visualize the monthly revenue trend.
* **Profit by Region**: Use a bar chart or a map visualization to show the total profit for each region (North, South, East, West).
* **Top 10 Products**: Use a bar chart to display the top 10 products by revenue.
* **Category and Segment Analysis**: Use pie charts or bar charts to show the breakdown of revenue and profit by category and segment.

**Step 4: Final Report Assembly and Insights**

Assemble your visualizations on a single report page or on multiple pages, as shown in the PowerPoint presentation. Add text boxes to summarize key insights and provide a narrative for your data. Based on the provided presentation, the key insights include:

* Seasonality peaks in August-September and November-December.
* Technology is the leading category for revenue, with Laptops and Monitors as the main drivers.
* The West and North regions are the most profitable.
* Consumer and Corporate are the key business segments.
* Discounts should be targeted to maintain profit margins.