Project Documentation:

1. Introduction
This document provides the full documentation of the DEPI Graduation Project for analyzing sales performance in the retail e-commerce sector. The project includes data cleaning, preprocessing, data modeling, KPI creation, insights generation, and building visual dashboards using Excel, Power BI, and Tableau.

2. Project Idea
Businesses often struggle to understand their sales performance, customer behavior, and product profitability. The project solves this by exploring trends in quantity sold, total profit, customer activity, and product performance using analytics tools such as pivot tables, dashboards, and interactive visuals.

3. Dataset Cleaning & Preprocessing
• Removing irrelevant/unnecessary columns
• Correcting data types
• Fixing date and time formatting
• Handling missing values
• Removing duplicates
• Filtering invalid entries (negative/zero quantities)
• Creating new calculated fields
• Standardizing country names
• Fixing negative values
• Creating a final cleaned dataset

4. Data Modeling, DAX & Measures
Key KPIs:
• Total Revenue
• Total Orders
• Average Price
• Average Order Value
• Total Returns
• Return Rate
• Lost Revenue
Time trend KPIs, product performance KPIs, and geography KPIs were also created to analyze multiple dimensions of performance.

5. Insights Generated
• Top-selling products by quantity and revenue
• Countries contributing most to sales (UK highest)
• Seasonality trends showing peak sales in November–December

• Operational inefficiencies identified through return rates and lost revenue

6. Visualizations

Interactive dashboards were built using Power BI and Tableau, along with pivot table visualizations in Excel. The visuals include geographical maps, trend lines, bar charts, product profitability visuals, and KPI cards.

7. Conclusion

The project successfully transformed raw data into meaningful business insights. By cleaning the data, applying analytical tools, and building interactive dashboards, the team provided deep visibility into sales trends, customer behavior, and product profitability.