

Project 1: Sales Performance Analysis for a Retail Store

Summary: In this project, you are tasked with analyzing the sales performance of a retail store. You will need to explore sales data to uncover key insights such as top-selling products, regional performance, and monthly sales trends. The goal is to produce an interactive Power BI dashboard that highlights these findings.

Instructions:

1. Excel:

- Perform an initial exploration of the sales data. Use pivot tables to summarize total sales by product, region, and month.
- Use Excel formulas to calculate metrics such as average sales per product and total revenue by region.
- Create any other interesting report

2. SQL:

Hint – You need to load the dataset into your SQL Server environment to write and validate your queries.

Write queries to extract key insights based on the following questions.

- retrieve the total sales for each product category.
- find the number of sales transactions in each region.
- find the highest-selling product by total sales value.
- calculate total revenue per product.
- calculate monthly sales totals for the current year.
- find the top 5 customers by total purchase amount.
- calculate the percentage of total sales contributed by each region.
- identify products with no sales in the last quarter.

3. Power BI:

- Create a dashboard that visualizes the insights found in Excel and SQL. The dashboard should include a sales overview, top-performing products, and regional breakdowns.

Project 2: Customer Segmentation for a Subscription Service

Summary: This project involves analyzing customer data for a subscription service to identify segments and trends. Your goal is to understand customer behavior, track subscription types, and identify key trends in cancellations and renewals. The final deliverable is a Power BI dashboard that presents your analysis.

Instructions:

1. Excel:

- Analyze customer data using pivot tables to find subscription patterns.
- Calculate the average subscription duration and identify the most popular subscription types.
- Create any other interesting reports.

2. SQL:

Hint – You need to load the dataset into your SQL Server environment to write and validate your queries.

Write queries to extract key insights based on the following questions.

- retrieve the total number of customers from each region.
- find the most popular subscription type by the number of customers.
- find customers who canceled their subscription within 6 months.
- calculate the average subscription duration for all customers.
- find customers with subscriptions longer than 12 months.
- calculate total revenue by subscription type.
- find the top 3 regions by subscription cancellations.
- find the total number of active and canceled subscriptions.

3. Power BI:

- Build a Power BI dashboard that visualizes key customer segments, cancellations, and subscription trends. Include slicers for interactive analysis.