SQL Project – Adventureworks

Objective: This project aims to provide you with hands-on experience in working on a Live project for a business. It is a blend of being able to apply the SQL concepts learnt over the course as well as understand how to interpret business case studies

Prerequisites: The learner should have covered the following before attempting to work on the project –

- MySQL Workbench software and the necessary databases
- Recorded content
- Live sessions and their recordings
- Doubt clearing sessions and their recordings

Database: The database used is the **Adventureworks** data, which is a very good practice dataset with multiple aspects like – Sales, Products, Employees, Territory, Customers etc.

The database diagram is also provided for getting a better understanding of the data.

Link - https://drive.google.com/drive/folders/1xfxDt8xuLbaPEYqzQC5frds9THx8oYW2?usp=sharing

Deliverables: The learner should prepare the following deliverables as an output from the project –

- **SQL query file** with the queries used to generate the data to solve each problem statement
- **Presentation** in PowerPoint or Google Slides with a Summary and showing the data from each problem statement in a chart format
    - The charts can be built directly on the slide or in Excel/Google Sheets
    - Add 1 slide per problem statement with a few points on the findings from the data and the chart depicting the output

Problem Statement: Solve each of the following business problem statements by writing SQL queries. The output data from the queries could be copied and used for charts.

1. What are the top 10 highest selling products in the database?
   (Hint - Use salesorderdetail as base table, LineTotal as Sales)
   Create a Pie chart to depict this information.

2. Who are the top 10 highest spending customers in the data along with their address and address type information?
   (Hint - Use salesorderheader as base table, TotalDue as sales)
   Create a Bar chart to depict this information.

3. Calculate the Sales by Sales Reason Name and Reason Type. Also find the best and worst performing Sales Reason in terms of Sales
   (Hint - Use salesorderheader as base table, TotalDue as sales)
   Create a Bar chart to depict this information.

4. Calculate the average number of orders shipped by different Ship methods for each month and year
   (Hint - Use salesorderheader as base table, TotalDue as sales)
   Create a Line chart to depict this information.

5. Calculate the count of orders, maximum and minimum shipped by different Credit Card Type for each month and year
   (Hint - Use salesorderheader as base table, TotalDue as sales)
   Create a chart as per your choice to depict this information.

6. Which are the top 3 highest selling Sales Person by Territory for each month and year
   (Hint - Use salesorderheader as base table, TotalDue as sales)
   Create a chart as per your choice to depict this information.

7. Calculate the count of employees and average tenure per department name and department group name.
   (Hint - Use employee as base table, Tenure is calculated in days – from Hire date to today)
   Create a table to depict this information.