**Project Title: Sales Analysis for E-commerce Company**

**Introduction:** This project entails a comprehensive sales analysis for an USA-based e-commerce company named 'ABC Company'. The company operates nationwide and aims to expand its business in the upcoming years. To facilitate this decision-making process, the CEO has tasked the sales manager with providing insights into total sales, profits, orders, and growth rates over the years. Additionally, the CEO seeks to understand the impact of various factors such as region, product category, and subcategory on these performance metrics.

**Problem Statement:** The primary challenge is to analyze the company's sales performance and identify key trends and insights to support strategic decision-making. Specifically, the CEO requires insights into total sales, profits, orders, profit margins, and year-on-year growth rates. Furthermore, understanding the most profitable product categories, subcategories, states, and regions is crucial for informed decision-making.

**Objectives:**

1. To analyze total sales, profits, orders, profit margins, quantities sold, and year-on-year growth rates.
2. To identify profitable product categories and subcategories.
3. To analyze the profitability of states and regions.
4. To provide actionable recommendations based on the analysis.

**Keywords:** Sales Analysis, E-commerce, Dashboard, Data Visualization, MySQL, Microsoft Excel, Business Intelligence.

**Data Collection:** The dataset was collected from a secondary source and stored in a Google Spreadsheet. The dataset includes information on countries, customers, orders, and products. After collection, the dataset underwent normalization (NF1, NF2, NF3) to ensure effective database creation.

**Data Management:** A relational database was created using MySQL to manage the collected dataset efficiently. The database includes tables for countries, customers, orders, products, and relational tables. Normalization processes were applied to ensure data integrity and minimize redundancy.

**Exploratory Data Analysis using SQL:**

In this e-commerce sales analysis project, various SQL queries were used to extract insights from the dataset. Each query addresses specific aspects of sales performance, customer behavior, and regional trends. Below are the queries along with their potential business benefits:

1. Total Sales, Quantity, and Profit
2. Sales, Quantity, and Profit per Year
3. Sales, Quantity, and Profit per Ship Mode
4. Total Number of Customers
5. Number of Customers by Customer Segment
6. Total Sales, Quantity, and Profit for Specific Customers
7. Customer Sales Ranking by Total Sales
8. Customer Sales Ranking by Total Profit
9. Top Ten States by Profit
10. Sales, Profit, and Quantity by Region and Year
11. Sales, Profit, and Quantity by Month and Year
12. Average Days Between Order and Shipping Date
13. Average Discount Rate by Year
14. Average Sales, Profit, and Discount by Year
15. Most Profitable Product Category
16. Most Profitable Subcategory
17. Most Sold Product Category in a Specific Region and Year

By analyzing these aspects of sales data, the e-commerce company can gain valuable insights into its performance, customer behavior, and market trends, thereby informing strategic decisions to drive growth and profitability.

**Dashboard Components:** The dashboard was created using Microsoft Excel and includes the following components:

1. Key Performance Indicators (KPIs) displaying total sales, profits, quantities sold, orders, and profit margins, with year-on-year growth rates for comparison.
2. Combo Chart visualizing month-wise sales and profit comparisons.
3. Waterfall Chart illustrating total profit breakdown by product category.
4. Donut Chart showing the percentage of sales contributed by each product category.
5. Map Chart revealing states with the highest and lowest sales figures.
6. Bar Chart displaying the top 5 subcategories of products sold.

**User Experience Features:** The dashboard offers user-friendly features, including:

1. Filters allowing users to refine data by year, consumer segment, and region.
2. Shortcut buttons for easy access to the dashboard, data analysis sheet, and options to share the dashboard via email or the company's website.

**Conclusion:** The E-commerce Sales Dashboard serves as a powerful tool providing stakeholders with clear and intuitive visualizations, interactive filters, and valuable insights. It equips decision-makers with the necessary information to make informed decisions about the company's sales performance, driving better outcomes and supporting strategic business growth initiatives.

**Repository:** The complete project, including the dataset, MySQL scripts, and Excel dashboard, can be accessed on GitHub [insert GitHub repository link].

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