Odin School Capstone Project

Axon Classic cars Sales Analysis

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**Problem Statement:**

A small company Axon, which is a retailer selling classic cars, is facing issues in managing and analyzing their sales data. The sales team is struggling to make sense of the data and they do not have a centralized system to manage and analyze the data. The management is unable to get accurate and up-to-date sales reports, which is affecting the decision-making process.

To address this issue, the company has decided to implement a Business Intelligence (BI) tool that can help them manage and analyze their sales data effectively. They have shortlisted Microsoft PowerBI and SQL as the BI tools for this project.

The goal of the capstone project is to design and implement a BI solution using PowerBI and SQL that can help the company manage and analyze their sales data effectively.

**Project Overview**:

* Import and integrate the data from MySQL database into PowerBI.
* Clean and transform the data to make it ready for analysis.
* Build interactive dashboard and reports using PowerBI that can help the sales team and management to make sense of the data .
* Use SQL to perform advanced analytics on the data and extract insights that can help the company improve its sales.
* Enable the management to access the dashboards and reports in real time and make data driven decisions.

**Procedure:**

* Use the data source provided: Use the MySQL database provided as a data source.
* Extract and clean the data: The next step is to extract the data from the identified sources and clean it to make it ready for analysis. This may involve tasks such as removing duplicates, handling missing values, and ensuring data consistency.
* Load the data into a PowerBI: The cleaned data can then be loaded into a centralized database.
* Design the dashboards and reports: Using PowerBI, data can be visualized in the form of interactive dashboards and reports. These dashboards and reports can be designed to provide useful insights and information to the management.
* Perform advanced analytics: Using SQL, advanced analytics can be performed on the sales data to extract insights and inform decision-making. This may involve tasks such as creating pivot tables, running queries, and creating views.
* Deploy the solution: The final step is to deploy the BI solution, including the dashboards, reports, and advanced analytics, to the sales team and management. The solution should be user-friendly and easy to use to ensure adoption and success.

**Database Description:**

The MySQL sample database schema consists of the following 8 tables:

* Customers: stores customer’s data.
* Products: stores a list of scale model cars.
* Product Lines: stores a list of product line categories.
* Orders: stores sales orders placed by customers.
* Order Details: stores sales order line items for each sales order.
* Payments: stores payments made by customers based on their accounts.
* Employees: stores all employee information as well as the organization structure such as who reports to whom.
* Offices: stores sales office data

**Tools required for the capstone project:**

* MySQL
* Power BI

**Insights/ Reports from the Dashboards:**

* There are total 23 employees works for Axon Classic Car sales.
* There are 122 customer across the countries.
* There are 7 offices situated across countries like USA, France, UK, Australia, Japan
* Total Sales achieved by Axon Classic Car sales is $9.60 M.
* Total Profit earned by Axon Classic Car sales is $3.83 M.
* There are 110 products overall.
* Average order processing time is 3.76 days
* Total orders placed is 326
* Total Quantity ordered 106k.
* Notable decline in first and second quarters of 2003,2004 but recovered in 2005.
* Top selling products 1992 Ferrari 360 Spider Red
* Top Customer Euro + Shopping channel
* Majority of the turnover comes from Classic Cars & vintage Cars.
* USA and Spain are the two countries from which majority of the revenue comes from.
* Top Performing Employee Gerard Hernandez as he promotes higher sales.
* Out of the 23 employees 17 are sales representative.
* Most of the orders are placed In Friday.
* Most of the orders are placed in the month of November.
* Shipment status is highly appreciable as maximum of the orders are delivery within expected date.
* Majority of the customers and Employees are from USA and France.