**AXON RETAIL COMPANY CAR SALES ANALYSIS**

**PROBLEM STATEMENT**

A small company Axon, which is a retailer selling classic cars, is facing issues in managing and analysing 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 analyse 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 analyse their sales data effectively. They have shortlisted Microsoft Power BI and SQL as the BI tools for this project.

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

**AIM**

* Import and integrate the data from MySQL database into Power BI  
  Clean and transform the data to make it ready for analysis.
* Build interactive dashboards and reports using Power BI that can help the sales team and management 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 (if needed).
* Enable the management to access the dashboards and reports in real-time and make data-driven decisions.

**ABOUT DATASET**

Here is a short description of the data tables included that contains typical business data such as customers, products, sales orders, sales order line items, etc.

* 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.
* Date : Stores date of sales.
* 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
* Profit Table: Stores profit made by products.

**IMPLEMENTATION**

* The project followed a well-structured approach:
* **Database Setup:** A MySQL database was created, and the provided data was loaded into it.
* **Data Transformation:** The data was cleansed and transformed. Duplicates were eliminated, missing values were handled, and data consistency was ensured.
* **Power BI Integration:** Power BI was utilized to import and integrate data from the MySQL database. This created a robust foundation for data analysis.
* **Dashboard Design:** Interactive dashboards and reports were developed in Power BI. Charts, graphs, and tables were carefully designed to visualize data effectively. DAX functions were employed for in-depth analysis.
* **Advanced Analytics:**SQL queries came into play to perform advanced analytics. This included identifying top-performing products and analysing regional sales data.

**KEY INSIGHTS**

* A total of 122 customers shopped at Axon’s retail store.
* A company achieved on outstanding total sales figure of 9.60M.
* 2004 had the highest profit at 1.81M, followed by 2003 at 1.32M and 2005 at 0.69M and overall profit is 3.83M
* Total 23 employees are present in company.
* In both 2003 and 2005, Nov month had the highest sales which has resulted in highest profits. Whereas in rest of the months the sales have been constant.
* Among the all countries, the company has made the highest sales in USA.
* Classic car product line having the highest sales of 3.83M among the all-product line.
* 1992 Ferrari spider red having the highest sales percentage.
* Company had the 2996 orders in three years.
* The year 2004 stood out as the most profitable year, surpassing both 2003 and 2005.
* “Classic Cars” is the most frequently ordered product line, followed by “Vintage Cars” and “Motorcycles.”

**CONCLUSION**

The implementation of the BI solution empowered Axon to efficiently manage and analyse their sales data, revealing invaluable insights. These insights have enhanced their decision-making process, enabling them to optimize inventory, focus on top-performing products, and identify growth opportunities.