

Sales Data Analytics Project for Axon

Project Description:

This project involved the analysis of sales data from the Axon Company's MySQL database to extract valuable insights for informed decision-making. The objective was to understand sales performance, customer behavior, and product trends.

Executive Summary:

The majority of customers are from the USA.

The top-selling product is the '1992 Ferrari 360 Spider Red.'

Gerard Hernandez is the highest sales contributor with around 1.1 million in sales.

The average order value is approximately 27.1 thousand dollars.

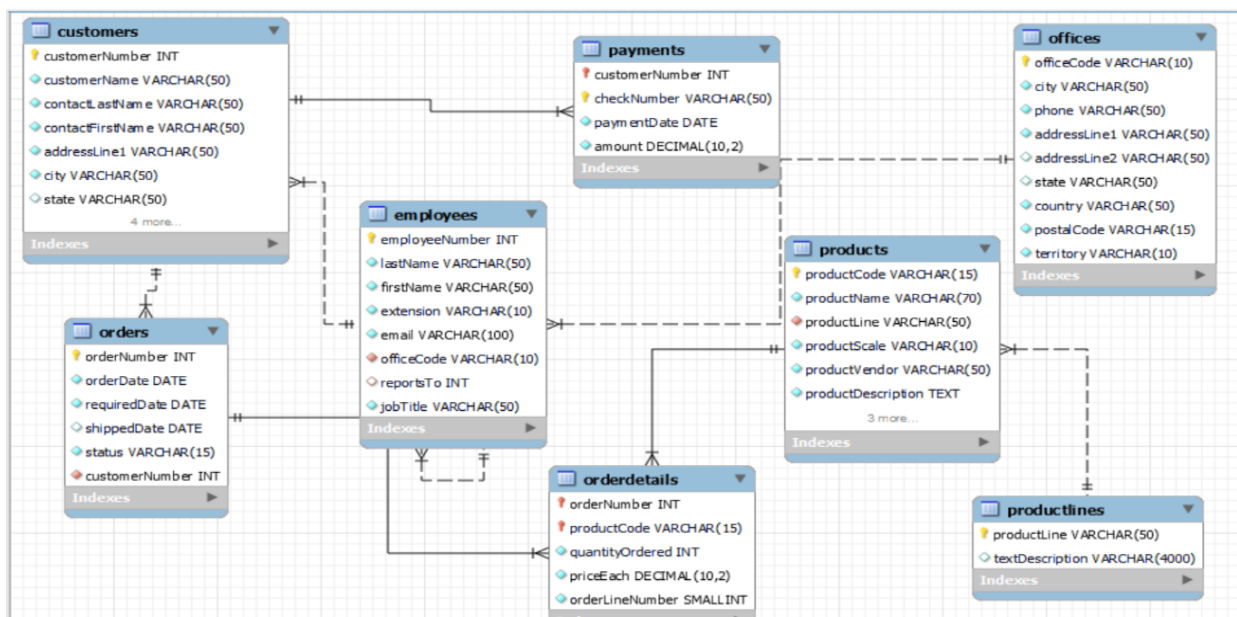
Total sales revenue is around 8.85 million dollars.

• Data Collection and Cleaning:

– Data Source:

https://drive.google.com/file/d/1OB_iGw6vVS5KS7QwiwVChbeTfR4WvUy3/view?usp=share_link

Engaging in reverse engineering as a means to gain a deeper comprehension of the data, unravelling its underlying structures and relationships for a more insightful analysis.



- **Data Cleaning:**

Conducting a comprehensive assessment to identify and flag any duplicate values within the table.

```
SELECT customerNumber, COUNT(customerNumber) AS duplicate_count
FROM customers
GROUP BY customerNumber
HAVING COUNT(customerNumber) > 1;
```

The absence of duplicate values within my dataset assures that each piece of data is distinct, simplifying data analysis and ensuring the integrity of my dataset for further processing and decision-making.

Conducting an evaluation of NULL values within the dataset to comprehensively analyze their potential impact on subsequent analytical processes and decision-making, including an assessment of how the presence of NULL values may influence the validity and reliability of the results.

```
SELECT * FROM customers WHERE customerNumber IS NULL;
```

Finding that more than 70% of some columns have missing data suggests that these columns may not provide valuable information for my analysis. Therefore, I may choose to ignore or give less importance to these columns when conducting my analysis.

```
ALTER TABLE orders DROP COLUMN Comments ;
```

Dropping the following columns:

'Comments' from the 'Orders' Table.

'htmDescription' from the 'Product Line' Table.

'image' from the 'ProductLine' Table.

- **Data Loading**

1. Open Power BI Desktop
2. Click on "Get Data"
3. Select "Database" Category
4. Choose "MySQL Database"

5. Enter Connection Details
6. Click "OK"
7. Choose Data Tables
8. Transform Data (Optional)
9. Load Data

MySQL database

Server

Database

▶ Advanced options

OK Cancel

Navigator

Display Options ▾

127.0.0.1:3306: classicmodels [8]

- classicmodels.customers
- classicmodels.employees
- classicmodels.offices
- classicmodels.orderdetails
- classicmodels.orders
- classicmodels.payments
- classicmodels.productlines
- classicmodels.products

Select Related Tables

classicmodels.products

Preview downloaded on Monday

productCode	productName	productLine	productScale	pr
S10_1678	1969 Harley Davidson Ultimate Chopper	Motorcycles	1:10	
S10_1949	1952 Alpine Renault 1300	Classic Cars	1:10	
S10_2016	1996 Moto Guzzi 1100i	Motorcycles	1:10	
S10_4698	2003 Harley-Davidson Eagle Drag Bike	Motorcycles	1:10	
S10_4757	1972 Alfa Romeo GTA	Classic Cars	1:10	
S10_4962	1962 LanciaA Delta 16V	Classic Cars	1:10	
S12_1099	1968 Ford Mustang	Classic Cars	1:12	
S12_1108	2001 Ferrari Enzo	Classic Cars	1:12	
S12_1666	1958 Setra Bus	Trucks and Buses	1:12	
S12_2823	2002 Suzuki XREO	Motorcycles	1:12	
S12_3148	1969 Corvair Monza	Classic Cars	1:18	
S12_3380	1968 Dodge Charger	Classic Cars	1:12	
S12_3891	1969 Ford Falcon	Classic Cars	1:12	
S12_3990	1970 Plymouth Hemi Cuda	Classic Cars	1:12	
S12_4473	1957 Chevy Pickup	Trucks and Buses	1:12	
S12_4675	1969 Dodge Charger	Classic Cars	1:12	
S18_1097	1940 Ford Pickup Truck	Trucks and Buses	1:18	
S18_1129	1993 Mazda RX-7	Classic Cars	1:18	
S18_1342	1937 Lincoln Berline	Vintage Cars	1:18	
S18_1367	1936 Mercedes-Benz 500K Special Roadster	Vintage Cars	1:18	
S18_1589	1965 Aston Martin DB5	Classic Cars	1:18	
S18_1662	1980s Black Hawk Helicopter	Planes	1:18	

Load Transform Data Cancel

I utilize the "Transform Data" feature to delve deeper into the data, gaining a more comprehensive understanding of its content and structure. This allows me to review and potentially modify the data format for better analysis.

Queries [8]

classicmodels.customers

classicmodels.employees

classicmodels.offices

classicmodels.orderdetails

classicmodels.orders

classicmodels.payments

classicmodels.productlines

classicmodels.products

fx = Source[[Schema="classicmodels",Item="customers"]][Data]

	customerNumber	customerName	contactLastName	contactFirstName	addressLine1
1	103	Atelier graphique	Schmitt	Carine	54, rue Royale
2	112	Signal Gift Stores	King	Jean	8489 Strong St.
3	114	Australian Collectors, Co.	Ferguson	Peter	636 St Kilda Road
4	119	La Rochelle Gifts	Labruno	Janine	67, rue des Cinquante Otages
5	121	Baane Mini Imports	Bergulfsen	Jonas	Erling Skakkes gate 78
6	124	Mini Gifts Distributors Ltd.	Nelson	Susan	5677 Strong St.
7	125	Havel & Zbyszek Co.	Piestrzeniewicz	Zbyszek	ul. Filtrawa 68
8	128	Blauer See Auto, Co.	Keitel	Roland	Lyonerstr. 34
9	129	Mini Wheels Co.	Murphy	Julie	5557 North Pendale Street
10	131	Land of Toys Inc.	Lee	Kwai	897 Long Airport Avenue
11	141	Euro's Shopping Channel	Freyre	Diego	C/ Moralezal, 86

Query Settings

NAME

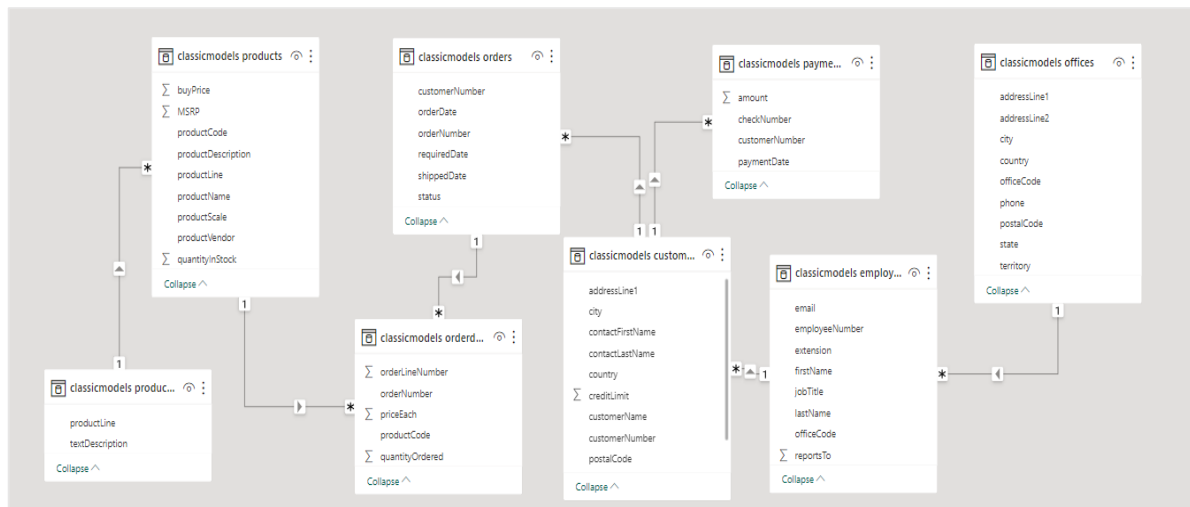
classicmodels.customers

APPLIED STEPS

Source

Navigation

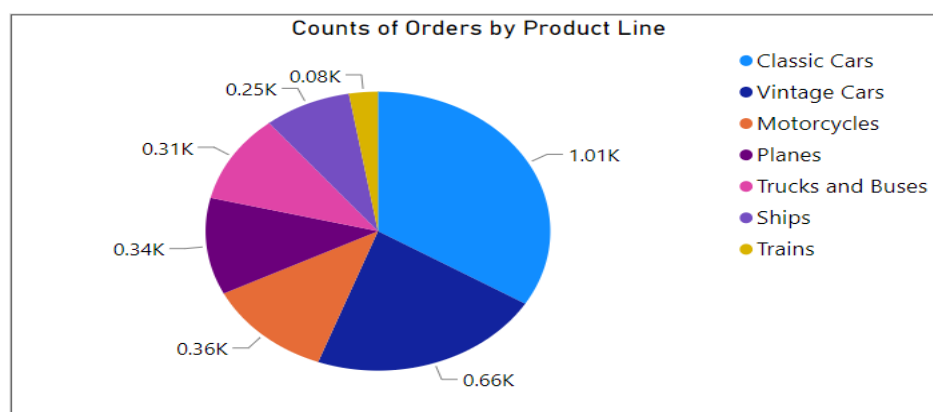
Using Power BI's data modeling tools to take a closer look at how different tables in your dataset are connected and making any necessary adjustments to those connections for better analysis.



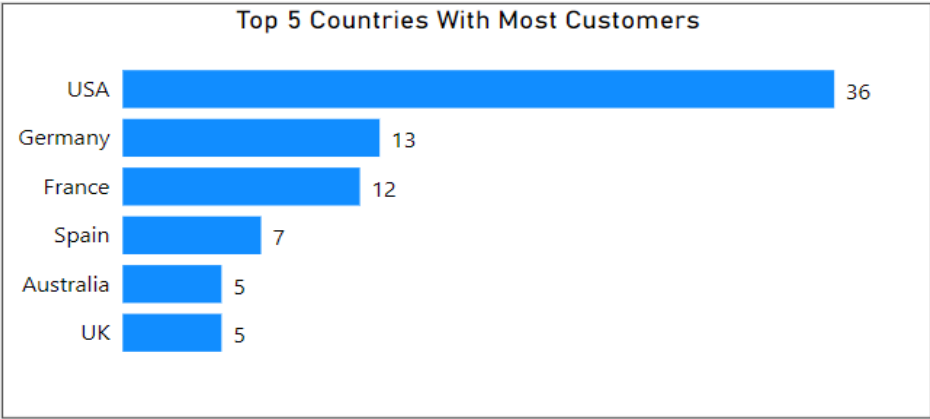
• Designing Dashboards

I am selecting the most fitting data visualizations, such as bar charts, line charts, and pie charts, according to the characteristics of the data I am working with and the specific insights I intend to convey. These visuals serve as powerful tools to help me effectively communicate the information and insights I want to share.

I am using a pie chart to show how many orders are in each product category. This chart makes it easy to see which product categories have more or fewer orders.

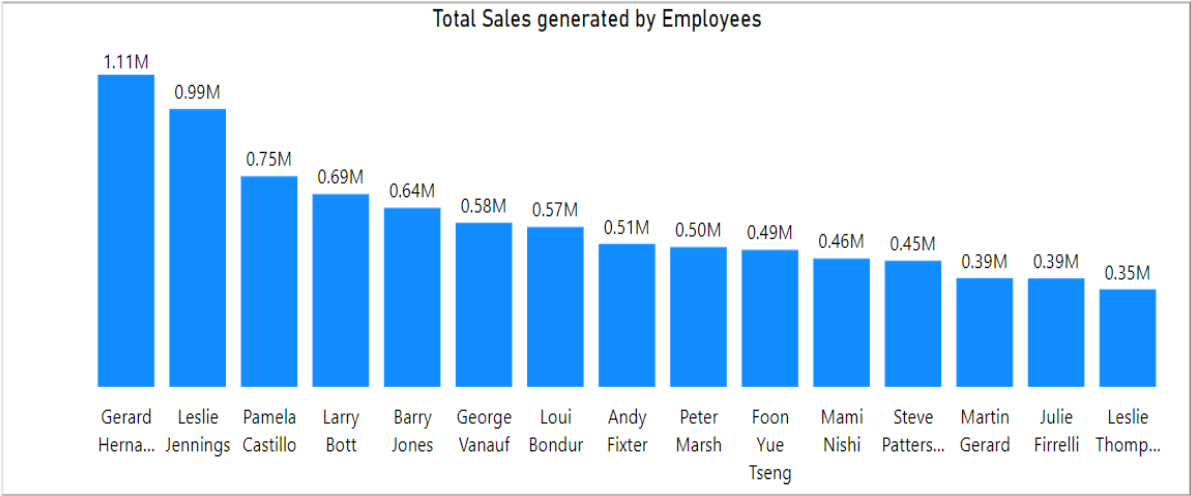


I am setting up a Horizontal bar chart to display the countries with the highest number of customers. To keep it concise and show only the top 5 countries, I'm using the "TOP N" filter option from the Filter section. This way, I can quickly identify and display the countries that have the most customers in my dataset.



For my next chart, I'm utilizing a DAX query to create a new column that will display the full names of employees. This additional column will provide a more informative and readable representation of employee names in my visualizations.

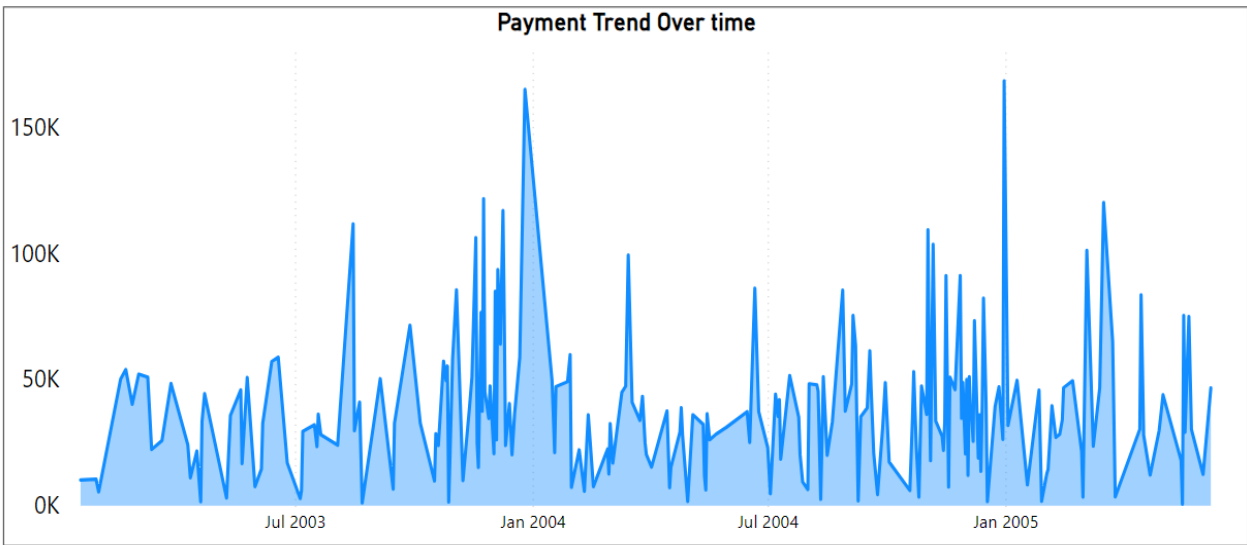
```
Full Name = 'classicmodels employees'[firstName] & " " & 'classicmodels employees'[lastName]
```



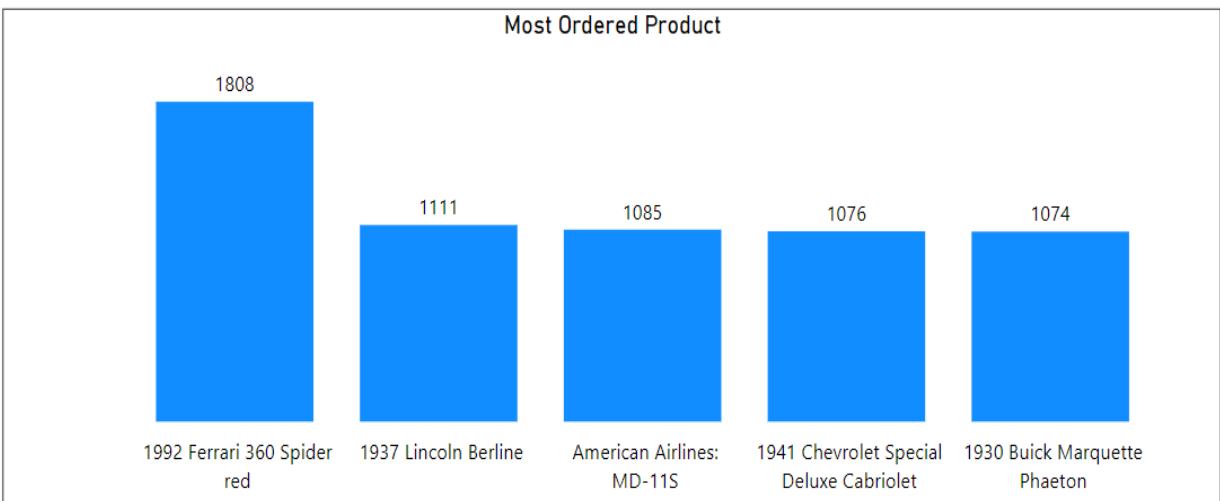
I am achieving my desired outcome by creating new measures to generate informative cards or visuals. These measures allow me to display specific calculated values or insights that are important for my analysis, enhancing the overall understanding of my data.



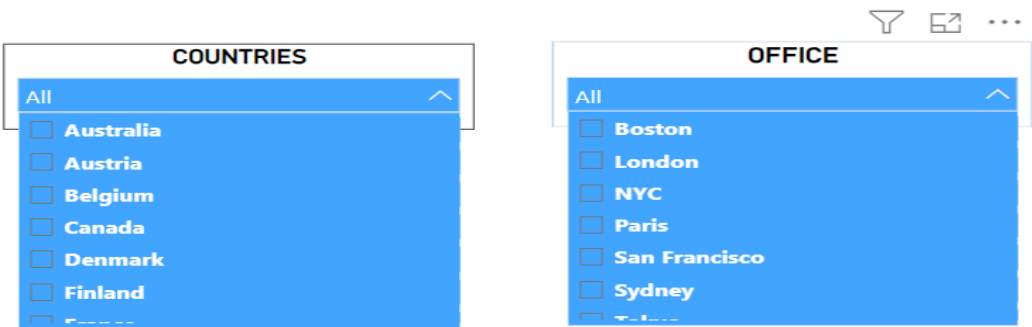
Analyzing the trends in payment behaviour and patterns over a specific time.



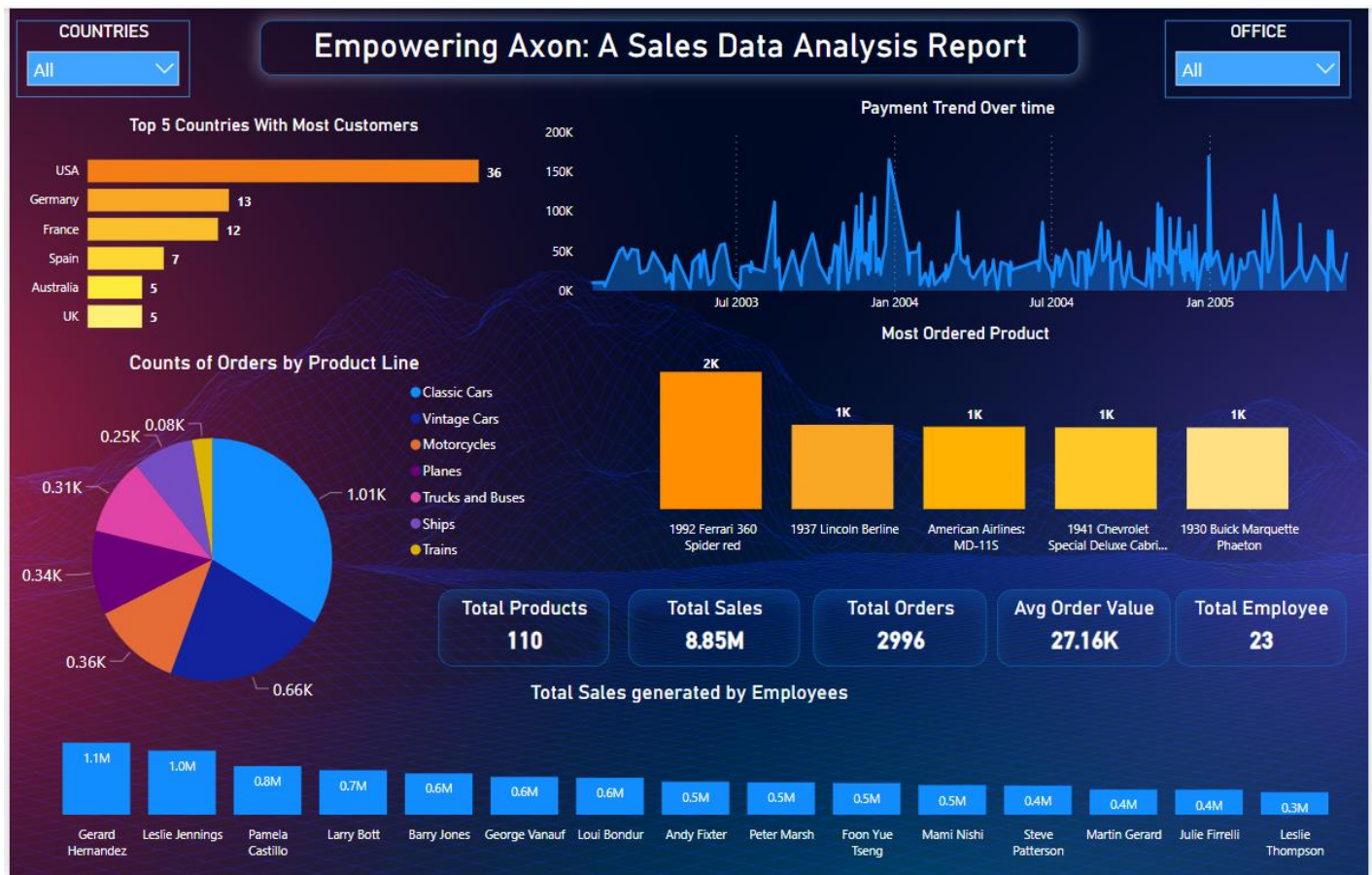
Constructing a bar chart as a visual tool to comprehensively assess and identify the most frequently purchased or commonly ordered products in the dataset or context of analysis.



By utilizing slicers, we can obtain the specific results we want from our data.



Through thorough data analysis, I have constructed the following dashboard.



For More Details:

Click on: [GitHub](#)

"I would like to express my gratitude to Odin School for providing me with the opportunity to work on this project. This experience has been invaluable in enhancing my skills and knowledge in data analytics. Thank you for your guidance and support throughout the project."

[Akash Katad](#)