DOCUMENTATION ON: Auto Sales Data

Domain: Data Engineering

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Dashboard Page 1: Overview Page

KPI / Measure	Description	DAX Formula	Visualization Used	Why This Chart is Effective
Average Sale Price	Average price of a unit sold	`AVERAGE(Sales[UnitPrice])`	Card	Cards show single value KPIs clearly and grab attention.
Total Sales	Sum of all sales revenue	`SUM(Sales[SalesAmount])`	Card	Summarizes performance instantly.
Total Orders	Total number of orders placed	`COUNT(Sales[OrderID])`	Card	Emphasizes order volume directly.
Sales Per Product	Revenue per product	`DIVIDE([Total Sales], DISTINCTCOUNT(Sales[ProductCode]))`	Card	Measures average revenue per product sold.
Total Quantity Sold	Total number of units sold	`SUM(Sales[Quantity])`	Card	Shows volume of product movement.
Total Sales by Country	Total sales by country	`SUM(Sales[SalesAmount])` by `Country`	Column Chart	Displays top-performing countries.
Max/Min Value by Product Line	Range of values in each product line	`MAX()`, `MIN()` for each product line	Table	Compares pricing spread in each category.
Count of Shop by Product Line	Shop distribution by product line	`COUNT(Sales[ShopName])` by `ProductLine`	Pie Chart	Understands shop distribution across product lines.

YoY Sales Growth by Quarter	Year-over-year growth across quarters	YOY = ... using SAMEPERIODLASTYEAR()	Line Chart	Tracks sales growth quarterly.

Dashboard Page 2: Detailed Insights Page

KPI / Measure	Description	DAX Formula	Visualization Used	Why This Chart is Effective
Top Shops by Quantity	Highest quantity sold by shops	RANKX() over SUM(Sales[Quantity])	Text Box	Highlights high-performing shops clearly.
Bottom Shops by Quantity	Lowest quantity sold by shops	RANKX() over SUM(Sales[Quantity]), reversed	Text Box	Flags underperforming shops.
Day with Most Sales	Day with highest total sales	MAXX(SUMMARIZE(...))	Text Box	Identifies best-performing day.
Day with Less Sales	Day with lowest total sales	MINX(SUMMARIZE(...))	Text Box	Pinpoints the lowest traffic day.
Total Quantity by Product Code	Quantity sold per product code	SUM(Sales[Quantity]) by ProductCode	Column Chart	Reveals product-level contribution.
Total Sales by Product Line	Revenue grouped by product line	SUM(Sales[SalesAmount]) by ProductLine	Donut Chart	Compares category performance visually.
City-wise Sales	Sales by city (spatial data)	SUM(Sales[SalesAmount]) by City	Map	Excellent for geographic insights.

Dashboard Page 3: Report Filtered (Interactive Analysis)

KPI / Measure	Description	DAX Formula	Visualization Used	Why This Chart is Effective
Average Order Value	Revenue per order	[Total Sales] / [Total Orders]	Card	Shows value generated per transaction.
Country, Month, Year Filters	Filter dashboard views dynamically	Built-in slicers	Slicers	Enables dynamic data slicing.
Total Quantity by Year	Annual sales quantity trend	SUM(Sales[Quantity]) by Year	Line/Bar Chart	Highlights yearly product movement.
Total Orders by Day	Weekly ordering trend	COUNT(Sales[OrderID]) by Day Name	Bar Chart	Shows popular days for transactions.
Sales vs Expected	Actual vs projected revenue	Target entered manually or with DAX logic	Gauge Chart	Assesses success against target visually.
Sales by Shop Name	Shop-wise revenue contribution	SUM(Sales[SalesAmount]) by ShopName	Pie Chart	Quickly identifies top-contributing shops.

Auto Sales Dashboard Measures

Measure Name	DAX Formula	Description
Average Sale Price	AVERAGE(Sales[UnitPrice])	Calculates the average unit price of all products sold.
Total Sales	SUM(Sales[SalesAmount])	Calculates total revenue generated.
Total Orders	COUNT(Sales[OrderID])	Counts the total number of orders placed.
Average Order Value	DIVIDE([Total Sales], [Total Orders])	Revenue generated per order.
Sales Per Product	DIVIDE([Total Sales], DISTINCTCOUNT(Sales[ProductCode]))	Calculates average revenue per product.
Total Quantity Sold	SUM(Sales[Quantity])	Total number of units sold.
Total Customers	DISTINCTCOUNT(Sales[CustomerID])	Counts total unique customers.
Max Value	MAX(Sales[SalesAmount]) (or MAXX over groups for ProductLine)	Maximum sales value across product lines.
Min Value	MIN(Sales[SalesAmount]) (or MINX over groups for ProductLine)	Minimum sales value across product lines.
Expected Sales	Manual entry or DAX calculated value (e.g. from forecast table)	Target sales used in comparison charts.
MoM (Month-over-Month)	DIVIDE([Current Month Sales] - [Previous Month Sales], [Previous Month Sales])	Calculates monthly growth percentage.
YoY (Year-over-Year)	DIVIDE([Total Sales] - CALCULATE([Total Sales], SAMEPERIODLASTYEAR(Date[Date])), CALCULATE([Total Sales], SAMEPERIODLASTYEAR(Date[Date])))	Compares current year's sales to previous year.

Car Sold Per Cust	DIVIDE([Total Quantity Sold], [Total Customers])	Average number of cars sold per customer.
Quantity by Product Code	SUM(Sales[Quantity]) grouped by ProductCode	Quantity sold per product SKU.
Sales by Product Line	SUM(Sales[SalesAmount]) grouped by ProductLine	Revenue per product category.
Orders by Day Name	COUNT(Sales[OrderID]) grouped by WEEKDAY or DayName	Orders distribution by day of week.
Top N Shops by Quantity	RANKX(ALL(Sales[ShopName]), [Total Quantity Sold], , DESC)	Returns rank of shop based on total quantity sold.
Bottom N Shops by Quantity	Same as above with ascending sort (ASC)	Identifies underperforming shops.
Sales vs Expected	Gauge showing Actual: [Total Sales], Target: [Expected Sales]	Used in performance gauges.