Power BI Modular Data Model Report
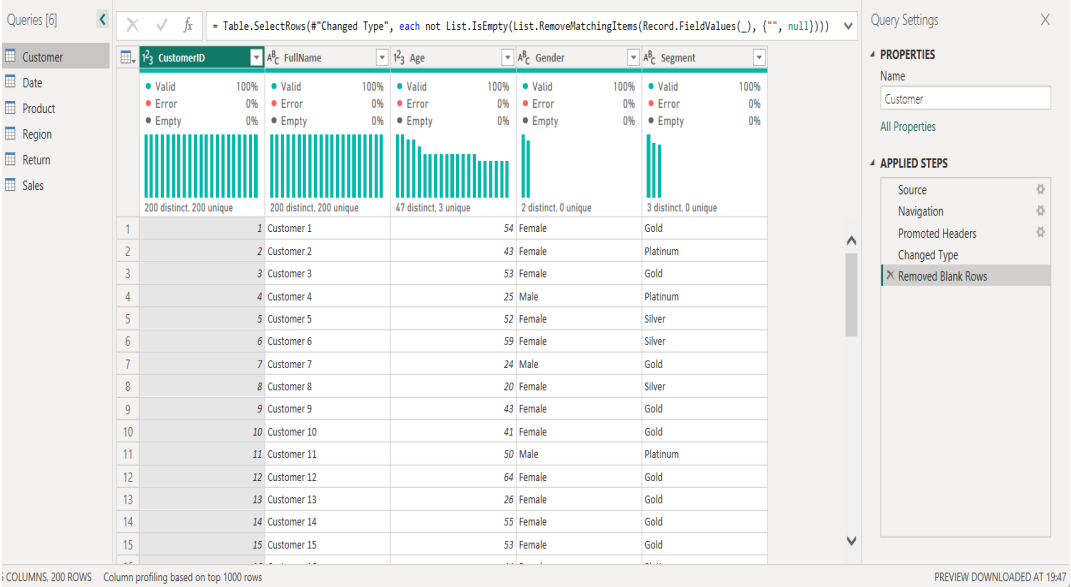
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Course: BCA / Data Analytics & AI■ML
Tool: Power BI

Customer Table

The Customer table acts as a dimension table containing customer■related details such as CustomerID, Full Name, Age, Gender, and Segment. This table is cleaned using Power Query by removing blank rows and correcting data types. It helps analyze sales based on customer demographics.

Date Table

The Date table is a time dimension table that enables time-based analysis. It includes DateKey, Date, Month, Quarter, Year, and Fiscal Year. This table allows filtering and comparison of sales data across different periods.
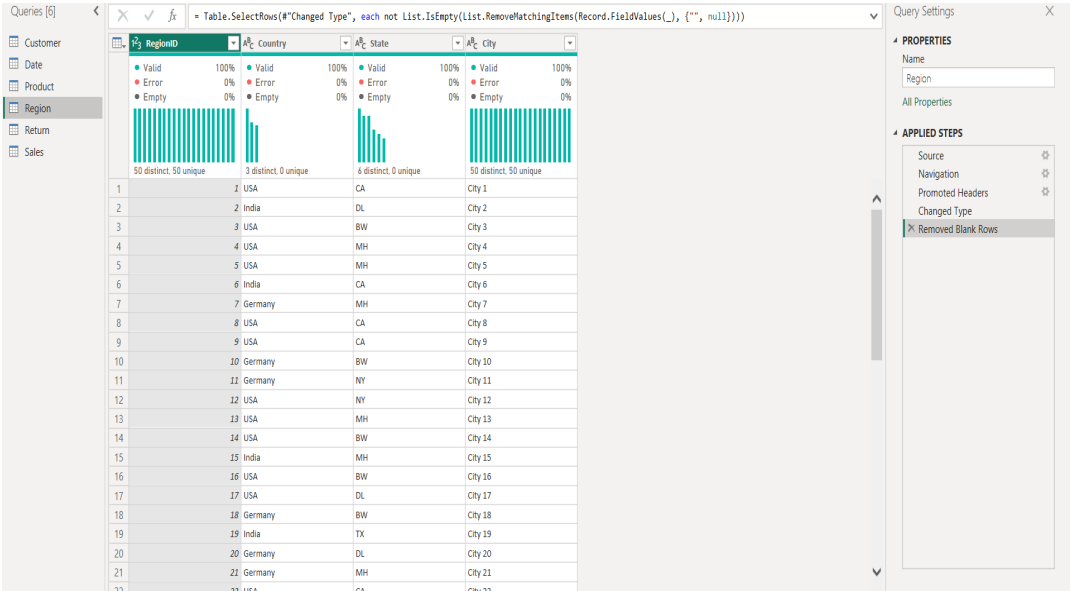
Product Table

The Product table stores product master data such as ProductID, Product Name, Category, Subcategory, and Brand. It enables product■wise and category■wise sales analysis.

Queries [6]

- Customer
- Date
- Product
- Region
- Return
- Sales

`= Table.SelectRows(#"Changed Type", each not List.IsEmpty(List.RemoveMatchingItems(Record.FieldValues(_), {"", null})))`

	ProductID	ProductName	Category	Subcategory	Brand
Valid	100%	100%	100%	100%	100%
Error	0%	0%	0%	0%	0%
Empty	0%	0%	0%	0%	0%
	100 distinct, 100 unique	100 distinct, 100 unique	3 distinct, 0 unique	6 distinct, 0 unique	3 distinct, 0 unique
1	1	Product 1	Furniture	Shirt	Brand C
2	2	Product 2	Furniture	Mobile	Brand C
3	3	Product 3	Electronics	Jeans	Brand B
4	4	Product 4	Electronics	Sofa	Brand A
5	5	Product 5	Clothing	Mobile	Brand C
6	6	Product 6	Clothing	Laptop	Brand C
7	7	Product 7	Furniture	Table	Brand B
8	8	Product 8	Electronics	Table	Brand A
9	9	Product 9	Furniture	Laptop	Brand C
10	10	Product 10	Furniture	Sofa	Brand B
11	11	Product 11	Electronics	Laptop	Brand A
12	12	Product 12	Clothing	Table	Brand A
13	13	Product 13	Clothing	Mobile	Brand A
14	14	Product 14	Electronics	Jeans	Brand C
15	15	Product 15	Clothing	Mobile	Brand B

Query Settings

▲ PROPERTIES

Name

Product

All Properties

▲ APPLIED STEPS

Source

Navigation

Promoted Headers

Changed Type

✕ Removed Blank Rows

5 COLUMNS, 100 ROWS   Column profiling based on top 1000 rows
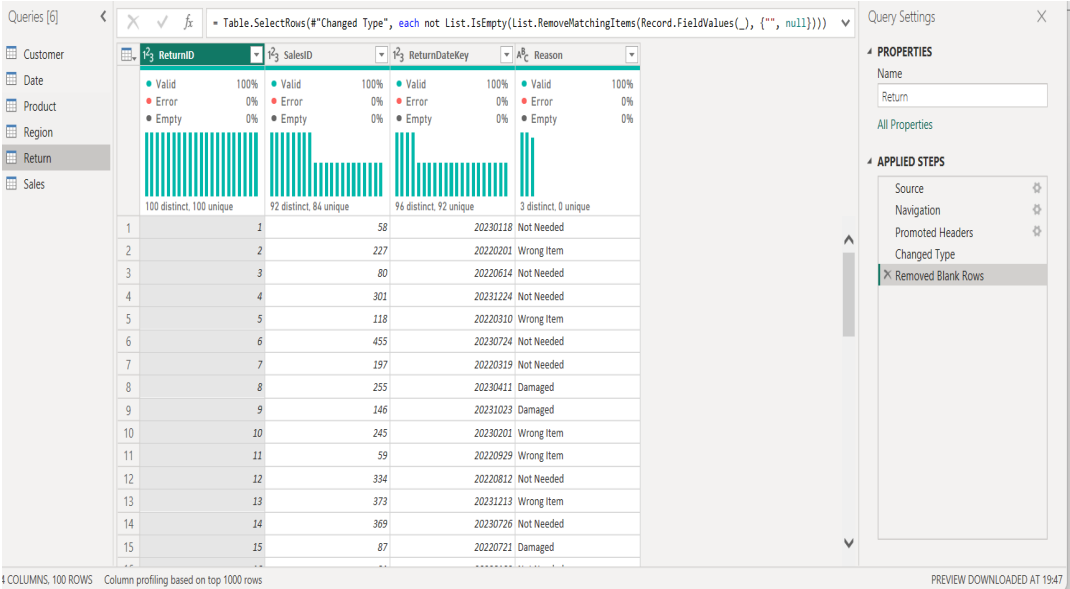
PREVIEW DOWNLOADED AT 19:47

Region Table

The Region table contains geographical information including RegionID, Country, State, and City.
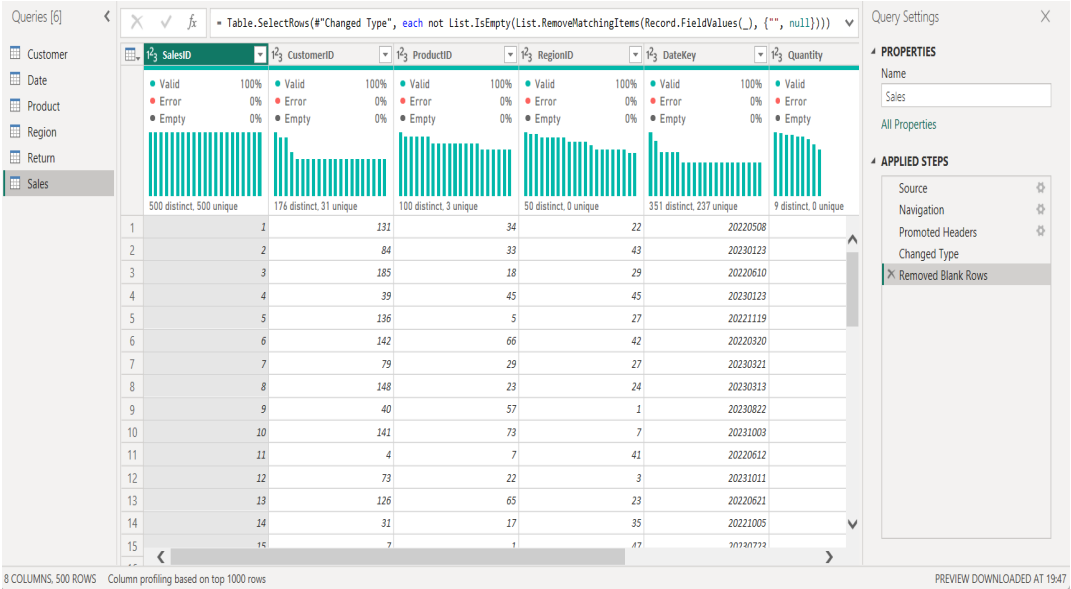This table supports region■wise sales performance and geographic comparison.

Return Table

The Return table records returned sales transactions along with reasons such as Wrong Item, Damaged, or Not Needed. It helps analyze return patterns and customer behavior.
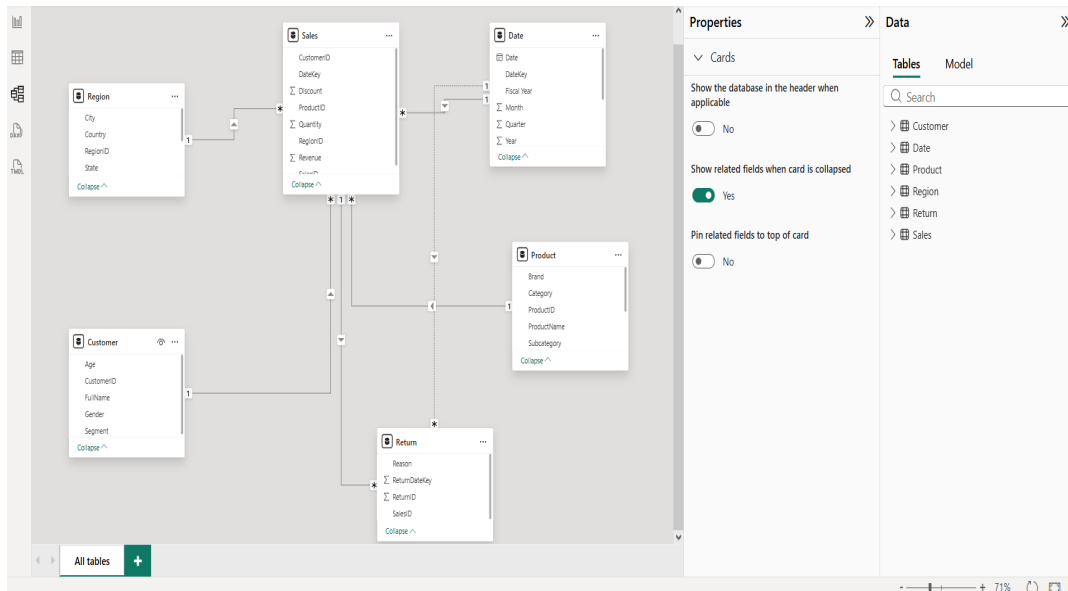
Sales Table

The Sales table is the central fact table containing SalesID, CustomerID, ProductID, RegionID, DateKey, and Quantity. It connects with all dimension tables and forms the foundation for analysis.

Data Model (Star Schema)

The data model follows a star schema design where the Sales table acts as the fact table connected to Customer, Date, Product, Region, and Return tables. This structure improves performance and simplifies reporting.

Dashboard & Insights

The final dashboard presents key insights such as total revenue, sales by category, country■wise performance, customer segment analysis, and return trends. These visuals help in quick decision■making.