Power BI Report: Sales, Employees & Global Population Analysis

1. Project Overview

This project demonstrates end■to■end data analysis using **Power BI** and **Power Query**, covering data extraction, cleaning, transformation, modeling, and insights generation. Multiple Excel datasets were used and uploaded to **GitHub** for version control and transparency.

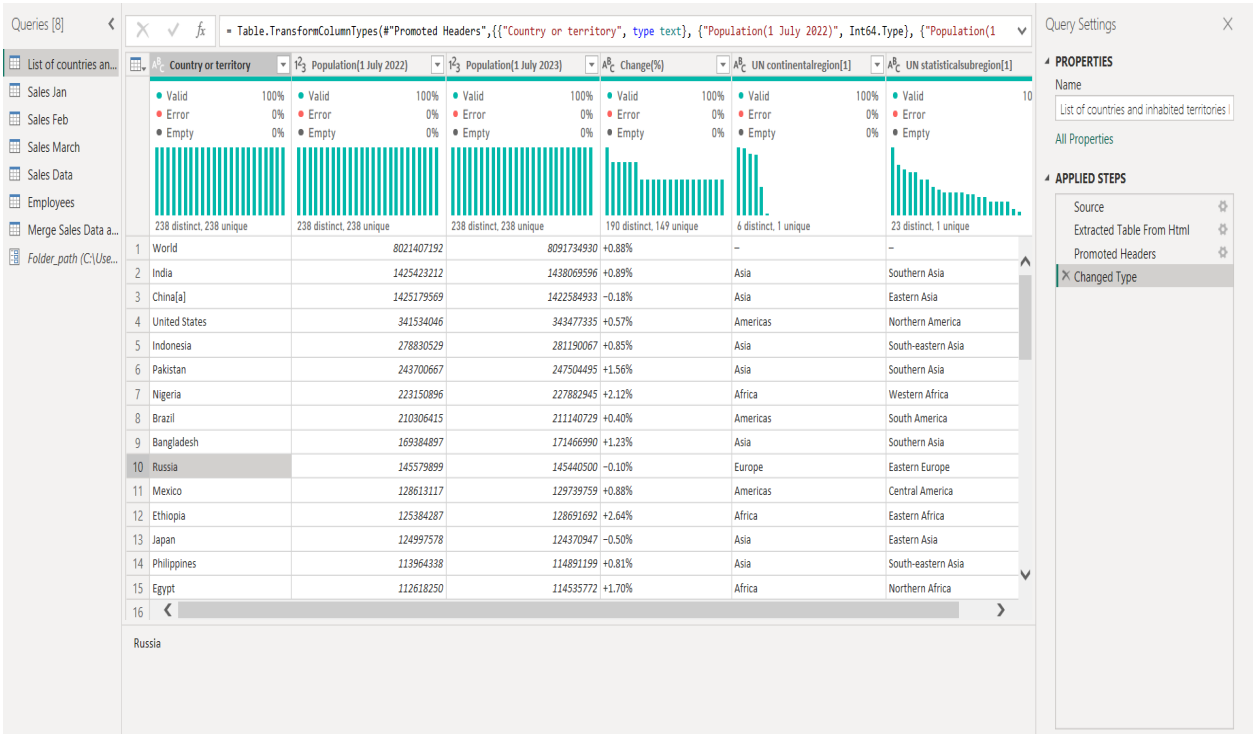
2. Data Sources (Excel – GitHub)

- Sales Jan, Sales Feb, Sales March – Monthly sales transaction data
- Sales Data (Combined) – Cleaned and transformed sales dataset
- Employees – Employee master data
- List of Countries and Inhabited Territories – Global population dataset
- Folder Path Parameter – Dynamic folder-based data loading

3. Data Transformation (Power Query)

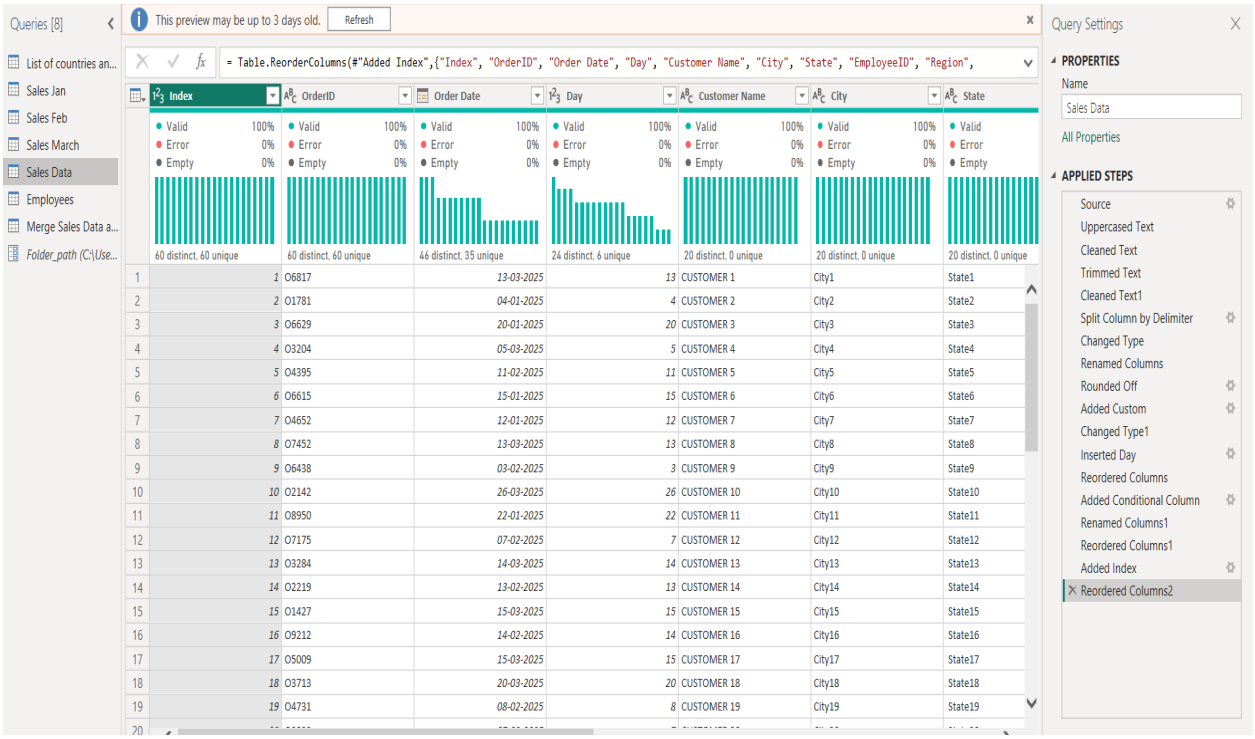
3.1 Global Population Dataset

- Extracted data from HTML table
- Promoted headers
- Changed data types (Text, Whole Number, Percentage)



3.2 Sales Data

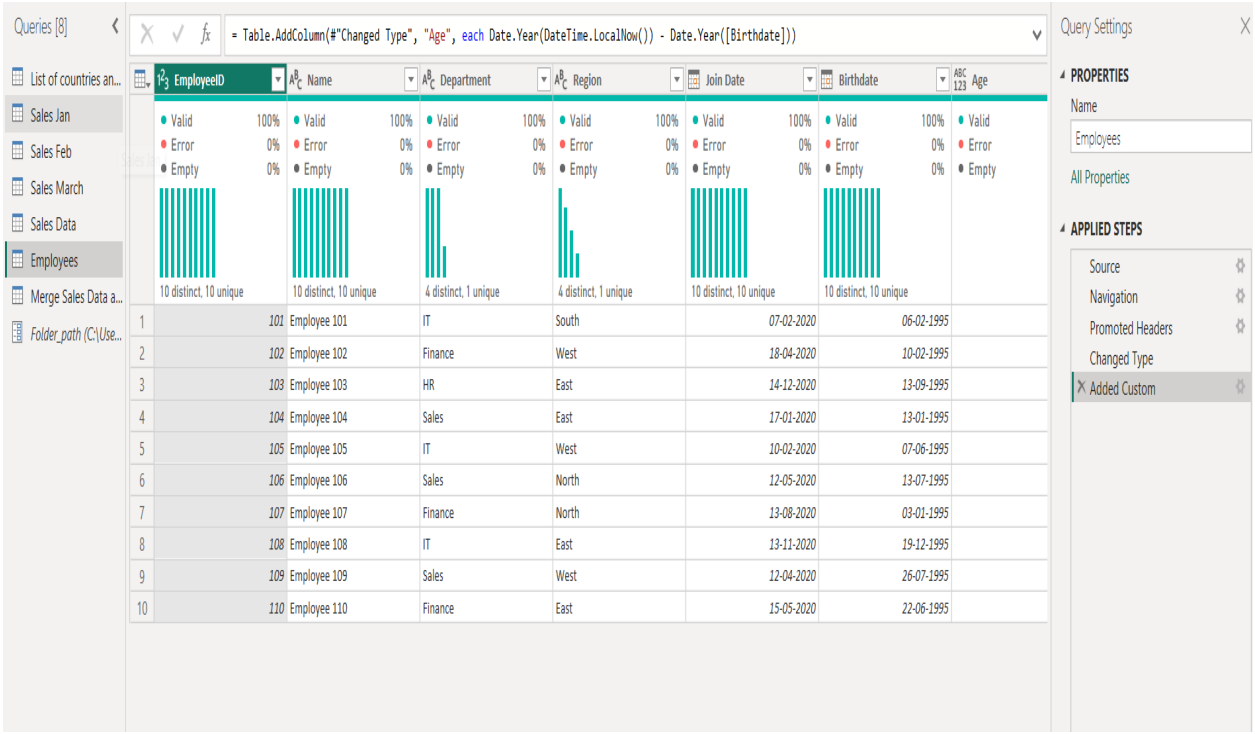
- Cleaned text (Trim, Clean, Uppercase)
- Split columns using delimiters
- Renamed and reordered columns
- Converted Order Date to Day column
- Added conditional columns and Index column



	Index	OrderID	Order Date	Day	Customer Name	City	State
	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid 100% Error 0% Empty 0%	Valid Error Empty
	60 distinct, 60 unique	60 distinct, 60 unique	46 distinct, 35 unique	24 distinct, 6 unique	20 distinct, 0 unique	20 distinct, 0 unique	20 distinct, 0 unique
1	1	O6817	13-03-2025	13	CUSTOMER 1	City1	State1
2	2	O1781	04-01-2025	4	CUSTOMER 2	City2	State2
3	3	O6629	20-01-2025	20	CUSTOMER 3	City3	State3
4	4	O3204	05-03-2025	5	CUSTOMER 4	City4	State4
5	5	O4395	11-02-2025	11	CUSTOMER 5	City5	State5
6	6	O6615	15-01-2025	15	CUSTOMER 6	City6	State6
7	7	O4652	12-01-2025	12	CUSTOMER 7	City7	State7
8	8	O7452	13-03-2025	13	CUSTOMER 8	City8	State8
9	9	O6438	03-02-2025	3	CUSTOMER 9	City9	State9
10	10	O2142	26-03-2025	26	CUSTOMER 10	City10	State10
11	11	O8950	22-01-2025	22	CUSTOMER 11	City11	State11
12	12	O7175	07-02-2025	7	CUSTOMER 12	City12	State12
13	13	O3284	14-03-2025	14	CUSTOMER 13	City13	State13
14	14	O2219	13-02-2025	13	CUSTOMER 14	City14	State14
15	15	O1427	15-03-2025	15	CUSTOMER 15	City15	State15
16	16	O9212	14-02-2025	14	CUSTOMER 16	City16	State16
17	17	O5009	15-03-2025	15	CUSTOMER 17	City17	State17
18	18	O3713	20-03-2025	20	CUSTOMER 18	City18	State18
19	19	O4731	08-02-2025	8	CUSTOMER 19	City19	State19

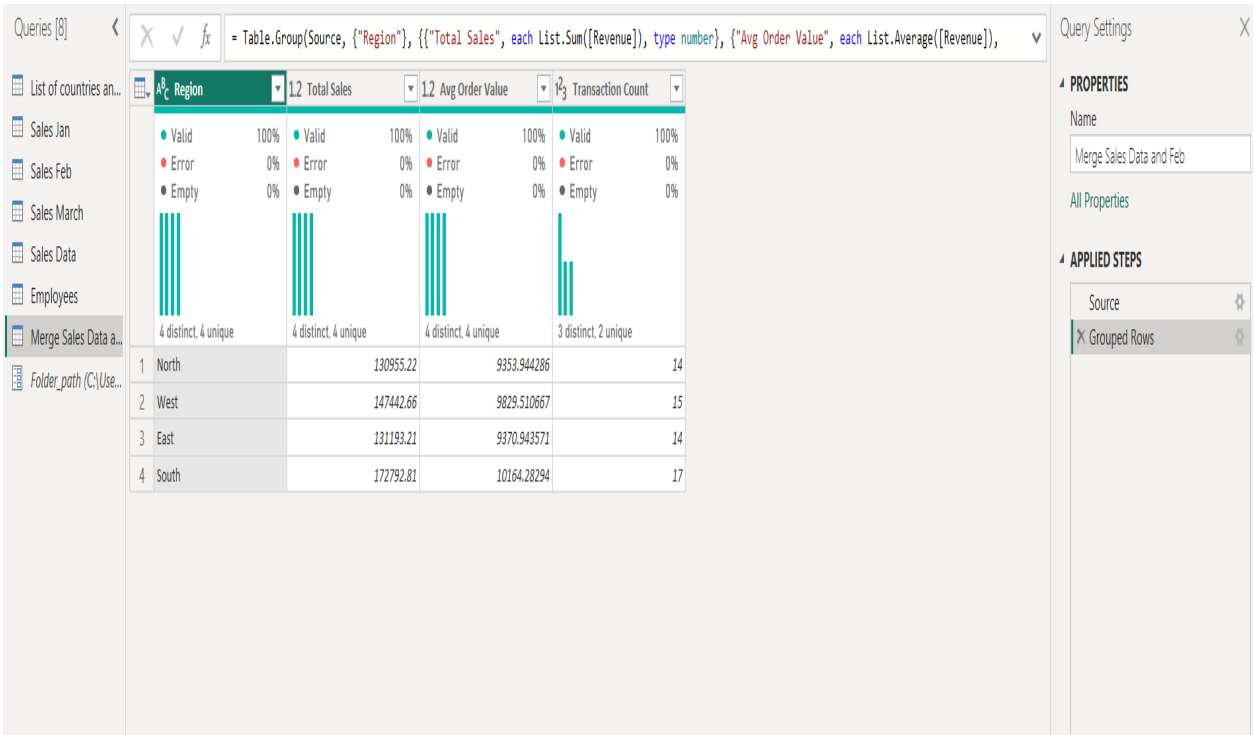
3.3 Employees Dataset

- Promoted headers and changed data types
- Added Age column using formula: Age = Current Year – Birth Year

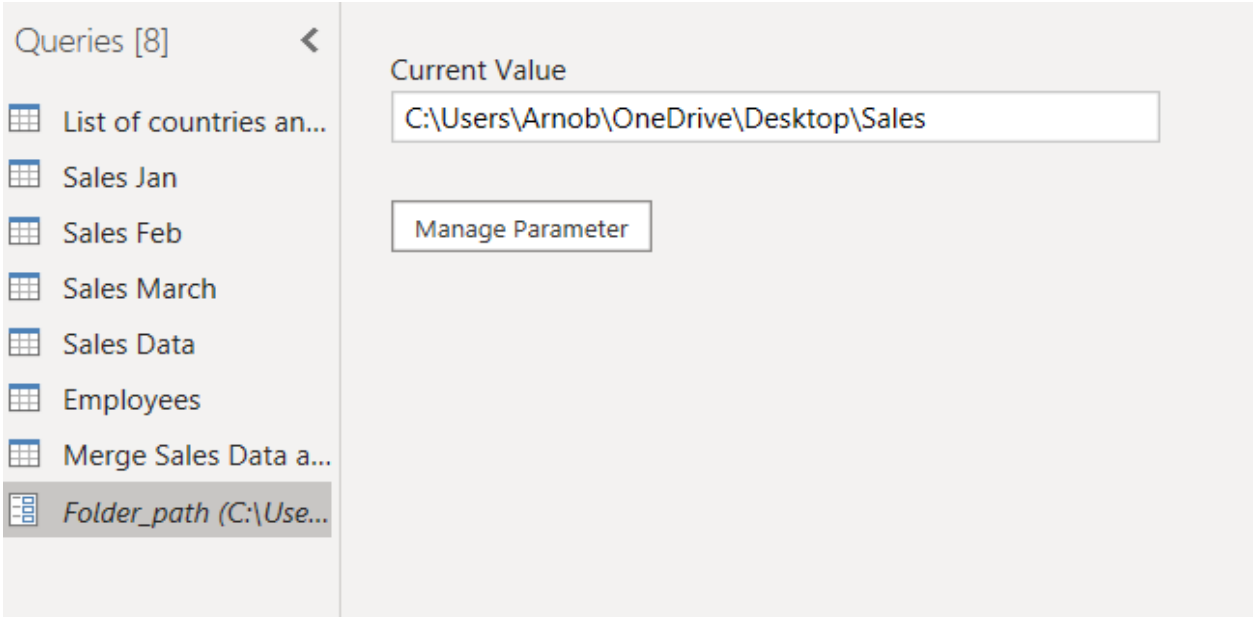


3.4 Merge & Aggregation

- Merged monthly sales datasets
- Grouped data by Region
- Calculated Total Sales, Average Order Value, and Transaction Count



Folder Path Parameter


Queries [8]
List of countries an...
Sales Jan
Sales Feb
Sales March
Sales Data
Employees
Merge Sales Data a...
Folder_path (C:\Use...
Current Value
C:\Users\Arnob\OneDrive\Desktop\Sales
Manage Parameter

4. Data Modeling

Region was used as a common key across Sales and Employees, forming a clean star-like structure suitable for dashboard visualization.

5. Key Insights

• South Region has the highest total sales
• West Region shows strong average order value
• North & East regions show stable transaction counts

6. Tools & Technologies Used

• Power BI Desktop
• Power Query (M Language)
• Microsoft Excel
• GitHub

7. Conclusion

This project showcases practical Power BI skills including data cleaning, transformation, merging, parameter usage, and aggregation. The project is fully reproducible using GitHub-hosted datasets.

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Tool: Power BI