

Sales Data Analysis Project

Overview

This project simulates a real-world task of a Data Analyst. The goal was to analyze sales data from multiple branches and generate useful business insights using Excel, SQL, and Tableau.

Tools Used

- Microsoft Excel
- MySQL
- Tableau

Project Goals

- Clean and prepare raw sales data
- Calculate total sales per branch
- Visualize sales performance using interactive charts

Step-by-Step Process

1. Data Cleaning (Excel):

- Removed duplicates and empty row
- Added a new column to calculate Total Sales using $\text{Quantity} \times \text{Unit Price}$
- Ensured date formatting was consistent for reporting

2. Data Analysis (SQL):

- Created a table in MySQL named sales_data
- Inserted sample sales records
- Wrote queries to calculate total sales per branch and per product
- Used GROUP BY, SUM(), and filtering with WHERE

3. Data Visualization (Tableau):

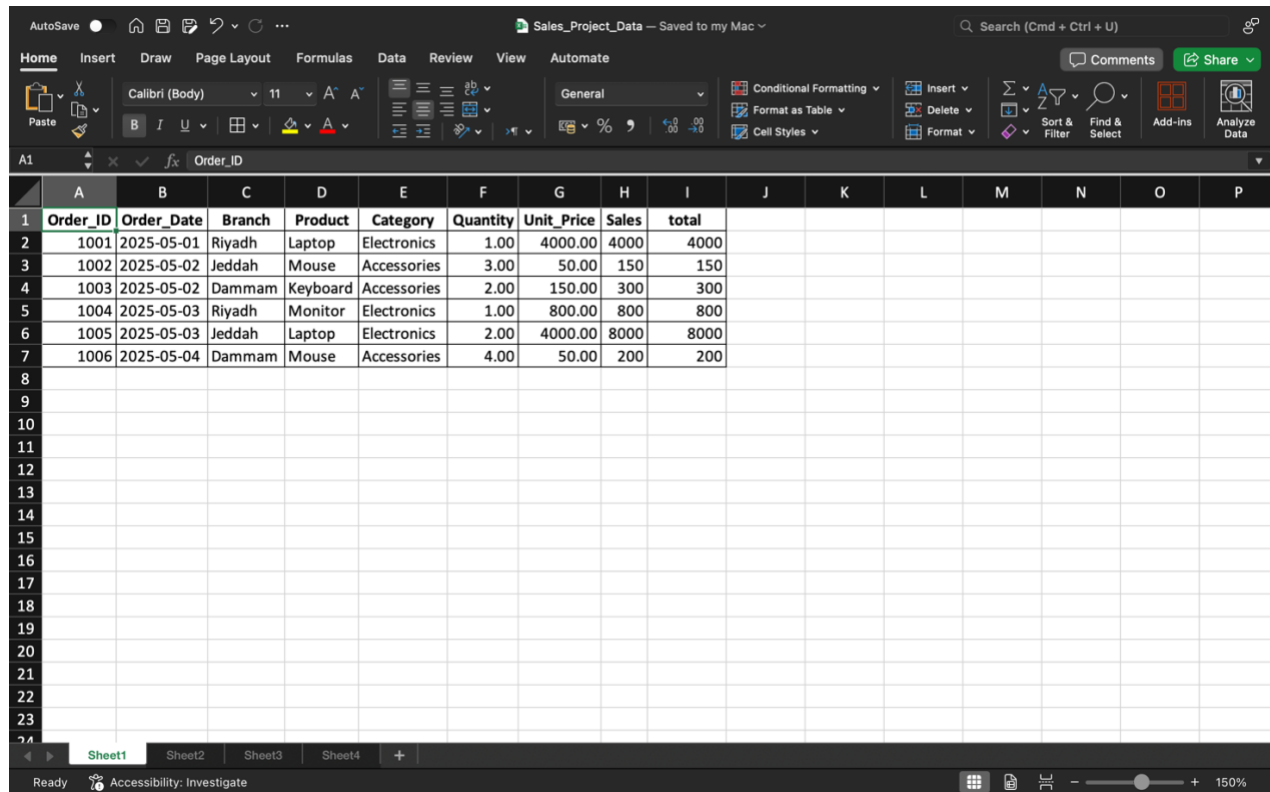
- Connected Tableau to the cleaned Excel file
- Built bar charts showing total sales per branch
- Added labels and filters for better insights

Key Insights

- Riyadh branch had the highest total sales
- Apple was the best-selling product
- Sales peaked in early May

Excel Data Preparation And Analysis

-Excel (Sheet 1- Raw Data:)



The screenshot displays the Microsoft Excel interface with the following data in Sheet1:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Order_ID	Order_Date	Branch	Product	Category	Quantity	Unit_Price	Sales	total							
2	1001	2025-05-01	Riyadh	Laptop	Electronics	1.00	4000.00	4000	4000							
3	1002	2025-05-02	Jeddah	Mouse	Accessories	3.00	50.00	150	150							
4	1003	2025-05-02	Dammam	Keyboard	Accessories	2.00	150.00	300	300							
5	1004	2025-05-03	Riyadh	Monitor	Electronics	1.00	800.00	800	800							
6	1005	2025-05-03	Jeddah	Laptop	Electronics	2.00	4000.00	8000	8000							
7	1006	2025-05-04	Dammam	Mouse	Accessories	4.00	50.00	200	200							
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“This is the original raw data before any processing.”

-Excel (Sheet 2 - Total Sales by Branch:)

The screenshot displays the Microsoft Excel interface with a PivotTable on Sheet2. The PivotTable summarizes sales data by branch. The 'PivotTable Fields' task pane on the right shows 'Branch' assigned to the Rows area and 'Sum of Sales' assigned to the Values area. The data is as follows:

Branch	Sum of Sales
Dammam	500
Jeddah	8150
Riyadh	4800
Grand Total	13450

“ I created a Pivot Table to analyze total sales per branch. “

-Excel (Sheet 3 – Order Count by Product :)

The screenshot shows an Excel spreadsheet with a PivotTable. The PivotTable is located in the range B3:B8. The data is as follows:

Row Labels	Count of Order_ID
Keyboard	1
Laptop	2
Monitor	1
Mouse	2
Grand Total	6

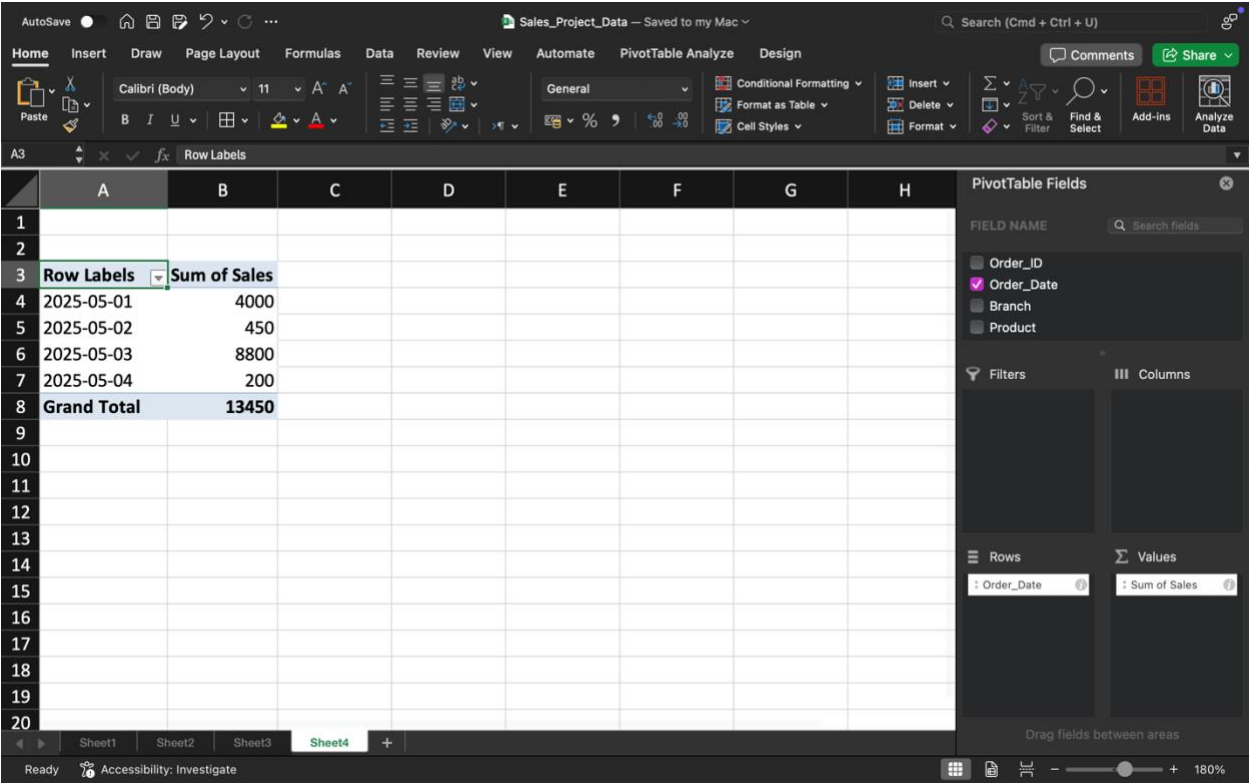
The PivotTable Fields task pane is open on the right side of the screen. It shows the following configuration:

- Field Name:** Search fields
- Fields:** Order_ID, Order_Date, Branch, Product
- Filters:** (Empty)
- Columns:** (Empty)
- Rows:** Product
- Values:** Count of Order_ID

The status bar at the bottom indicates the sheet is 'Sheet3' and the zoom level is 160%.

“ In this sheet, I analyzed how many times each product was ordered. ”

-Excel (Sheet 4 – Daily Sales Analysis:)



“ A Pivot Table was used to analyze sales based on date. “

Using SQL To Analyze Sales Performance

The screenshot displays a SQL IDE interface with a dark theme. The left sidebar shows a schema tree with 'company' as the selected schema, containing 'sale_project' and 'sys'. The main editor shows a SQL query with two parts: an insert statement and a select statement. The insert statement populates the 'sales_data' table with six records. The select statement calculates the total sales for each branch. The 'Result Grid' at the bottom shows the output of the query, which is limited to 1000 rows. The action output at the bottom indicates that the query was completed successfully, returning 3 rows.

```
1 use sale_project ;
2 insert into sales_data (order_id, product, branch, quantity, unit_price, sales, order_date)
3 values (1001,'apple','riyadh',2,10.00,20.00,'2024-05-01'),(1002,'apple','riyadh',3,10.00,30.00,'2024-05-01'),
4 (1003,'orange','jeddah',1,15.00,15.00,'2024-05-02'),(1004,'banana','riyadh',4,5.00,20.00,'2024-05-02'),
5 (1005,'apple','jeddah',1,10.00,10.00,'2024-05-03'),(1006,'banana','dammam',2,5.00,10.00,'2024-05-03');
6 select
7 branch,
8 sum(sales) as total_sales
9 from
10 sales_data
11 group by
12 branch;
```

branch	total_sales
riyadh	210.00
jeddah	75.00
dammam	30.00

Result 1

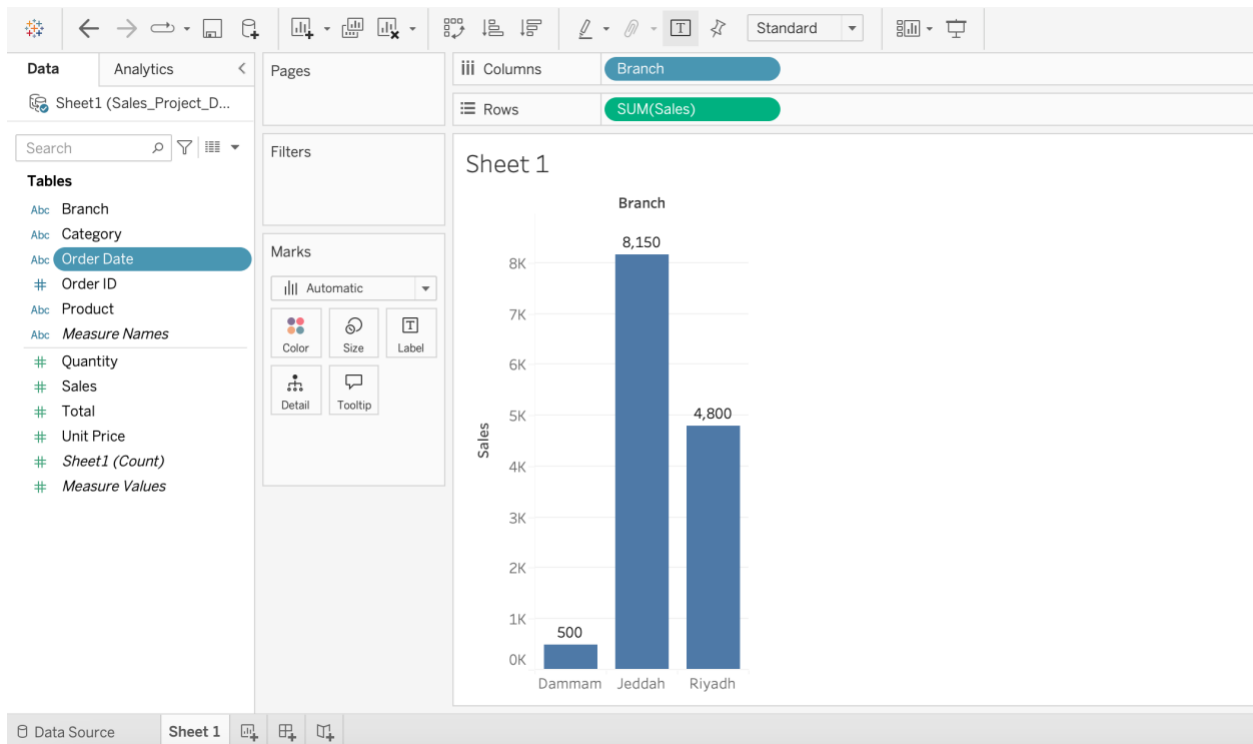
Action Output

Time	Action	Response	Duration / Fetch Time
01:29:34	select branch, sum(sales) as total_sales from sales_data group by branch LIMIT 0, 1000	3 row(s) returned	0.0012 sec / 0.00001...

Query Completed

“ This screenshot shows my end-to-end SQL process: I inserted sales records into the sales_data table, then wrote queries using SELECT, GROUP BY, SUM(), and COUNT() to analyze total sales per branch, number of orders per product, and daily sales performance. The results at the bottom demonstrate how I used SQL to extract key business insights from raw data. ”

Tableau Dashboard for Sales Data Exploration



“ This bar chart presents total sales grouped by branch. It allows for easy comparison of sales performance across locations “

What I Learned

- Real-world workflow of data analysis from start to finish
- How to connect data across tools (Excel → SQL → Tableau)
- How to present insights visually for decision-making