**📊 Sales Data Analysis Excel Project**

A complete Excel-based sales analysis project with dynamic dashboards, product insights, and salesman performance tracking. This project is ideal for understanding sales trends, product-level performance, and team contributions using real or mock sales data.

**📁 Project Structure**

This Excel workbook contains **three core sheets**:

**1. Dashboard (Sheet: Dashboard)**

* **Purpose**: A visual summary of key performance indicators (KPIs).
* **Features**:
  + Interactive charts (e.g., bar, pie, line).
  + Filters by date range, product, region, or salesman.
  + KPIs such as total revenue, top-selling products, best-performing salesmen.
* **Insights Enabled**:
  + Quick decision-making based on trends.
  + Identification of peak sales periods.
  + Visual comparison of category/product/salesman performance.

**2. Products (Sheet: Products)**

* **Purpose**: Maintain detailed product-level information.
* **Columns**:
  + Product ID
  + Product Name
  + Category
  + Unit Price
  + Stock Quantity
* **Usage**: Helps analyze revenue contribution by category/product and manage inventory levels.

**3. Salesmen (Sheet: Salesmen)**

* **Purpose**: Track individual sales performance.
* **Columns**:
  + Salesman ID
  + Name
  + Region
  + Monthly/Quarterly Sales
  + Targets
* **Insights Enabled**:
  + Sales targets vs achievements.
  + Identify top/bottom performers.
  + Region-wise team effectiveness.

**🛠️ Tools & Technologies Used**

| **Tool** | **Purpose** |
| --- | --- |
| **Microsoft Excel** | Main platform for data analysis |
| Power Query | Data cleaning and transformation |
| Pivot Tables | Dynamic aggregations and summaries |
| Charts | Visualization of KPIs and trends |
| Slicers | Interactive filtering of dashboard data |
| Conditional Formatting | Highlight performance and trends |

**🌟 Key Features**

* 📌 Clean, categorized dataset with proper formatting.
* 📈 Interactive and filterable dashboard.
* ✅ Easy-to-understand layout and formulas.
* 🔍 Drill-down capability into product and salesman data.
* ♻️ Reusable for any sales dataset (just replace the data sheet).

**🤝 Acknowledgments**

* Special thanks to the Excel and Data Analysis communities on YouTube, Reddit, and Stack Overflow for inspiring layout and formula ideas.
* This project was built with the intention of helping small businesses and students grasp the power of Excel as a data analytics tool.

**🔍 Insights You Can Gain**

* Which products generate the most revenue?
* Which salesman or region performs best?
* What months show peak and drop in sales?
* Are sales targets being met?

**🧼 Data Cleaning Process**

1. **Remove Duplicates** from raw sales logs.
2. **Standardize Date Format** (dd-mm-yyyy or yyyy-mm-dd).
3. **Trim and Clean Text** fields (e.g., extra spaces in product names).
4. **Correct Data Types** (e.g., price as number, date as date).
5. **Handle Missing Values** (e.g., replace nulls with N/A or average).
6. **Validate Entries** using data validation rules.

**📘 How to Use the Project (Step-by-Step Guide)**

1. **Download the Excel File** from this repository.
2. Open the file in Microsoft Excel 2016 or later (supports slicers & Power Query).
3. Go to the Products sheet:
   * Enter or update product data.
4. Go to the Salesmen sheet:
   * Fill in or import performance data.
5. Go to the Dashboard:
   * Use slicers or filters to explore trends and KPIs.
   * Analyze visual insights (e.g., top 5 products, monthly revenue).
6. Optional: Load new data via Power Query if connected to external sources.

**🧩 Dependencies**

* Microsoft Excel (2016 or later recommended)
* Power Query (built-in for Excel 2016+)
* Data analysis enabled via Pivot Table and Charts
* Slicer functionality requires modern Excel

**📌 Project Purpose**

This project demonstrates how Excel can be used for complete business data analysis without writing code. It serves as a hands-on project for:

* Students learning data analysis.
* Job seekers building a data portfolio.
* Sales managers tracking performance visually.

**🚀 How to Use the Excel File**

1. **Open the Excel Workbook**
2. **Navigate to the 'Products' Sheet** and enter/update product details
3. **Go to the 'Salesmen' Sheet** and fill in or paste performance data
4. **Paste raw sales data (if applicable) into a ‘Raw Data’ sheet**
5. **Ensure all formulas auto-populate correctly** (linked via VLOOKUP/INDEX-MATCH)
6. **Head to the 'Dashboard' Sheet** to explore visual insights and filter based on date/product/region
7. **Customize the charts or slicers** as needed for your analysis

**🗂 Sample Data (Optional)**

You may include a SampleData.csv or MockSalesData.xlsx for demonstration, which contains:

* Sample transactions
* Product catalog
* Salesman records

**✅ How to Contribute**

If you'd like to contribute:

1. Fork the repository.
2. Improve or add features (e.g., new KPIs, more charts).
3. Submit a pull request.

**📧 Contact**

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