**💡 Project Idea**

**“Pharmaceutical Sales & Prescription Performance Dashboard”**

* **Goal:** Track sales trends, prescription behavior, and regional performance to support strategic decisions.
* **Impact:** Helps identify top drugs, underperforming regions, and align sales with prescription demand.

**📝 Requirements**

* Use **Excel tools only** (no Power BI).
* Apply:
  + Data cleaning (Remove duplicates, correct formatting).
  + Pivot Tables for analysis.
  + Charts (Bar, Line, Pie, Map with add-ins if available).
  + **Excel Dashboard** (interactive with slicers and timelines).

**KPIs to Show in Dashboard:**

* Total Sales & Revenue Growth Trend
* Top 5 Drugs by Sales
* Sales by Region
* Prescription Count by Doctor Specialization
* Patient Demographics (Age & Gender distribution)
* Sales by Channel

**🛠️ Steps**

**Step 1: Define Business Questions**

Examples:

* Which drugs generate the highest revenue?
* Which region has the highest sales?
* Which doctor specialization prescribes the most drugs?
* Do prescriptions align with actual sales?
* Are certain age groups consuming more drugs?

**Step 2: Collect / Simulate Data**

* Use provided **Excel file (pharma\_data.xlsx)** or simulate similar datasets.

**Step 3: Data Cleaning in Excel**

* Remove duplicates → Data → Remove Duplicates
* Standardize values (e.g., “Paracetamol” vs “PCM”)
* Convert Date column into proper date format
* Add calculated fields (e.g., Revenue per Unit = Sales Revenue ÷ Units Sold)

**Step 4: Create Pivot Tables**

* Sales by Region
* Sales by Drug Name
* Prescriptions by Doctor Specialization
* Prescriptions by Age Group & Gender

**Step 5: Add Charts for Visualization**

* Line Chart → Monthly Sales Trend
* Bar Chart → Top 5 Drugs by Revenue
* Pie Chart → Sales Channel Share
* Stacked Bar → Prescriptions by Age Group & Gender
* Map Chart (if Excel 365 or add-in) → Sales by Region

**Step 6: Build Excel Dashboard**

* Place pivot charts neatly in one sheet
* Add **Slicers** (for Region, Drug Name)
* Add **Timeline** (for Date filters)
* Apply consistent formatting (colors, borders, labels)

**Step 7: Share Insights**

* Which drugs to promote (top revenue but underprescribed drugs).
* Which regions need better distribution (low sales, high prescriptions).
* Which channels (Hospital/Pharmacy/Online) generate most revenue.