**EXCEL ASSIGNMENT**

The link for the dataset is:

C:\Users\PAYAL\Downloads\Sales\_Analysis\_Assignment.xlsx

**Questions to Test Skills**

**🔹 Data Cleaning & Preparation**

1. Identify and remove duplicate Transaction IDs.

Answer. Data -> Remove Duplicates

1. Check for missing Salesperson IDs or invalid regions.

Answer: Data -> Filter

1. Validate that Discounts are between 0–50%.

Answer: IF(AND(Discount >=0, Discount <=0.5),”Valid”,”Invalid”)

1. Add a calculated column for **Net Sales = (UnitsSold × UnitPrice) × (1 - Discount%)**.

Answer: Apply the formula by adding new column

**🔹 Data Aggregation & Pivot Tables**

1. Create a Pivot Table showing Total Sales by Region.
2. Compare Quarterly Sales Trends for 2022 vs 2023.
3. Find the Top 2 Salespeople by Total Sales.
4. Show Sales by Product Category across Regions.

**🔹 Advanced Excel Functions**

1. Use **VLOOKUP/INDEX-MATCH** to fetch Cost Price from Product Data and calculate **Profit = Net Sales – (UnitsSold × CostPrice)**.
2. Calculate **Profit Margin % = Profit ÷ Net Sales × 100**.
3. Use **IF statements** to flag transactions where Profit Margin < 20%.
4. Apply **conditional formatting** to highlight Salespeople not meeting Annual Targets.

**🔹 Visualization**

1. Create a Line Chart of Monthly Sales Trends.
2. Make a Bar Chart comparing Sales across Regions.
3. Build a Pie Chart showing Product Category contribution to Total Sales.

**🔹 Dashboard**

1. Create a Dashboard showing:

* Total Sales & Profit
* Salesperson Leaderboard
* Category-wise Sales Distribution
* Regional Performance

**🔹 Strategic Reasoning & Recommendations**

1. Which region performed the best and worst? Why?
2. Are discounts helping or hurting profitability?
3. Which products/categories should the company focus on?
4. Suggest **3 data-driven strategies** to improve sales in 2024.

**🔹 Step 1: Data Cleaning & Preparation**

* Open the dataset in Excel (raw sheet).
* Remove duplicates, check for missing values.
* Standardize column names (capitalize, remove spaces).
* Make sure **date column** is in proper date format.
* Verify numerical columns (Sales, Profit, Quantity) are numbers, not text.

👉 Goal: Ensure the dataset is “analysis-ready.”

**🔹 Step 2: Exploratory Analysis (Pivot Tables)**

Ask them to create pivot tables to answer key questions:

1. Which region has the highest sales?
2. Which product category is most profitable?
3. Who are the top 5 salespersons by sales?
4. What’s the monthly sales trend?
5. Which region or product is underperforming?

👉 This builds pivot table + aggregation skills.

**🔹 Step 3: Build Charts from Pivot Tables**

* Bar chart: Sales by Region
* Pie chart: Sales by Product Category
* Column chart: Profit by Category
* Line chart: Monthly Sales Trend
* Bar chart: Top 5 Salespersons

👉 Reinforces chart selection for insights.

**🔹 Step 4: Create KPIs (Summary Metrics)**

* Total Sales = SUM(Sales)
* Total Profit = SUM(Profit)
* Average Profit Margin = Profit / Sales
* Best Region = MAX(Sales by Region)
* Worst Region = MIN(Sales by Region)

👉 Put these at the top of the dashboard in big cards.

**🔹 Step 5: Design the Dashboard**

* Place **KPIs** at the top (big bold numbers).
* Place **charts logically** (sales left, profit right, trends bottom).
* Use **slicers/filters** for interactivity (Year, Region, Category).
* Add **consistent colors** (blue for sales, green for profit).
* Add a title: *“Sales Performance Dashboard”*