

Power BI Demo – Demo Tasks

Part A – Power Query (Cleaning, Transforming, Exploring Data)

Task 1 – Remove extra spaces in column names

Steps:

1. In Power BI, go to **Transform Data** → Power Query opens.
2. Right-click on the column " Sales".
3. Select **Rename** and change it to "Sales".

Why: Clean column names make analysis easier.

Task 2 – Change data types

Steps:

1. In Power Query, look at the icons next to each column.
2. Make sure **Date** has a calendar icon.
3. Change **Sales, Profit, COGS** to **Decimal Number**.

Why: Correct data types ensure accurate calculations.

Task 3 – Split column

Steps:

1. Select the **Date** column.
2. Go to **Split Column** → **By Delimiter** → **Custom**.
3. Create a new column showing only **Year** or **Month**.

Why: Splitting helps create new fields for analysis.

Task 4 – Replace values

Steps:

1. Select the **Discount Band** column.
2. Right-click → **Replace Values**.

3. Replace "None" with "No Discount".

Why: Makes data more meaningful.

Task 5 – Remove duplicates

Steps:

1. Select all columns.
2. Go to **Remove Rows → Remove Duplicates**.

Why: Removes repeated rows to keep data clean.

Task 6 – Add conditional column

Steps:

1. Go to **Add Column → Conditional Column**.
2. Rule: If **Profit > 10,000** → "High Profit", else → "Low Profit".

Why: Helps classify sales records into categories.

Task 7 – Group data

Steps:

1. Select **Segment** column.
2. Go to **Group By**.
3. Operation: **Sum of Sales**.

Why: Groups data to show total sales per segment.

Task 8 – Add calculated column

Steps:

1. Go to **Add Column → Custom Column**.
2. Formula: $[\text{Profit}] / [\text{Sales}]$.
3. Rename as **Profit Margin**.

Why: Creates a useful financial KPI.

Part B – Creating Visuals

Task 9 – Column chart (Sales by Segment)

Steps:

1. On the Report view, select **Clustered Column Chart**.
2. Drag **Segment** to Axis.
3. Drag **Sales** to Values.

Task 10 – Bar chart (Profit by Country)

Steps:

1. Insert **Bar Chart**.
2. Drag **Country** to Axis.
3. Drag **Profit** to Values.
4. Sort → choose **Top 5**.

Task 11 – Line chart (Sales over Time)

Steps:

1. Insert **Line Chart**.
2. Drag **Date** to Axis.
3. Drag **Sales** to Values.

Task 12 – Area chart (Profit Trend)

Steps:

1. Insert **Area Chart**.
2. Drag **Year** to Axis.
3. Drag **Profit** to Values.

Task 13 – Pie chart (Sales by Product)

Steps:

1. Insert **Pie Chart**.
2. Drag **Product** to Legend.
3. Drag **Sales** to Values.

Task 14 – Tree Map (Profit by Segment and Product)

Steps:

1. Insert **Tree Map**.
2. Drag **Segment** to Group.
3. Drag **Product** to Details.
4. Drag **Profit** to Values.

Task 15 – Card Visual (KPIs)

Steps:

1. Insert **Card Visual**.
2. Drag **Sales** into it → shows **Total Sales**.
3. Duplicate for **Profit** and **Units Sold**.