Power BI - lesson 17

Part 1: Maps & Geocoding

Task 1: Create a Basic Map Showing Sales by Country

1. Load `sales_with_geodata.csv` into Power BI.

2. Insert a **Map** visual.

3. Drag `Country` into **Location**.

4. Drag `Sales` into **Size**.

   - You'll see bubbles sized by total sales per country.

Task 2: Use Latitude and Longitude for Precise Mapping

1. In the **Map** visual, drag:

   - `Latitude` → **Latitude** field

   - `Longitude` → **Longitude** field

2. This ensures precise city-level placement rather than just name-based geocoding.

Task 3: Plot Total Sales by City

1. Add another **Map** visual.

2. Drag `City` → **Location**.

3. Drag `Sales` → **Size**.

   - Now, bubbles will represent sales totals by city.

Task 4: Create a Region-wise Sales Heatmap (Shape Map)

1. Insert a **Shape Map** visual (enable it in Preview if not available).

2. Drag `Region` → **Location**.

3. Drag `Sales` → **Color saturation**.

   - Choose a predefined map (world, country, or custom TopoJSON).

   - Regions will be shaded by sales intensity.

Task 5: Add Map Drill-Down (Country → Region → City)

1. In your dataset hierarchy, create: **Country → Region → City**.

   - In **Model view**, define this hierarchy.

2. Use a **Map visual**.

3. Drag the hierarchy to **Location**.

4. Turn on the **Drill Down button** (top-right of visual).

   - Now you can drill from country → region → city dynamically.

Part 2: Formatting & Annotations

Task 6: Customize Map Visual – Titles, Colors, and Labels

- Change **Title** → "Sales Distribution by Location".

- Set **Data colors** to a meaningful palette (e.g., green = high sales, red = low).

- Enable **Category labels** to show city names.

Task 7: Use Conditional Formatting for Bubble Colors

1. Go to **Format → Data colors → Conditional formatting**.

2. Base on `Sales`.

3. Example:

   - 0–1000 → Red

   - 1000–5000 → Orange

   - 5000+ → Green

Task 8: Add Annotations to Highlight Key Cities

1. Insert **Shapes → Callout box** or use **Text boxes**.

2. Position near the bubble of important cities (e.g., highest sales city).

3. Add notes like: *"Top performing city"* or *"Emerging market"*.

Task 9: Create a Tooltip Page with Detailed Info

1. Add a **new page**, set it as **Tooltip Page** (Page Information → Tooltip = On).

2. Add visuals like:

   - City-level sales trend

   - Product breakdown by category

3. Go back to the map → **Format → Tooltip → Report page tooltip**.

   - Hovering on a city will now show detailed insights.

Task 10: Add a Slicer to Filter the Map by Category

1. Insert a **Slicer visual**.

2. Drag `Category` into it.

3. Link it to the map visuals.

   - Now you can filter maps by product category dynamically.