✅ Week 7 – Dashboard Preparation & Storytelling (Power BI)

🎯 Agenda (Week 7 Focus)

- Finalize dashboard structure (number of dashboards & purpose)
- Choose impactful visuals and KPIs
- Connect visuals to clear business questions
- Apply design principles (colors, spacing, themes)
- Prepare dashboards for review & presentation

📊 Dashboard Plan (How Many & Why)

Create 2 dashboards (effective + not overloaded):

1️⃣ Dashboard 1: *Disaster Overview & Trends* (Star Dashboard)

Goal: Understand frequency, trends, and types of disasters

KPIs (2–3):

- Total Disaster Declarations
- Most Frequent Incident Type
- Year with Highest Disasters

Visuals (3 main visuals):

1. **Line Chart**

   - Field: fyDeclared (X-axis), Disaster Count (Y-axis)
   - **Question answered:**
     → Are disasters increasing over years?

2. **Clustered Column Chart**

   - Field: incidentType (Axis), Disaster Count (Values)
   - **Question answered:**
     → Which disaster types occur most?

3. **Map (Filled/Shape Map)**

   - Field: state (Location), Disaster Count (Color)
   - **Question answered:**
     → Which states are disaster-prone?

2️⃣ Dashboard 2: *Impact & Program Insights*

Goal: Understand duration, severity & program support

KPIs (2–3):

- Max Disaster Duration (Days)

- Average Disaster Duration (Days)

- Total Programs Declared

Visuals (3 main visuals):

1. **Bar Chart (Top 5 Longest Disasters)**

   o Field: designatedArea (Axis), DurationDays (Values)

   o **Question answered:**
   → Which locations faced the longest disasters?

2. **Pie Chart**

   o Field: incidentType (Legend), Disaster Count (Values)

   o **Question answered:**
   → What share each disaster type contributes?

3. **Clustered Column Chart (Programs by State)**

   o Field: state (Axis), iaProgramDeclared / paProgramDeclared / hmProgramDeclared (Values)

   o **Question answered:**
   → Which states receive more assistance programs?

🔗 **Connection Between Visuals (Story Flow)**

- Line chart shows **trend over time**

- Column chart shows **what type is driving the trend**

- Map shows **where the trend is concentrated**
  ➡️ Together, visuals answer:

When, what, and where disasters are happening.

🎨 **Dashboard Design – Colors, Theme & Layout**

Color Palette (Professional + Clean):

- Primary: Dark Blue

- Secondary: Teal

- Highlight: Orange (for alerts / high impact)

- Background: Light grey / white

Theme Rules:

- Same color for same measure across visuals

- Use orange/red only for **high severity areas**

- Avoid more than **4 colors per dashboard**

Spacing & Layout Rules (Changes for Next Review):

- Add equal space between visuals

- Align KPIs in one straight row at top

- Increase padding inside visuals

- Keep titles short & bold

- Remove heavy borders, use soft background

🧠 KPI Storytelling (What KPIs Tell Others)

KPI	What it Tells
Total Disasters	Overall disaster exposure
Max Duration	Worst-case disaster impact
Avg Duration	Typical disaster length
Most Frequent Type	Main cause of disasters

🎯 Questions You Must Answer From Dashboard (For Review / Viva)

- Are disasters increasing or decreasing over time?

- Which disaster type is most common?

- Which states are most affected?

- Where did disasters last the longest?

- Which assistance programs are used more?

🔄 Instructions for Next Review (Improvements to Do)

- ✔️ Increase space between graphs
- ✔️ Use 1 highlight color for high-risk states
- ✔️ Reduce visual clutter (remove gridlines if heavy)
- ✔️ Keep only 2–3 KPIs per dashboard
- ✔️ Add short subtitles below titles (optional)
- ✔️ Make slicer simple (Year or State only)