📘 Module 8: Map Charts – Only for Excel 2019 & Above

🗺️ 1. What is a Map Chart?

A **Map Chart** allows you to visually represent **geographic data** such as:

- Country-level GDP
- State-wise sales
- Region-wise growth

📌 **Internet connection is required** to use map charts in Excel.

📥 2. How to Insert a Map Chart

Step	Action
1	Select your dataset (must include a geographic column like "Country", "State", or "Region")
2	Go to **Insert → Maps → Filled Map**
3	Excel will auto-detect geographic values and display a map
4	Use the **Chart Elements** button to add titles, legends, and labels
5	Use the **Format Chart Area** to customize appearance

🎨 3. Formatting Map Charts (via Format Chart Area)

You can open the Format Chart Area by right-clicking the chart → `Format Chart Area`.

Feature	Description
🎨 Fill	Change background: `Solid`, `Gradient`, `Picture`, or `Pattern`
✏️ Border	Add or remove borders, change color and thickness
🔤 Title	Edit Chart Title using Chart Elements `+`
🗒️ Legend	Add/Remove chart legends
🏷️ Data Labels	Show actual values or percentages on the map
🌈 Color Gradient	Controls intensity of values (e.g., GDP, population)

🌐 4. Important Limitations

Limitation	Explanation
📌 State/Country only	Excel supports **States**, **Countries**, and **Regions** – NOT districts, villages, or cities
🔄 Duplicate Names	If two places have the same name, add a **helper column** with distinguishing numeric values
🌍 Regional Settings	Map data must match regional names (e.g., use "United States" not "USA")
📶 Internet Required	Excel uses Bing Maps API to generate map visuals, so internet is necessary

🔧 5. Handling Duplicate or Conflicting Locations

If Excel fails to map places correctly (e.g., two entries for "Punjab"):

- Insert a new **helper column** to the **left of the main data** with different numeric values or grouping labels.
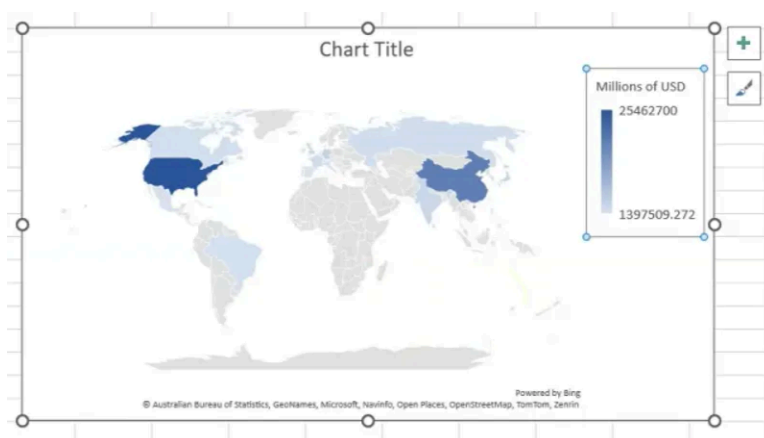- This helps Excel distinguish locations.

🧪 6. Example Data Structures

🌍 Country-wise Economy (in Millions USD):

	A	B	C
1	**Economy**	**Millions of USD**	
2	United States	25462700	
3	China	17963170.52	
4	Japan	4231141.202	
5	Germany	4072191.736	
6	India	3385089.882	
7	United Kingdom	3070667.732	
8	France	2782905.326	
9	Russian Federation	2240422.438	
10	Canada	2139840.024	
11	Italy	2010431.598	
12	Brazil	1920095.561	
13	Australia	1675418.665	
14	Korea, Rep.	1665245.539	
15	Mexico	1414187.194	
16	Spain	1397509.272	
17			

→ Insert → Map → Filled Map

→ Format using chart tools (color, border, label, etc.)

🇮🇳 State-wise Growth Example:

→ Insert → Map → Filled Map

→ Gradient will reflect growth levels.
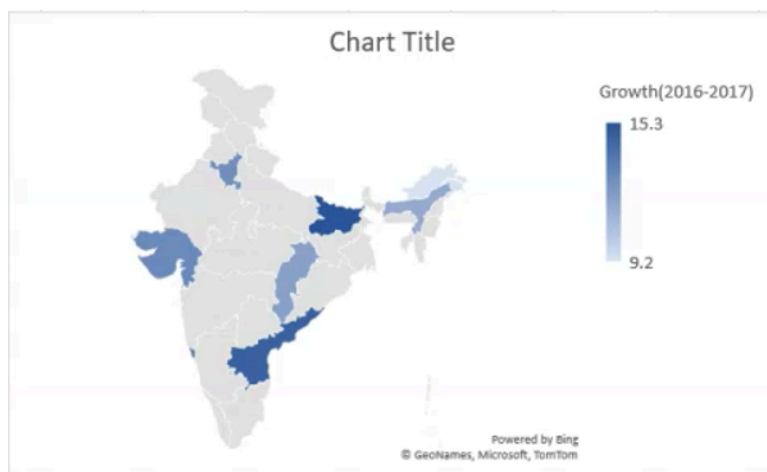
📌 Key Points / Important Notes

- 📊 Internet is required to generate maps (uses Bing API).
- 🧾 Data must include **State**, **Country**, or **Region** columns.
- ❌ Districts, cities, and villages are not supported.
- 🧩 Use **helper columns** for duplicate names or to guide Excel.
- 🎨 Customize the chart using **Format Chart Area**.
- 📊 Map Charts are best for **geographical comparisons** and **region-wise analysis**.