**Understanding Web Services and Data Exchange with XML and JSON**

1. **Client & Server:**
   * **Client** (your app) asks for something → **Server** (web service) gives a response.
   * Example: You search for weather → The weather server sends back temperature data.
2. **Serialization & Deserialization (Packing & Unpacking Data):**
   * Before sending data, the server **packs** it (serialization).
   * When the client gets the data, it **unpacks** it (deserialization).
3. **Data Formats (XML & JSON):**
   * **XML:** Looks like HTML (older, more structured).

**Example:**

<person>

<name>Alice</name>

<age>25</age>

<city>New York</city>

</person>

* + **JSON:** Simpler, faster, and used in modern applications.

**Example:**

{

"name": "Alice",

"age": 25,

"city": "New York"

}

**Final Thought:**

* **Client → Request → Server → Response → Data is packed/unpacked using JSON or XML.**

**Step-by-Step Example:**

**Client (Your App) Sends a Request:**

* You enter "New York weather" in your app.
* The app sends a request to the weather server using an API.

**Server Processes the Request:**

* The weather server finds the data for New York.

**Server Packs (Serializes) the Data:**

* The server converts the weather data into **JSON or XML** format before sending it. (Instead of sending the data in a complicated format, the server **converts** the data into **JSON** format to make it simple for the app to understand.)

**Server Sends the Packed Data (Response):**

* The server sends back the current temperature and weather conditions in JSON/XML format.

**Client Unpacks (Deserializes) & Shows Data:**

* The app reads (unpacks) the JSON/XML data.
* It displays: **"New York: 25°C, Sunny"** on your screen.