

### 1. Python requests module:

The requests module is a Python library used to send HTTP requests easily. It supports methods like GET, POST, PUT, PATCH, and DELETE. It simplifies handling headers, cookies, sessions, and JSON responses.

### 2. JSON and XML:

JSON is a lightweight data format represented as key-value pairs and arrays. Advantages: simple, lightweight, fast, JavaScript-friendly. Disadvantages: no comments, limited types, no schema by default, not great for complex structures.

XML is a markup language using hierarchical tags and attributes. Advantages: structured, supports schemas, extensible, good for complex data. Disadvantages: verbose, harder to read, slower to parse, overkill for simple data.

### 3. RESTful API:

A RESTful API follows REST principles using standard HTTP methods to interact with resources. It is stateless and commonly exchanges data using JSON.

Advantages: simple, scalable, flexible data formats, widely supported.

Disadvantages: inefficient for real-time, over/under-fetching, stateless overhead, inconsistent design across services.