

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.