**RESTful API**

**What it is:**  
A RESTful API is an Application Programming Interface that follows the principles of REST (Representational State Transfer). It uses standard HTTP methods like GET, POST, PUT, and DELETE to let different systems talk to each other over the web.

**How it works:**

* A client (like a browser or mobile app) sends an HTTP request to the server.
* The server processes the request and sends back an HTTP response, often with data in formats like JSON or XML.
* Each request is stateless, meaning the server does not remember past requests from the same client.

**Core principles:**

* Uses resources (like users, products, orders) which are represented by URLs. Example:
  + GET /users → fetch all users
  + POST /users → create a new user
  + PUT /users/1 → update user with ID 1
  + DELETE /users/1 → delete user with ID 1
* Communication is based on HTTP, making it simple and widely supported.

**What it is used for in web development:**

* To connect the frontend (like a React app) with the backend (like a Node.js or Django server).
* To let third-party apps access data or services securely, for example payment gateways, social media login, or weather data.
* To build scalable and modular applications where different services can interact without being tightly coupled.

**Why developers use it:**

* It’s lightweight and easy to understand.
* Works across different programming languages and platforms.
* Makes integration between applications and services straightforward.