

A **REST API** (Representational State Transfer API) is a way for systems to communicate over the web using standard HTTP methods like GET, POST, PUT, and DELETE. It is resource-based, meaning it interacts with data (resources) identified by URLs. REST APIs are stateless, scalable, and commonly return data in formats like JSON or XML, making them ideal for web and mobile applications.

Key HTTP Methods in REST API:

1. **GET:**
 - Used to **retrieve data** from a server.
 - Does not modify the server's state.
 - Example: Fetching a list of users or a specific user.
2. **POST:**
 - Used to **create new resources** on the server.
 - Typically includes data in the request body.
 - Example: Adding a new user or submitting a form.
3. **PUT:**
 - Used to **update an existing resource** or create one if it doesn't exist.
 - Requires the full updated data in the request.
 - Example: Updating a user's profile.
4. **DELETE:**
 - Used to **remove a resource** from the server.
 - Example: Deleting a user or a post.

These methods follow REST principles for interacting with resources systematically.