REST API

# API

API is an acronym for Application Programming Interface. It is an interface between two applications.

## REst API

REst is an acronym for REpresentational State Transfer and an architectural style for distributed systems.

They use the following:

* HTTP/HTTPS as a transport protocol
* Message format is JSON (JavaScript Object Notation)/XML/text/image).

When a client wants to access our data, they do so through an API, and so a communication is established.

The client makes an HTTP request using the HTTP protocol. When the API receives this request, it processes it and then sends an HTTP response. These messages have a structure and a basic structure is given below:

* Endpoint: Address where API is hosted on the server.
* Resources: Represent API/Collection which can be accessed from the server.

For example:

Request 

## Request Methods

HTTP request methods are commonly used to communicate with Rest APIs. Popular HTTP methods, they are:

* **GET:** Used to retrieve information from the given server using a given URL. Normally Query parameters are used.
* **POST:** Used to send data to the server contained in the request body.
* **PUT:** Used to update or modify the specific data in the server contained in the request body.
* **DELETE:** Used to delete the specified data of the target server.

They are also known as **CRUD** methods.

|  |  |
| --- | --- |
| Method | Action |
| POST | Create |
| GET | Read |
| PUT | Update |
| DELETE | Delete |

## Parameters

They are the variables in a URL.

They can be:

* Query parameters
* Path parameters
* Headers

## Status Codes

HTTP response status codes indicate whether a specific HTTP request has been successfully completed.