What is REST API ?

REST (Representational State Transfer) API is an architectural style that defines a set of constraints to be used for creating networked applications. It relies on HTTP protocol and provides methods for HTTP verbs, such as GET, POST, PUT, DELETE, etc.

The REST API relies on the concept of "resources", which are identified by URIs (Uniform Resource Identifiers) and can be accessed using standard HTTP methods.

REST API's have several advantages, including:

Statelessness: Each request from a client to a server must contain all the information needed to understand and process the request. The server cannot store any information about the client's state between requests.

Client-Server: The client-server model separates the user interface concerns from the data storage concerns, resulting in systems that are more scalable and maintainable.

Cacheable: The REST API can use the HTTP cache to cache server responses. This can improve the performance of the system by reducing the number of requests to the server.

Layered System: The architecture of a REST API allows it to be composed of multiple layers, each of which is independent of the others. This enables greater flexibility in the system design and allows for the implementation of additional features, such as load balancing and security.

A REST API is an architectural style for building web services that allows different systems to communicate with each other over HTTP in a simple and scalable way.

A good example of a REST API is the Wikipedia API, which allows developers to access and retrieve Wikipedia data in a structured format. Developers can use the Wikipedia API to search for articles, retrieve article content, and perform other operations.

a REST API would use a GET request to retrieve a record, a POST request to create one, a PUT request to update a record, and a DELETE request to delete one. All HTTP methods can be used in API calls. A well-designed REST API is similar to a website running in a web browser with built-in HTTP functionality.

Any REST request includes four essential parts: an HTTP method, an endpoint, headers, and a body. An HTTP method describes what is to be done with a resource.