

RESTFULL APIS

Q1. What is an API?

ans. Application Programming Interface is a intermediary of two application to talk to each other.

Q2. What is rest and features of it.

Ans -Rest(**representational state transfer**) is a arcitecture .One of the main features of an REST API is that its service is stateless, which means that every time we refer to it, it will be necessary to remind it our data, whether it is our user credentials or any other information. ... This factor is particularly relevant for any bank API, such as those of BBVA

* CRUD is an acronym that comes from the world of computer programming and refers to the four functions that are considered necessary to implement a persistent storage application: create, read, update and delete.

Q3.difference between rest and crud apis.

Ans.REST basically is a style of web architecture that governs the behavior of clients and servers. While API is a more general set of protocols and is deployed over the software to help it interact with some other software. REST is only geared towards web applications. And mostly deals with HTTP requests and responses.

4Q. What is the concept of statelessness protocol in REST?

ans. As per the REST architecture, a RESTful Web Service should not keep a client state on the server. This restriction is called Statelessness. It is the responsibility of the client to pass its context to the server and then the server can store this context to process the client's further request.

* Same client are not depened on nature of previous call in api respective.

5Q. What are HTTP Codes?

Ans. An HTTP status code is a message a website's server sends to the browser to indicate whether or not that request can be fulfilled.

100 - The HTTP 100 Continue informational status response code indicates that everything so far is OK and that the client should continue with the request or ignore it if it is already finished

200 - success/OK

201 - CREATED - used in POST or PUT methods.

304 - NOT MODIFIED - used in conditional GET requests to reduce the bandwidth use of the network. Here, the body of the response sent should be empty.

400 - BAD REQUEST - This can be due to validation errors or missing input data.

401- UNAUTHORIZED - This is returned when there is no valid authentication credentials sent along with the request.

403 - FORBIDDEN - sent when the user does not have access (or is forbidden) to the resource.

404 - NOT FOUND - Resource method is not available.

500 - INTERNAL SERVER ERROR - server threw some exceptions while running the method.

502 - BAD GATEWAY - Server was not able to get the response from another upstream server

307 Temporary Redirect (since HTTP/1.1)

In this case, the request should be repeated with another URI; however, future requests should still use the original URI. In contrast to how 302 was historically implemented, the request method is not allowed to be changed when reissuing the original request. For example, a POST request should be repeated using another POST request.^[22]

308 Permanent Redirect (RFC 7538)

This and all future requests should be directed to the given [URI](#). 308 parallel the behaviour of 301, but does not allow the HTTP method to change. So, for example, submitting a form to a permanently redirected resource may continue smoothly.^[28]

6Q. What are various http methods and uses?

Ans. OPTIONS: This fetches the list of supported options of resources present on the server.

The POST, GET, PUT, DELETE corresponds to the create, read, update, delete operations which are most commonly called CRUD Operations.

Q7. What are components of http request?

ans. An HTTP request is divided into three parts: Request line, header and body.

Q8. component of http response?

Ans. An HTTP response is also divided into three parts: Status line, header and body.

Q9. What is URI for web services?

Ans. A Uniform Resource Identifier (URI) is a generic term for the names of all resources connected to the World Wide Web. URIs enable the protocols over the internet to conduct the interactions between and among resources.

Q10. difference between query and path params.

Ans. The first difference between query and path parameters is their position in the URL. ... Secondly, the query parameters are used to sort/filter resources. On the other hand, path parameters are used to identify a specific resource or resources. You can't omit values in path parameters since they are part of the URL.

Q11. What are Idempotent methods.

Ans. The meaning of idempotent is that even after calling a single request multiple times, the outcome of the request should be the same. While designing REST APIs, we need to keep in mind to develop idempotent APIs. This is because the consumers can write client-side code which can result in duplicate requests intentionally or not. Hence, fault-tolerant APIs need to be designed so that they do not result in erroneous responses.

* REST provides idempotent methods automatically. GET, PUT, DELETE, HEAD, OPTIONS, and TRACE are the idempotent HTTP methods. POST is not idempotent.