API Interview Questions

Q1) What is API?

Application Programming Interface (API) is a software interface that enables two applications to interact with each other.

**Explanation**: - API is defined as a interface that helps two different software communicate and exchange data with each other. It is a combination of endpoint + resource + input.

**Example**: The weather app on your phone “talks” to this system via APIs and shows you daily weather updates on your phone.

Q2) What are the advantages of API Testing?

* API test requires less code so it can provide better and faster test coverage.
* API testing provides access to the application without the user interface.
* Api empowers developers to be more productive by reusing code in complex but repetitive process.

Q3) What is API Endpoint?

An Endpoint is a Location where an API receives requests about a specific resource on its server. In APIs, an endpoint is typically a uniform resource locator (URL) that provides the location of a resource on the server.

Q4) What is a API Resource?

Resources are data sets that an API allows you to work with, and which are accessible via endpoints. A resource is focused on data set that is returned by a request.

Q5) What are the types of parameters?

* **Header Parameter**: Parameters can be passed in the request header. Usually header parameters are used for passing sensitive data that shouldn’t be cached like a Bearer Token or an API key. Header parameters are most often used in API security and authentication.
* **Query Parameter**: Query Parameters are added to the end of a URL after a question mark. The question mark is followed by a parameter name, and the value.
* Example: `/users?role=admin`
* **Request Body Parameter:** Request body parameters, which look similar to query parameters, are most often used in POST requests to send values in the request body.
* **Template Parameter**: It is used to parameterize the endpoint or resource.

**Q**6) What are Types of HTTP Methods?

* **GET**– Get method retrieve the data from database.
* **POST**– POST is used to send data to a server to create a record in database.
* **PUT**– Put Create a new entity or update an existing one.
* **DELETE**– Delete the existing record from the database.
* **Patch**– PATCH is a method of modifying resources where the client sends partial data that is to be updated without modifying the entire data.

Q7) What is Rest API?

REST stands for Representational State Transfer. REST API treats all data as resource and each one is represented by unique uniform resource identifier.

**REST API is also known as RESTful web services that follow the REST architecture**

Example: Airlines use APIs to expose the flight times and prices to allow travel and ticketing sites for businesses.

Q8) What are the advantages of RESTAPI?

* Easy to Learn
* Wide range of data transfer like JSON, XML.
* Statelessness i.e. allowing simple client experience.
* Scalability- independent in nature.

Q9) What are the disadvantages of RESTAPI?

* Lack of built in security.
* Consistency in URI’s difficulty to maintain complex projects.

Q10) What is URI?

URI: **Uniform Resource Identifier** is used for identifying each resource of the REST architecture.

**URI are of two types:**

1)**URN**: **Uniform Resource Name** identifies the resource by means of a name that is both unique and persistent.

2)**URL: Uniform Resource Locator** has the information regarding fetching of a resource from its location. Examples: <http://abc.com/samplePage.html>.

URLs start with a protocol (http) and they have the information of the network hostname (sampleServer.com) and the path to the document(/samplePage.html). It can also have query parameters.

Q11) What is the definition of messaging in terms of RESTful web services**?**

In REST API web services, when a REST client wants to send a message to the server, it can be sent in an HTTP request form, and the same applies to the server. This kind of communication is called messaging in REST.

Q12) How can RESTful web services be tested**?**

The RESTful web services can be tested with the help of tools such as Swagger and Postman, which enable users to inspect query parameters, response headers, and headers, documentation of the endpoints, and conversion of endpoints to XML and JSON.

### Q13) What are the most common HTTP response status codes you see while working in REST API?

Some of the most common response status codes are 200 OK, 201 Created, 400 Bad Request, 401 Unauthorized, 403 Forbidden, 404 Not Found, 500 Internal Server Error, 502 Bad Gateway, 503 Service Unavailable, etc.

Q14) How are RESTAPI Stateless?

The REST architecture is designed in such a way that the client state is not maintained on the server. This is known as statelessness.