

1. What is API?

API stands for application programming interface. API acts as an interface between two software applications & allows the two software applications to communicate with each other.

API is a collection of software functions that can be executed by another software program.

2. What is API Testing?

It is a type of software testing that involves testing APIs directly and also as a part of integration testing to check whether the API meets expectations in terms of functionality, reliability, performance and security of an application.

• API testing can be performed on any software system which contains multiple APIs.

3. Name some of the common protocols used in API Testing?

1. HTTP 2. REST 3. SOAP 4. JMS 5. UDP

In API we send data as JSON.

4. What is SOAP?

SOAP stands for Simple Object Access Protocol. It is an XML based messaging protocol. It helps in exchanging information among computers.

send data into the XML format.

5. What exactly needs to be verified in API Testing?

• In API Testing, we send a request to the API with the known data & we analyze the response.

1. Data accuracy

3. Response time

2. HTTP status codes

4. Error codes in case API returns

any errors.

5. Authorization checks

6. Non-functional testing such as performance testing, security testing.

8. Name some tools used for API Testing?

Some of the tools used for API Testing are as follows:

1. Postman 2. SoapUI 3. Jmeter 4. Parasoft.

7. List some most used templates for API documentation?

1. Swagger 2. HatDOC 3. RestDOC 4. API blue print

5. etc

9. Diff. between API testing & unit testing.

Unit testing -

- Unit testing is conducted by the development team.
- Unit testing is a form of white box testing.
- Unit testing is conducted prior to the process of including the code in the build.
- Source code is involved in Unit testing.
- In unit testing, the scope of testing is limited, so only basic functionalities are considered for testing.

API Testing -

- API testing is conducted by QA Team.
- " " is a form of black box testing.
- API testing is conducted when the build is ready for testing.
- Source code is not involved in API testing.
- In API testing the scope of testing is wide, so all the issues that are functional are considered for testing.

- What all changes are included under API Testing?
9. What are the main challenges faced in API testing?
- Some of the challenges we face while doing API testing are as follows:
- selecting proper parameters & its combinations.
 - categorizing the parameters properly.
 - Proper call sequencing is required as this may lead to inadequate coverage in testing.
 - verifying & validating the output.
 - Due to the absence of GUI, it is quite difficult to provide input values.

10. What are the types of bugs we face when performing API testing?

Issues observed when performing API testing are:

- stress, performance issues.
- Duplicate or missing functionality.
- Reliability issues.
- Improper messaging.

11. How is UI testing is not similar to API testing?
- UI (User Interface) testing is to test the graphical part of the applⁿ.

Its main focus is to test the look & feel of an applⁿ.

On the other hand, API testing enables the communication betⁿ two diff. sys systems.

Its main focus is in the business layer of the applⁿ.

12. Name some most commonly used HTTP methods?
- Some of the HTTP methods are:

1. Get -

It enables you to retrieve data from server.

What are commonly used HTTP methods?

post should be used when the client sends the page to the server and then the server lets the client know where it put it. put should be used when the client specifies the location of the page.

2. Post - It enables you to add data to an existing file or resource in a server.

3. Put - It lets you replace an existing file or resource in a server.

4. Delete - It lets you delete data from a server.

5. Patch - It is used to apply partial modifications to a resource.

13. Can you use Get request instead of put to create a resource?
No, Get request only allows read only rights. It enables you to retrieve data from a server but not create a resource. put & post methods should be used to create a resource.

we cannot allow to do modify or delete we can only read or access.

14. What is the difference betⁿ PUT & POST methods?
PUT & POST methods are sometimes confused in regards to when each should be used. Using POST request, our client intent is to create a new object on the server whereas with PUT request, our intent is to replace an object by another object.

Post should be used when the client sends ^{the} page to the server and then the server lets the client know where it put it. PUT should be used when the client specifies the location of the page.

15. What is the difference betⁿ PUT & POST methods.
POST request - creating a new object on the server.
PUT " " - update the object in server with new value.

16. List out few authentication Techniques used in API's?
- Session / cookie based Authentication?
- Basic authentication?
- Digest " "
- OAuth.

17. Why API testing is determined as the most suitable form for Automated testing?

18. What REST API?

REST stands for Representational state transfer. It is a set of functions helping developers in performing request & receive response. Interaction is made through HTTP protocol in REST API.

19. What exactly needs to verify in API Testing?

In API Testing, we need send request to API with the known data & then analysis the response.

1. we will verify the accuracy of the data.

2. will see the HTTP status code.

3. We will see the response time.

4. Error codes in case API returns any errors.

5. Authentication would be check.

6. Non-functional testing such as performance testing, security testing.

20 What are path parameters & query parameters for below API request URL.

→ http://vaahali Jagatap.com/orders/1122344?location=IND

This is end point resource out of this order no is 1122344. Path parameters generally refer to / . prefix is / then it is path. prefix is ? then it is query parameters.

u have to know these below components to send HTTP request.

21 What are the core components of an HTTP request?

1. What kind of api method it is?

1. HTTP request method like: PUT, POST, Delete.

2. Base Uniform Resource Identifier (URI).

3. Resources & parameters. → query params or other params.

4. Request header, which carries metadata (as key value pairs) for the HTTP request msg.

5. Request body, which indicates the message content or source representation.

22 What could be the HTTP method for below API scenario? Answer: if it is "get or post"

Scenario: An API which has endpoint, parameters, headers, cookies and payload

get has no body it only send access the data from server. It gives all things into url.

This scenario is post because post can accept payload where a get can not accept any payload.

23. What protocol is used by the RESTFUL web services?

RESTFUL web services ^{uses} the HTTP protocol. They use the HTTP protocol as a medium of communication between the client & the server. so we are the client here & ~~comm~~^{we are send it informat} with server & that informat^{ion} is communicated securely with HTTP protocol.

24. How do we represent a Resource in REST?

using HTTP methods i.e. GET, POST, PUT & DELETE. These are HTTP methods. with which we represent resource in rest API.

25. Can you use POST request instead of PUT to create a resource?

Yes, we can because post is super set of all other HTTP methods except GET.

26. What do you understand by payload in Restful web service?

→ Payload is nothing but the request body. so that is the secured input data which is sent to API to process the request. Payload is generally represented in JSON format in REST APIs.

27. How do we differentiate path & query parameters in API request endpoint?

28. What is Rest Assured?

It is Java ~~library~~^{library} which can automate Rest APIs.

29. How would we define API details in Rest Assured Automation?

we shall define all the request details & send it to server

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In Given, when, Then methods.

Q. What is JSON serialization & deserialization in Rest Assured?
Serialization in Rest Assured context is a process of converting a Java object into request body (payload).

Rest Assured also supports deserialization by converting Response body back to Java object.

Q. How would you send attachments to API using Rest Assured Test?

→ using multipart method.

↳ we send using this method all the attachments.