Top 25 Interview questions for API testing

1. What are the challenges included under API testing
   1. API documentation
   2. Access to database and make sure End points are up and running
   3. Authorization overhead
2. What is the difference between PUT and POST methods?

Post – Creating a new object on the Server (Creates new object every time it is called)

PUT – Update the Object on Server with new value (updates the object if it exists, else creates a new one. Creates once and updates multiple times)

1. What is the commonly used HTTP methods?
   1. GET – to retrieve data from the server
   2. POST – Creating a new object/data on the Server
   3. PUT – Update the existing object/data in the server
   4. PATCH – update partial data in the server
   5. DELETE – delete the object/data in the server
2. List out few authorization techniques used in API
   1. Session based / Cookie based authorization
   2. Basic Authentication
   3. Digest Authentication (**a way for service providers to verify a person's credentials by using a web browser**)
   4. OAuth
3. Why API testing is determined as the most suitable for Automation testing.
   1. Manually takes long time
   2. Automation takes a single click
   3. Fast and easy to automate
4. What is REST api?
   1. Rest stands for representational State transfer. It is a set of functions helping developers in performing request and receive responses. Interaction is made through HTTP protocol in Rest API. It is an architecture and not the protocol
5. What exactly you need to verify in API testing
   1. Verify status code
   2. Verify accuracy of the data in response
   3. Check the response time
   4. Check the error codes in case API returns any error
   5. Authorization
   6. Nonfunctional testing like performance testing, security testing
6. What are path parameter and Query parameter?
   1. Path parameter preceded by / and query parameter by?
7. What are the core components of HTTP request?
   1. HTTP method – GET / PUT / POST / DELETE
   2. Base URI
   3. Resources (End Point) and parameters
   4. Request Header
   5. Request Payload except for GET
   6. Authorization / Authentication
8. What could be the HTTP method for below API Scenario. GET **/ POST**
   1. Scenario: An API with End point, Parameters, Headers and Request Payload
9. Differences between API and UI testing
   1. API , without UI we can test , functionality with respect to data is tested where as UI is checking the layout and validation whether correct data is entered etc etc
   2. UI testing features look and feel of the application, focuses how end users interact with app elements such as images , fonts , layout etc are checked.
10. What protocol is used by Restful Web services
    1. HTTP protocol is used by Restful web services. It uses this protocol to communicate between client and server
11. What are soap web services?
    1. SOAP stands Simple Object Access Protocol. It is an XML based messaging protocol. It helps in exchanging information among computers.
12. **How do we Represent a Resource in REST?**
    1. **Using HTTP methods like GET / POST / PUT/ PATCH and DELETE**
13. Can you use GET request instead of Put to create object in the Server.
    1. No, GET request is use to retrieve data, so the user will have only read only rights. So user / tester cannot modify or create data in the server
    2. POST should be used when client send the page to the server and then the server lets the client know about where to put it. PUT should be used where client specifies the location of the page.
14. What do you understand by Payload in Restful web services
    1. Payload / Response Body is the secured input data which is sent to API to process the request. Payload generally represented in JSON format in Rest API
15. Can you use POST request instead of PUT to create a source
    1. Yes we can, Because POST is the super set of all other HTTP methods except GET
16. How do we differentiate <> Path and Query Parameter
17. What is Rest Assured
    1. It is a set of Java jar library which can be used to automate REST APIs
18. How would you define API details in Rest Assured Automation
    1. We shall define all the request details and send it to the server in given, when and then methods
19. What is JSON serialization and Deserialization in Rest Assured?
    1. Serialization is a process of converting Java Object into request Payload
    2. Deserialization is the process of converting Response body payload to Java Object. Rest Assured supports both Serialization and Deserialization using POJO classes (getter and setter methods for easy access of JSON)
20. List out few JSOn parsing techniques used in Rest Assured Automation
    1. JsonPath
    2. DeSerialization of Json using POJO classes
21. How would you send the attachments using Rest Assured Test
    1. Using multipart methods
22. List different Status codes and their descriptions

|  |  |  |
| --- | --- | --- |
| Code | Status | Description |
| 200 | OK | The request was completely completed |
| 201 | Created | A new resource was successfully created |
| 400 | Bad Request | The request was invalid |
| 401 | Unauthorized | The request did not include an authentication token or authentication token was expired |
| 403 | Forbidden | The client did not have permission to access the requested resource |
| 404 | Not found | The requested resource was not found |
| 405 | Method not allowed | The HTTP method in the request was not supported by the resource |
| 409 | Conflict | The request could not be completed sue to a conflict |
| 500 | Internal Server Error | The request was not completed due to internal error in the server side |
| 503 | Service unavailable | Server was unavailable |

1. How will you create a pass session details in Rest Assured?
   1. Using Create Session filter
2. Given the Json, How do you go/ traverse to a node?
   1. Using a Json editor, get the parent node.childnode.childnode… if it has more values , then specify the index
3. How do you extract data from Excel for automating?
   1. Using Apachi POI api

**Different methods on api**

**HEAD**

Same as GET, but transfers the status line and header section only.

**CONNECT**

Establishes a tunnel to the server identified by a given URI.

**OPTIONS**

Describes the communication options for the target resource.

**TRACE**

Performs a message loop-back test along the path to the target resource.