

API Testing

application transport

① What is the diff b/w HTTP & HTTPS?

Ans: HTTP: Hyper text transfer protocol.

- \* It is not secure and unreliable.

- \* The URL is (`http://.`)

HTTPS: Hyper text transfer protocol secure.

- \* It is secure and reliable.

- \* The URL is (`https://.`)

HTTP is a protocol used to transfer data from one location to another location.

→ HTTP and HTTPS both are same.

② What are the HTTP methods and Explain each method?

Ans: 1. Post - create the new resources.

2. Get - retrieve the existing data.

3. Put - updating the existing resource.

4. Delete - Delete the Data.

→ It is called CRUD or CURD operation.

2. PUT is  
to update  
existing

### ③. What is POST method?

Ans: \* It is one of the HTTP methods used by world wide web.  
\* POST has a pay load.  
\* POST will create the new resource.  
\* It can carry unlimited of Data.  
\* It carries any type of data like images, mp3, etc,....

### ④. What is diff b/w POST and PUT?

Ans: POST and PUT both are HTTP methods and they have pay load.

POST: It will create the new resource.

PUT: It is used to update the data resource. In this the current payload sending is replaced by the existing payload.

### ⑤. What is diff b/w PUT and PATCH?

#### PUT

1. PUT is one of  
HTTP method.

#### PATCH

1. PATCH method is a request method supported by HTTP.

the method? HTTP  
side web  
you-

2. PUT is used to update the existing resource.

3. In PUT method the current pay which is sending is replaced by the existing pay load.

2. PATCH is used to update the existing resource.

3. The PATCH method is used to update particular element without lossing the existing resource.

⑥ What is PATCH method and explain briefly? why it is differ from PUT?

Ans: PATCH: This method is used to update the particular element without loss of existing resource.

→ It is used to update the existing resource.

→ PATCH is a request method supported by HTTP.

⑩

what  
Ans: 200

⑦ Types of status codes: The status codes are used to know about the transaction. It is a three digit positive number, which begin with 1XX, 2XX, 3XX, 4XX, 5XX.

1XX → information.

2XX → success

3XX → Bidirection.

4XX → Client side error.

5XX → Service side error.

100 → continue.

300 → multiple choices.

⑧ What is request header syntax (structure)?

Ans: http method followed by end point followed by HTTP version.

⑨ What is response header syntax (structure)?

Ans: http version followed by status code followed by message.

http 1.0 200 OK, http 1.1 201 Create → 505

code. The static  
know about  
three  
which

⑩ What are the 2xx status codes?

Ans: 200 → OK (GET)

201 → Create } POST, PUT

202 → Accepted }

204 → no content : } DELETE

205 → Reset content.

⑪ What are 4xx status codes?

Ans: 400 → bad request (syntax error).

401 → unauthorized (No token, invalid, expire token)

403 → forbidden (no permission for token).

404 → not found (invalid URI)

405 → method not found (invalid HTTP)

407 → proxy authentication error.

408 → Request time out [unable to send request in time]

409 → conflict (Duplicates).

415 → internal content type.

429 → too many requests.

⑫ What are 5xx status codes?

Ans: 500 → internal server error (error within resource)

501 → not implemented (URI not designed)

502 → bad gateway (Gateway not responding)

503 → service unavailable (server under maintenance)

504 → gateway timeout [unable to give response in time]

505 → HTTP version not supported.

[mismatching b/w req & response]

Q13. What is Rest testing:

Ans: Rest is also called as API testing.

\* REST → Representational state transfer.

\* In REST testing we use API's for execution.

\* Rest depends on HTTP methods.

\* Rest supports JSON Data.

\* Rest is less bandwidth, more speed and secure.

\* Rest is a architecture, light weight.

Q14. What is API testing process?

Ans: (1) Select a tool.

(2) API / URI is taken.

(3) Select method.

(4) Give payload.

(5) Give Header and save.

(6) later send.

(7) Verify the status code and

(8) Validate the response.

Q15. What is diff b/w URL Vs URI.

Ans: URL

1. Uniform resource location.

URI

1. Uniform resource identifier.

- |   |   |
|---|---|
| 2. URL is a sub-set of URI.                   | 2. URI is superset of URL.                          |
| 3. URL is domain addresses / server addresses | 3. URI is a direct address of a resource in server. |

### (16) Explore URI?

Ans: It is the combination of end point + Resource + mandatory.

End point → server address.

Resource → Particular location in server.

Parameters → filtering the Data.

### (17) What is URI and what is resource in URI?

Ans: URI → Uniform resource identifier.

It gives direct address of resource in server. It is a super set of URL.

\* Resource is a mandatory parameter in URI.

\* It give the particular location in server.

⑯ What is parameter? Types?

Ans: Parameter: It will filter the data.

by using A PI. They are four types. Parameter is a part of URL.

(i) Path → It is separated by / [/{Id}]

(ii) Query → It is " by ? [? {Id=1}] .

(iii) Header → Declaire header, they are used for authorization purpose

(iv) Pay load / body parameter.

⑰ What is header and its usage?

Ans: Headers: Headers are using for authorization purpose to secure our APIs.

Types of headers: Two types of header  
Fixed headers:

? types ?  
fixes the date  
are fewer  
but & URL  
[123]

⑳ If we given wrong header what will happen? when we will get 401 status code?

Ans: If the header is invalid we get 401. 401 will get when no token, invalid, expire token.

㉑ Explain the process of API/ REST testing in POSTMAN TOOL?

- Ans:
- (i) Enter URI / API.
  - (ii) Select the HTTP method.
  - (iii) Enter header data, Select body
  - (iv) Select payload.
  - (v) Enter JSON payload.
  - (vi) Click on save.
  - (vii) Click on send.
  - (viii) Verify state code.
  - (ix) Validate the response.

(i) Collection  
Created by API's

Q22 What is the usage of the collection in POSTMAN?

Ans: Collections are used to save the APIs for re-useable and future reference.

(i) Share collections: User can share the collection to other user by using it.

(ii) Group execution / Combo execution:

If user want to run more than one API / set of APIs together.

(iii) Parameterization / Variables / Properties

To save the testdata into variables and use that variables in APIs during the execution.

Two Parameterization:

1) Value / Data Parameterization.

2) Endpoint parameterization.

Q23 POSTMAN variables and Types? Explain Connection and Global variables?

Ans: Variables: It will save the test data, which are submit into payload during the execution.

Types are (i) Collection

(ii) Global.

(i) Collection Variables: These variables created in one collection and accessed by APIs within collection only.

\* One collection variables cannot access by another collection APIs.

(ii) Global Variables: These variables created Globally and accessed by all APIs within workspace.

Syntax: {{value}}

\* Use prefix as "g" in variable name  
This concept also known as  
Parametrization.

End point: Save the endpoint into a variable and access that variable in to URL using syntax.

{}{{end point variable}}

Value/Data: Save the value / Data into a variable and access that variable into URL using syntax.

{}{{a}}, {{ishu}}, {{025}}

26

What is it? New man  
Ans: New man  
collection

24 What is Data Driven Testing?

Ans: DDT: Testing a request with multiple set of test data automatically.

25 Explain me the process of DDT in POSTMAN?

Ans: DDT with CSV / JSON file:

1. Select one service API which have payload.
2. Save that API in new collection.
3. Prepare test data in excel(CSV file) or JSON file.
4. Read the data from CSV/JSON to Pay load.
5. Save.
6. Run collection.
7. Save Response. [Data].
8. Browse the CSV file/JSON file.
9. Select Data file type as "text/csv" or "application/json".
10. Click on preview.
11. Run collection.

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(26) What is newman command and how it is helping in POSTMAN?

Ans: Newman: It is a command-line collection Runner for Postman.

→ It enables you to run and test a Postman collection directly from the command line.

Execute scripts, as below:

Method-I:

1. Go to postman.
2. Select collection.
3. Share "".
4. Select Via JSON and copy the link.
5. Open CMD.
6. newman run past the link in 4,
7. Click enter.

Method-II:

1. Go to postman.
2. Select collection.
3. Click on export.
4. Save into 2.1.
5. Save into one folder with .JSON.
6. Go to folder >> Go to file URL >> enter CMD
7. Newman run filename.json.
8. Enter.

Method-3: User can generate the reports in postman tool.

1. Open CMD >> npm install -g newman-reporter-htmlextra.
2. Goto postman.
3. Select collection.
4. Click on export.
5. Save into 2.1.
6. Save into one folder with .JSON.
7. Goto folder >> goto file URL >> enter CMD newman run filename.json --reporters=cli,htmlextra.

(27) How to generate reports in POSTMAN?

Ans: User can generate the reports in POSTMAN using newman command. Using newman command user can generate the console reports.

(28) How to validate response data in POSTMAN TOOL? What is SNIPPET in POSTMAN?

Ans: Validation of Response data using POSTMAN TOOL:

→ When we / user submit the request user should validate the below.

HTTP status code

Response JSON data Validation.

How to validate the response JSON  
in POSTMAN? MANUAL, SNIPPET.

As a tester we have to verify the  
below → Data type of element.  
→ Missing any element.  
→ Spelling mistakes.  
→ Order of the elements.

SNIPPET - It is a piece of Java  
Script which is validating the  
response JSON. SNIPPET available  
under TESTS Tab.

Validate the Response JSON data:

1) Status code: Code is 200.

It is using to find the existence of  
HTTP status code is 200 or NOT.

2) Status code: Successful POST request.

Snippet is using to validate the  
POST request HTTP status code  
(201 or 202).

3) Status code: Code name has string  
This assertion is using to validate  
the message of the status code.

- (5) 45
- 4) Response time is less than 200 ms  
It is used to find the time gap  
b/w request and response.
- 5) Response header content-type header  
It is used to validate the content type from response header.
- 6) Response Body contain string.  
It is used to validate the response json body data.

- (29) What is content-type for REST testing - application/JSON.
- (30) What is content-type for SOAP testing - application/soap+XML.  
XML → Extensible markup language.
- (31) Which method you are using to test signup service - POST.
- (32) Which method you are preferred for sign in testing - POST.
- (33) Can we use PUT method for create new resource - Yes.
- (34) Tools :-  
(i) Post man tool.      (iv) Fiddler.  
(ii) Rest Client.      (v) Soap UI.  
(iii) Advanced rest client.      (vi) Swagger.

and find is less than 200 ms response time gap content-type header content

(35) Why REST is architecture?

- Ans:
1. Uniform interface.
  2. Stateless.
  3. Unified.
  4. Multilayered format.
  5. Client server.
  6. Cache.
  7. Code and demand.  
(open source).

(36) Types of SOAP UI tool:  
(A) free tool.  
(Ready API) ← (B) Paid tool.

(37) Process of SOAP UI tool?

Ans:

SOAP UI tool.  
WSDL  
Service Document.

(38) What is WSDL?

Ans:

Web service Description language.

- \* It is a collection of services in XML format.
- \* Specification that describes a service interface.