Basics of API

1. END Point
2. HTTP Methods
3. Resources
4. Parameters ( Path / Query )
5. Headers / Cookies
6. Real Time Scenario on POSTMAN tool

POST request on Server

Getting that request from server ( GET )

Deleting that request from Server

Updating the request on Server

1. **End Point / BASE URI**

**Address Where APi is stored on the server**

**First Requirement to Test an API is you need End Point that means where exactly API is located so that you can call the API by hitting the Endpoint and from your API Testing tool.**

1. **HTTP Methods which are commonly used to communicate with Rest API**
2. **GET : The GET method is used to extract information from the given server using a given URI**

**While Using GET request it should only extract data and should have no other effect on the data. No Payload Body Required.**

Q. **How to Send input data in GET** ?

Ans. Using Query Parameter

1. **POST : It is used to Send data to the Server, for e.g Customer Information , file Upload etc, using HTML forms.**

Q. **How to Send input data in POST** ?

Ans. Using Form Parameters / Body Payload

1. **PUT : Replace the current representation of the target resource with the uploaded content. Suppose you need to update your phone no then we can use PUT .**
2. **DELETE : Removes the current representations of a Target Resource given by a URI.**

These are called CRUD Operations.

1. C : Create : POST Request
2. R : Retrive : GET Request
3. U : Update : PUT Request
4. D : Delete : Delete Request.

Some Other Concepts

1. **Resources :**

Resources Represent API / Collection which can be accessed from the server.

E.g a) Google.com/maps

b) Google.com/search

c) Google.com/ images

like Google.com is the server where all the APIs are Stored.

In google there are Different API like

Maps , Search , images and for each section there will be an API.

Every API test you do : We should have Base URI and Resource

1. **Parameters (Path ) : Path parameters are variable parts of a URL path. They are typically used to point to a specific resource within a collection, such as identifying a user by its ID.**

[**HTTP://www.google.com/images/1123**](HTTP://www.google.com/images/1123)

* **Here google.com is URI and Images is a Collection / Resource and 1123 is a Parameter which is asking API that you want response only for this Number.**

1. **Query Parameter : It is used to sort or filter the resources**

**They are Identified with ?””**

**https://amazon.com/orders?sort\_by=2/20/2020**

Q. How to difference bw Query and Path Parameter.

1. If there is question mark sign before parameter name it will be Query.

2. Path parameter will be just like a normal url we will just add a slash in it

3. For E.g : Search New York in Google

[https://www.google.com/search**?**q=new+york&sxsrf=AOaemvJpNAp6rbltcjpzYPfL-LDZ1eRFYw%3A1634154646742&source=hp&ei=ljhnYdSOKq-f4-EPs7yNiAk&iflsig=ALs-wAMAAAAAYWdGpo\_kwvPf3ksJH9GB2fkupEFqxxA6&ved=0ahUKEwjUseW5lMjzAhWvzzgGHTNeA5EQ4dUDCAc&uact=5&oq=new+york&gs\_lcp=Cgdnd3Mtd2l6EAMyCwguEIAEELEDEJMCMgUIABCABDIICAAQgAQQsQMyCAguEIAEELEDMggILhCABBCxAzIFCAAQgAQyCAgAEIAEELEDMggIABCABBCxAzIFCAAQgAQyCAgAEIAEELEDOgQIIxAnOg4ILhCABBCxAxDHARDRAzoICAAQsQMQgwE6BQguEIAEOgsIABCABBCxAxCDAToLCC4QgAQQxwEQrwFQ0g1YgyRgoSloAHAAeACAAa0BiAGxCZIBAzAuOJgBAKABAQ&sclient=gws-wiz](https://www.google.com/search?q=new+york&sxsrf=AOaemvJpNAp6rbltcjpzYPfL-LDZ1eRFYw%3A1634154646742&source=hp&ei=ljhnYdSOKq-f4-EPs7yNiAk&iflsig=ALs-wAMAAAAAYWdGpo_kwvPf3ksJH9GB2fkupEFqxxA6&ved=0ahUKEwjUseW5lMjzAhWvzzgGHTNeA5EQ4dUDCAc&uact=5&oq=new+york&gs_lcp=Cgdnd3Mtd2l6EAMyCwguEIAEELEDEJMCMgUIABCABDIICAAQgAQQsQMyCAguEIAEELEDMggILhCABBCxAzIFCAAQgAQyCAgAEIAEELEDMggIABCABBCxAzIFCAAQgAQyCAgAEIAEELEDOgQIIxAnOg4ILhCABBCxAxDHARDRAzoICAAQsQMQgwE6BQguEIAEOgsIABCABBCxAxCDAToLCC4QgAQQxwEQrwFQ0g1YgyRgoSloAHAAeACAAa0BiAGxCZIBAzAuOJgBAKABAQ&sclient=gws-wiz)

This is we are getting in the Url once searched for New York

1. As we can see there is question mark that means it is a query parameter, Search is the Resource or Collection and google.com is the URI

Q. What are Headers / cookies ?

Ans : Headers is the meta data ( Additional Data ) associated with the API request and response. In General terms we are sending additional details to API to process our request.

E.g : Authorisation Details. There is one API which is secured and that needs username and password to authenticate from headers

In total End Point Request URL can be constructed as below :

**Base URI / Resource /(Path/Query) Parameter**

POSTMAN tool

<https://www.rahulshettyacademy.com/#/practice-project>

[Google Maps API Contract](https://drive.google.com/file/d/1A3Q_HX8A_GtamXs5kpdZ_7jM8W-OajKS/view?usp=sharing)

This API is Regarding Google Maps API

**Complete URL :** [https://rahulshettyacademy.com](https://rahulshettyacademy.com/)**/maps/api/place/add/json?key=** **qaclick123**

**Base URL**:  [https://rahulshettyacademy.com](https://rahulshettyacademy.com/)

**Resource**: /maps/api/place/add/json

**Query Parameters**: key =qaclick123

**Http Method**: POST

**PLEASE REFER TO THE DOCUMENT – ADD Delete PLACE API**

**SCENARIO 1 – POST Request**

1. Now Start Manual Testing of API Using POSTMAN
2. Open Postman and Create a New Collection – Collection\_Maps
3. Add a Request Inside the Collection – Collection Maps
4. Request Name – Add place and Save
5. There will be a Field : Enter Request URL : Type --- [https://rahulshettyacademy.com](https://rahulshettyacademy.com/)
6. Add Resource with url : /maps/api/place/add/json
7. Add Query Parameter : --- key =qaclick123 , Add Question mark before it
8. It’s a POST request so we need to change the Get request to post by clicking at it.
9. For POST request we need to send the body as well
10. Click on Body Button – Located Below URL
11. Click on Raw Radio Button
12. Click on Text Button and Select JSON inside it from Dropdown
13. Now Paste the Entire Code ( Address or the Place Which needs to be Added in the Server )
14. Now we need to Send the Request and Check the Response 😊
15. Below Request Section we are Getting the Response and it is Successful
16. Note : It’s a Dummy Request in the Real time we need to pay. But the Format is the Same. 😊
17. Also we can see the Status is coming 200 OK : Means it is PASS

**Sceanrio 2 : Get Request**

**This will get Existing Details place Details from the API**

1. Add a Request Inside the Collection – Collection Maps
2. Request Name – Get\_place and Save
3. Enter Url in – URL Field
4. Add Resources : Note This time it is different.
5. By Referring the document we have added one Query Parameter which is : Key – qaclick123
6. But there is one More parameter : Which Place Details user is asking for.
7. For That : There is ( place\_id ) Parameter so one more needs to be added there.
8. Place id - - a8ff7e849319dcccbda7eeadbabe83c9
9. Enter this Place id in the value and send Request
10. Correct Response is coming : We are getting correct address 😊

**Sceanrio 3 : Delete Request**

1. Add a Request Inside the Collection – Collection Maps
2. Request Name – Delete\_place and Save
3. Enter Url in – URL Field
4. Add Resources : Note This time it is different.
5. Add Query Parameter
6. Here we can use POST request or DELETE request, as we are going to make the Modification in the server.
7. Since we need to do modification therefore we need to go the body button click
8. Click Raw > Text > JSON
9. Automatically Header will be Added
10. In the Text Pass : place\_id : a8ff7e849319dcccbda7eeadbabe83c9
11. By providing this request server will know which API needs to be Deleted and it will delete it from the database.
12. Status is Coming ok 😊
13. Now again run : Get Place REQUEST

**Sceanrio 4 : UPDATE Request**

1. Add a Request Inside the Collection – Collection Maps
2. Request Name – Delete\_place and Save
3. Enter Url in – URL Field
4. Add Resources : Note This time it is different.
5. Add Query Parameter
6. HTTP method : PUT or POST --- as POST is Super Set.
7. The Sample Code is made to update the existing address.
8. Select Body > Raw > Text > JSON
9. But here since we have Deleted the Request in the Previous Step we need to Create one Place in the Server again send the Request, and then pass the New Place Id here.
10. Else Error Message will place does not exist as user have deleted it.
11. Now to Validate whether the address has been changed or not
12. RUN the------- Get Place request after changing the Place id in query parameter. 😊