**Reference URL’s**

* Hotel Booking URL -> [restful-booker](https://restful-booker.herokuapp.com/apidoc/index.html#api-Booking-GetBookings)
* ReqRes URL - [REQRES](https://reqres.in/)
* rest-assured github URL -> [Rest Assured](https://github.com/rest-assured/rest-assured/wiki/gettingstarted)
* URL - > [JSON path finder](https://jsonpathfinder.com/)
* OAuth 1.0 vs OAuth 2.0 - URL > [Explanation with diagram](https://medium.com/identity-beyond-borders/oauth-1-0-vs-oauth-2-0-e36f8924a835)
* GitHub URL - <https://github.com/nits709/SA2411063>

What is an API ?

Api (Application programming interface) which is done at backend level which between presentation and application layer.

API testing does not have UI. ( User interface)

API runs over the protocol – HTTP and HTTPS

Client – Amazon -> URL ---- HTTPS – server

Client – URL – get encrypted -de-crypted -server 🡪 request API

Response -🡪server – encrypted ------ dr crypted response display to the client.

======================================================================

What is an API – Application program interface.

An API is set of rules and protocols that allow different software to communication with each other.

1. Web API. – Google Maps, Google Login
2. Library API – allow developer to use function and method from pre-writtencode.
3. Operating system API – calculator, MS office, Notepad

API testing is backend testing.

4 level – unit – integration – system – UAT

API testing is the process of testing the functionality, reliability, performance and security of an API are used to enable different software system to communicate with each other

Public API – Google MAPs, Twitter API, Google Login API  
Private API – API are used within organization to allow software to communicate each other.  
Payment API – PayPal, MasterCard, Visa, UPI

Dev Environment 🡪 API –> QA Environment -- Manual API/ Automation API

Production Environment -🡪Hosted over the internet – Web.

API. 🡪 Webservices

All WS are API but not all API are. WS

Workday – HRM -salary, timesheet and profile.

CRUD – Create Read Update Delete

http methods – Read – GET  
 Create – POST  
 Update – PUT / PATCH  
 Delete – DELETE

Creating the account

Nitin | Gupta | 20 | male| [nitin@gmail.com](mailto:nitin@gmail.com) | Sachin| Tiwari | 25 | male | sachin@re

1. Creating account in Gmail.

Open the gmail URL -- GET : get method consider the safe request.

Create an account -> POST : Create a new resources in database.

“Name, lastname, age,gender, emailed” – request Payload

Update the resources : PUT - update the entire resources

PATCH – partial update in database.

Delete : Delete method.

Request consist of certain data or information.

Type – Method, Request + Payload (Data), Header information, Endpoint(address)

Response.

Status code : 100, 200, 300, 400, 500  
Status Message.  
Response Payload  
Headers  
Cookies.

What is endpoints ?

In general endpoints is a URL but tech. endpoints is an address of API

Each api having its own address.

Get -> address API

Post – address API

PUT/PATCH – Address API

Delete - Address API

Types of Webservices

SOAP - simple object access protocol  
REST – representational state transfer

Feature. | REST | SOAP

Protocol | Http/https – CRUD | http smtp – POST

DATA FORMAT | JSON , XML | XML only.

Performance | Faster . lightweight | slower because XML  
Use Case | Web & Mobile – API | Enterprise application.

JSON Key and value Pair

{

“Student” :

{

“name” : “Nitin”,  
 “Id” : “1818”,  
 “marks” : “A”

}

}

E

ndpoint - https://reqres.in/[api/users?page=2  
/api/users?page=2](https://reqres.in/api/users?page=2)

**Java**

1. String name =”Nitin”
2. Float value = 3.0
3. Int x = 1;

Javscripts

1. Var()
2. Let and const

Let x =100;

Let name = “nitin”

Let f = 3.0;

Function java

Public void funcname(){

}

Javascripts

Function add(num1, num2){

Let result = num1 + num2;

Console.log(“total number :” + result);

}

add(1,2);

res.data[2].id

res.data[4].email

Variables in postman

1. Collections variables. -
2. Global Variables
3. Environment variables
4. Collection. Booking Api collection and reqres collection
5. Global Variable. – Admin team.
6. Environment - Developer, QA , staging, UAT ,PRODUCTION

Authentication

Authentication is the process of verifying who are you | who you are.it is way for a system like a website or mobile app to confirm you identity so it can allow you to access the information and services.

Authorization.

Authentication Types

1. Basic Authentication­
2. Digest Authentication
3. Bearer Token Authentication
4. OAuth Authentication.