API TESTING PROJECT

Test reqres.in APIs

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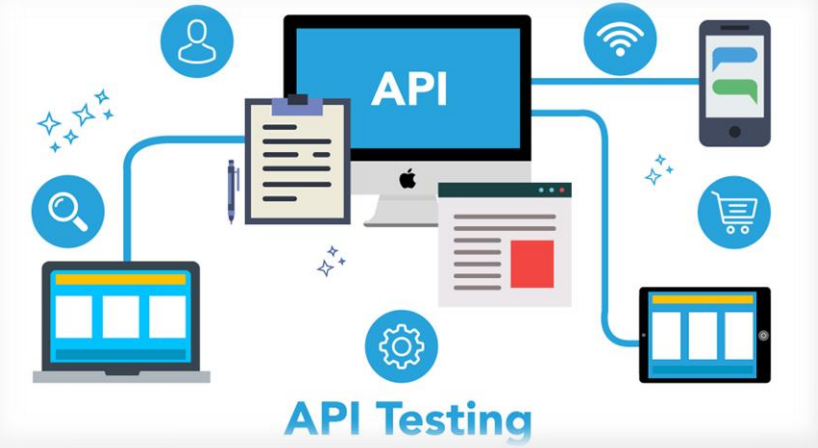


CONTENT

01	What is API?
02	What is API Testing?
03	Difference Between (API and Unit testing) and (APIs And Web Services).
04	API Testing Types.
05	Benefits Of APIs.
06	What exactly needs to be verified in API Testing?
07	Tools For API Testing.
08	Postman And Newman
09	Project Demo

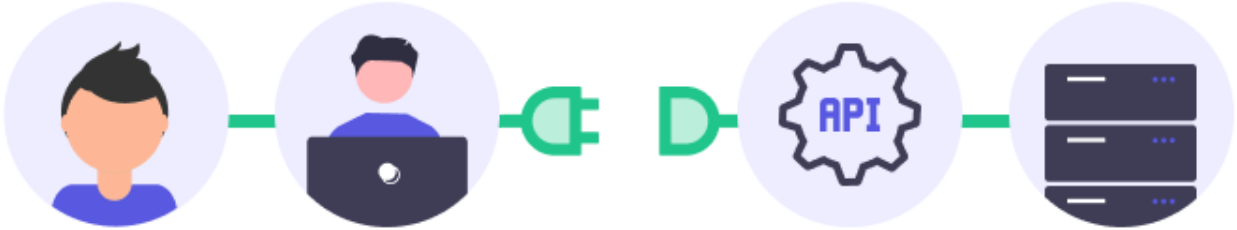
What is API ?

API is an acronym, and it stands for Application Programming Interface.

API is a set of routines, protocols, and tools for building Software Applications.

APIs specify how one software program should interact with other software programs.

How does an API work?



End user

End user will get the required info on your app.

Developers

Developers will design your app in a way that it can access data stored in assets/ databases via APIs.

API

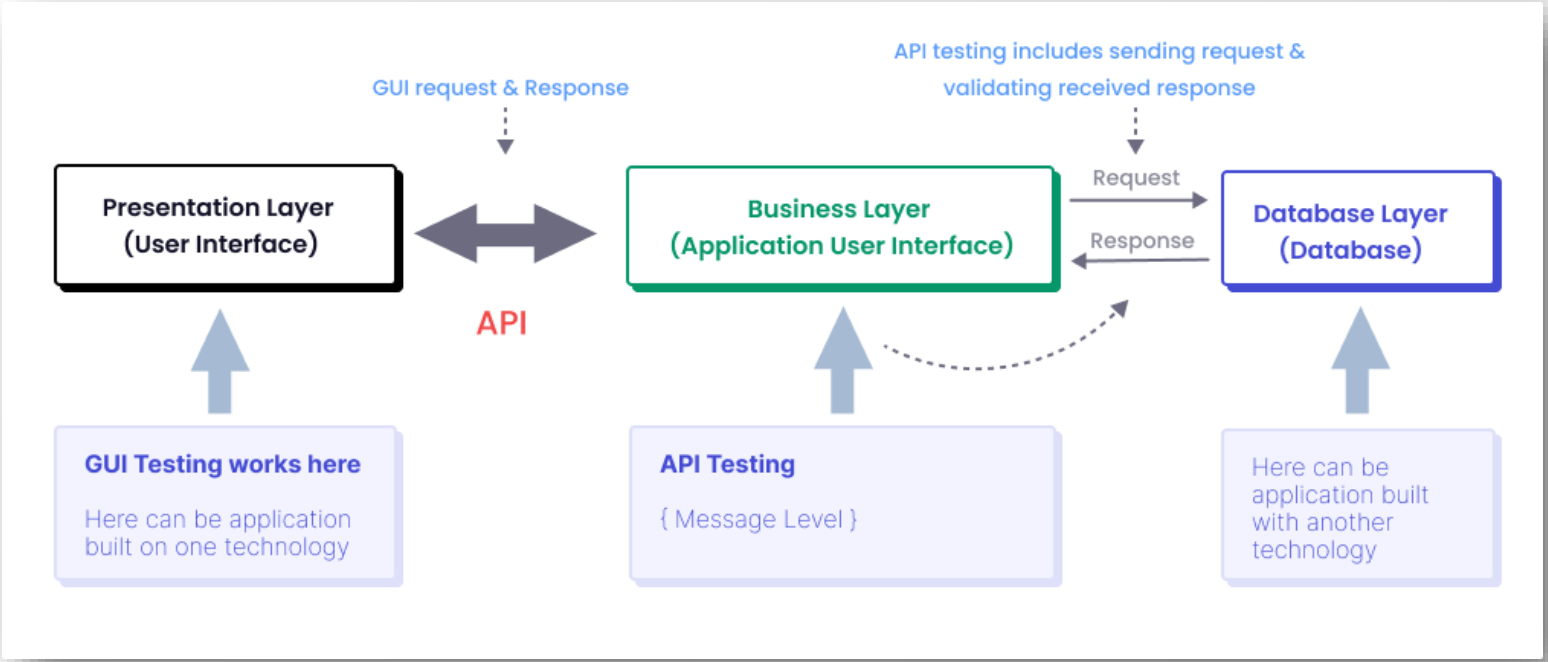
API will connect with assets/databases to access required info, sending it to the app.

Assets (Database)

The data of the other brands will be used for providing third-party services.

mailmodo

What is API Testing?



Difference between API testing and Unit Testing?

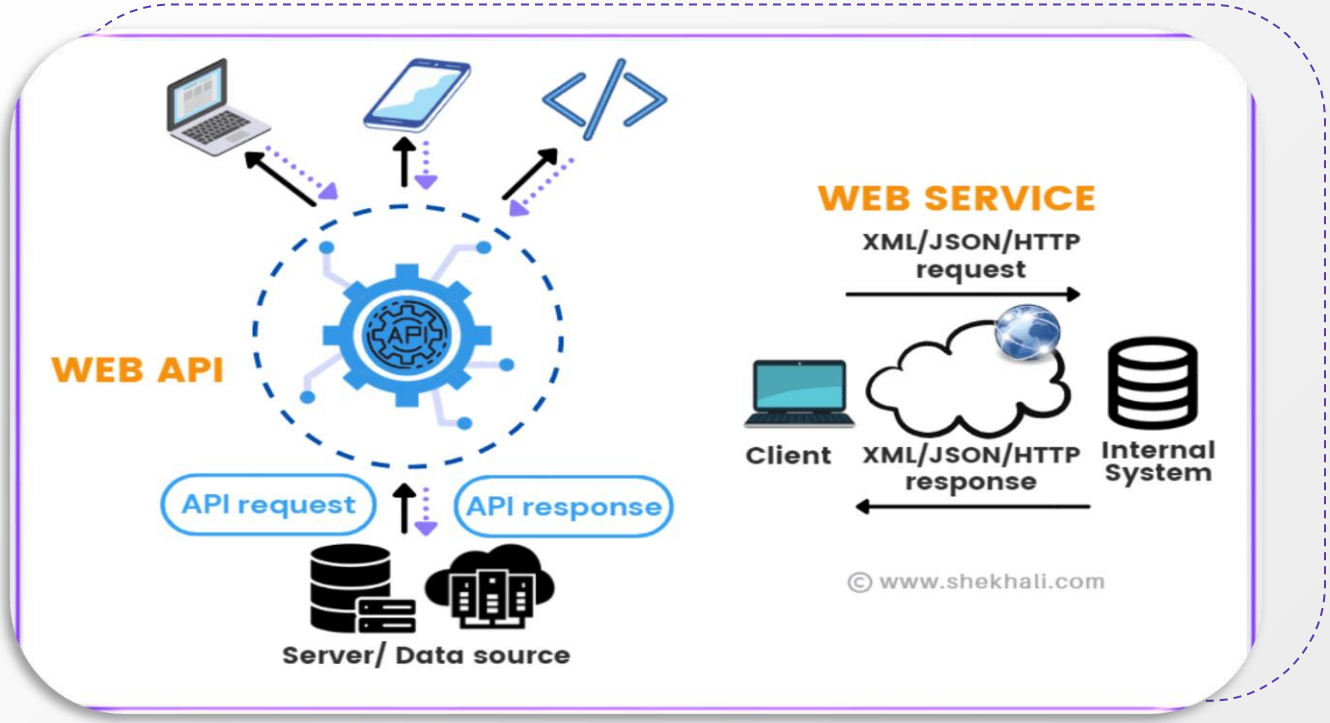
UNIT TESTING

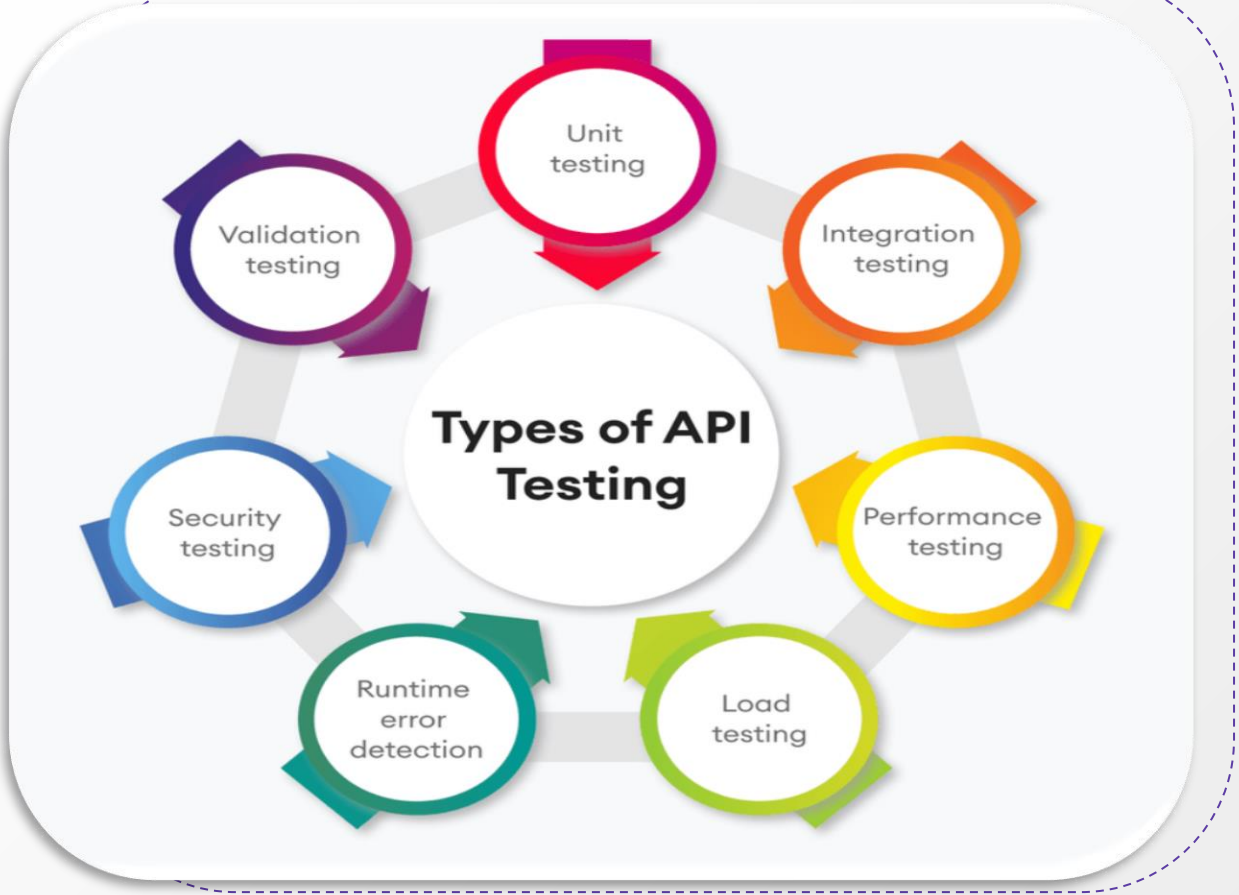
- Unit testing is conducted by the Development Team
- Unit testing is a form of White box testing
- Unit testing is conducted prior to the process of including the code in the build
- Source code is involved in Unit testing
- In unit testing, the scope of testing is limited, so only basic functionalities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

API TESTING

- API testing is conducted by QA Team
- API testing is a form of Black box testing
- API testing is conducted after 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

API And Web Services




Types of API Testing
Unit testing
Integration testing
Performance testing
Load testing
Runtime error detection
Security testing
Validation testing

Benefits of APIs

What exactly needs to be verified in API Testing?

Basically, on API Testing, we send a request to the API with the known data, and we analyze the response.

- Data accuracy
- HTTP status codes
- Response time
- Error codes in case API return any errors
- Authorization checks
- Non-functional testing such as performance testing, security testing

Common Tests On APIs

Some of the common tests we perform on APIs are as follows.

- To verify whether the return value is based on the input condition. The response of the APIs should be verified based on the request.
- To verify whether the system is authenticating the outcome when the API is updating any data structure
- To verify whether the API triggers some other event or request another API
- To verify the behavior of the API when there is no return value

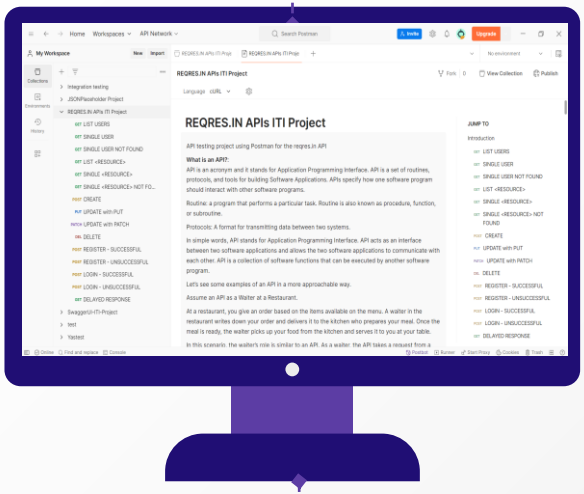
Tools used for API Testing

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

- Postman
- Katalon Studio
- SoapUI
- JMeter
- Rest-Assured
- Karate DSL
- API Fortress
- HP QTP(UFT)
- vREST
- Airborne
- API Science
- APIary Inspector
- Hippie-Swagger
- HttpMaster Express
- Mockbin
- Ping API
- Pyresttest
- Rest Console
- SOAP Sonar
- Unirest
- WebInject

What is Postman?

How Beneficial is Postman for API Testing?
What is Newman?



Demo

Demo of reqres.in API Testing Project in Postman

THANKS!

Do you have any questions?

Project @github: https://github.com/Tahani-Saber/reqres.in-API-Testing-Project-