**INTERVIEW AND QUESTION**

1. **What is API?**

* API stands for Application Programming Interface. It is a way for different applications to connect and exchange information with each other. API allow applications to work together, without having to build everything from scratch. They create the connection and integration between different applications.
* In summary, an API is an interface that allows software, applications, and services to communicate and share data with each other.

1. **Why do we need to do API testing?**

* API testing helps ensure that the API is working correctly. This is important because the API is the interface between systems. When testing the API, we can:
* Verify that the API returns the expected data accurately.
* Ensure the API is stable, reliable, and secure.
* Check the integration between the systems connected by the API
* Evaluate the scalability of the API as traffic increases.
* Verify the API’s security measures.
* Ensure the API documentation accurately reflects its actual behavior

1. **What is HTTP status code?**

* HTTP status codes are 3-digit numbers that web servers return to respond to client ‘s HTTP requests. Some common HTTP status codes include:
* **200 OK**: The request was successful, the server has processed the request and is returning the expected data.
* **400 Bad Request**: The request is invalid, usually due to incorrect data or syntax in the request from the client.
* **401 Unauthorized**: The use has not been authenticated or does not have permission to access the resource.
* **403 Forbidden**: The user may have been authenticated but does not have permission to access this resource.
* **404 Not Found**: The requested resource does not exist on the server.
* **409 Conflict**: the request cannot be completed due to a conflict with the current state of the resource.
* **500 Internal Server Error**: There was an error on the server side, and the request could not be completed.
* **503 Service Unavailable**: The server is temporarily unable to handle the request, often due to overload or maintenance.

1. **How many parts of API?**

The main components of an API include:

* **Endpoints**: The addresses (URLs) to access the API.
* **Requests:** The requests (such as GET, POST, PUT, DELETE) sent to the API.

**CRUD** is a fundamental operating model that includes 4 basic functions:

* **Create:** Create new data.
* **Read:** Read/View data.
* **Update:** Update data.
* **Delete:** Delete data.
* **Parameters:** the data sent along with the request.
* **Reponses:** the data returned by the API, usually in JSON or XML format.
* **Status Code**: The HTTP status code (such as 200, 404, 500) – indicating the result of the request.
  + **Response Code**: The specific API code – providing additional information about the request processing result.
  + **Response Message**: The text message – describing the result of the requests.
* **Response Body**: The data returned in the content of the API response, usually in JSON or XML format.
* **Authentication**: The authentication mechanisms to safely access the API, such as API key or OAuth.
* **Error Handling**: How the API handles and returns errors when it cannot complete the request.
* **Versioning**: How the API manages different versions.