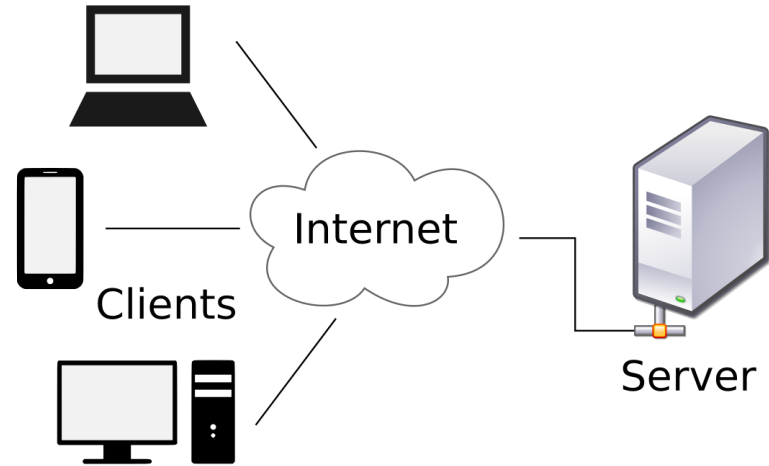


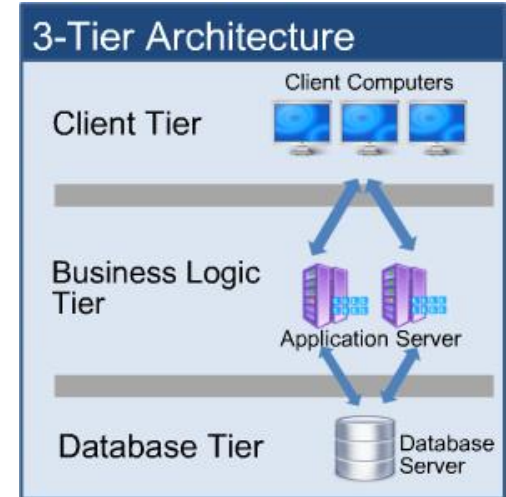
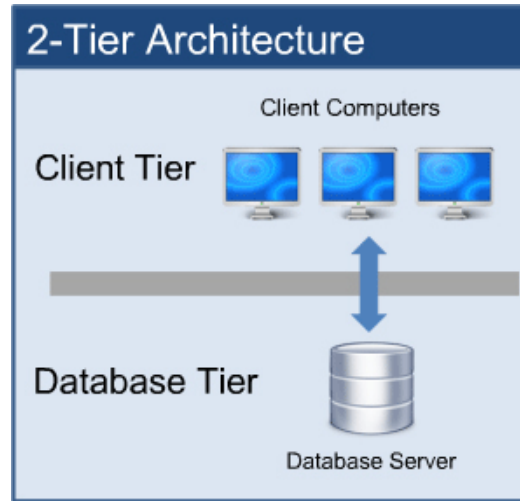
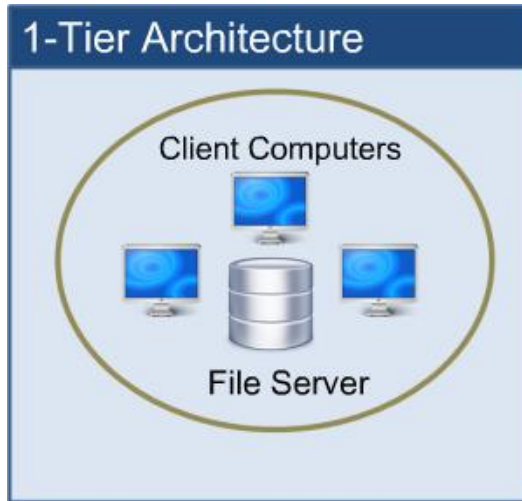
API/Web Services Testing Basics

What is Client and Server?

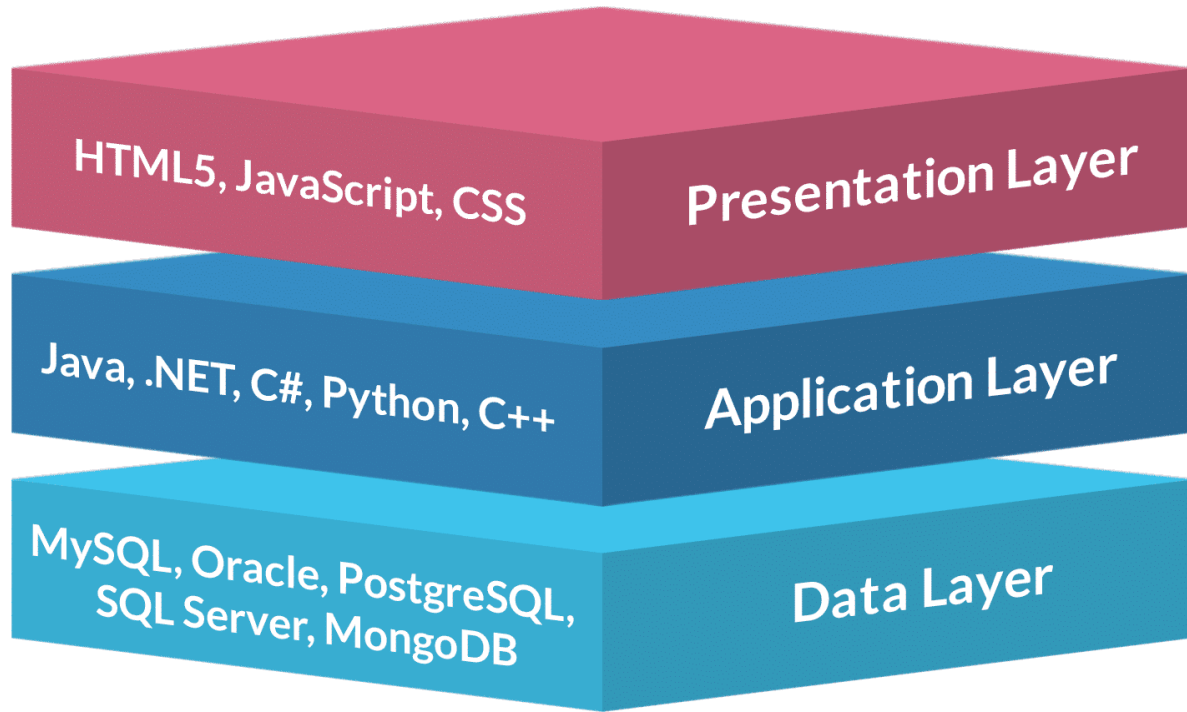
- **What is a Client?**
- A client is a computer hardware device or software that accesses a service made available by a server. The server is often (but not always) located on a separate physical computer.
- **What is a Server?**
- A server is a physical computer dedicated to run services to serve the needs of other computers. Depending on the service that is running, it could be a file server, database server, home media server, print server, or web server.



Client/Server Architecture



Client/Server Architecture

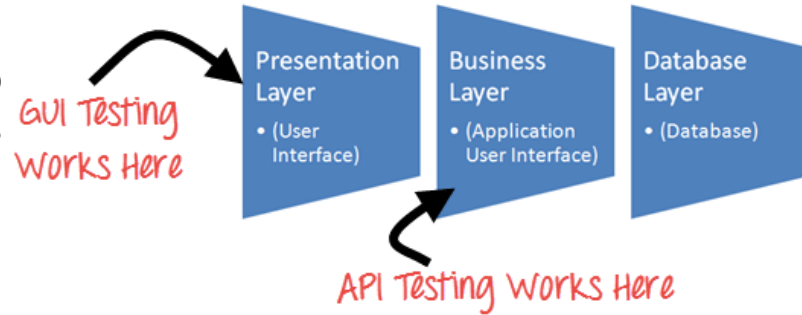


What is an API?

- API is means **A**pplication **P**rogramming **I**nterface.
- It enables communication and data exchange between two separate software systems.
- A software system implementing an API contains functions/sub-routines which can be executed by another software system.

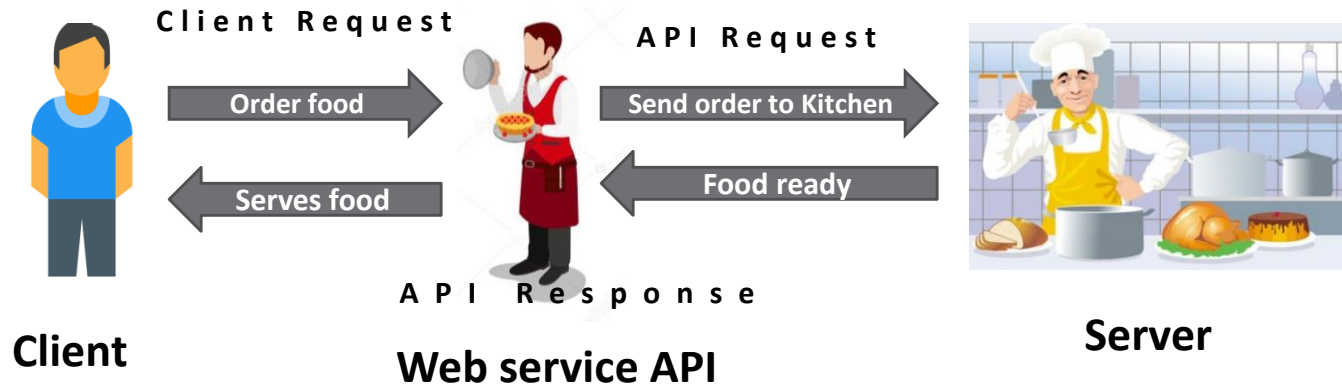
What is API testing?

- API Testing is entirely different from GUI Testing and mainly concentrates on the business logic layer of the software architecture. This **testing won't concentrate on the look and feel of an application.**
- Instead of using standard user inputs(keyboard) and outputs, in API Testing, you use software to send calls to the API, get output, and note down the system's response.
- API Testing requires an application to interact with API. In order to test an API, you will need to
 - Use Testing Tool to drive the API
 - Write your own code to test the API



What is Web Service?

- What is a Web Service: Web Service - service available over the web
- Enables communication between applications over the web
- Provides a standard protocol/format for communication
- **Why we use it?**
- Platform independent communication - using web services two different applications (implementation) can talk to each other and exchange data/information



Difference between API & Web service

1. Web Service is an API wrapped in HTTP.
2. All Web Services are API but APIs are not Web Services.
3. Web Service might not perform all the operations that an API would perform.
4. A Web Service needs a network while an API doesn't need a network for its operation.

Types of Web Services

- There are mainly two types of web services.
 - SOAP web services. (Simple Object Access Protocol)
 - RESTful web services. (**R**epresentational **S**tate **T**ransfer)

