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# Glosary Technology

#### **Protocol Buffers:**

Protocol buffers are Google's language-neutral, platform-neutral, extensible mechanism for serializing structured data – think XML, but smaller, faster, and simpler. You define how you want your data to be structured once, then you can use special generated source code to easily write and read your structured data to and from a variety of data streams and using a variety of languages.

### Difference API vs microservice:

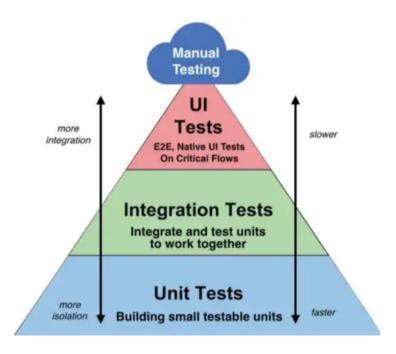
Microservices is an approach to building an application that breaks its functionality into modular components. APIs are part of an application that communicates with other applications.

### **Unitary Test:**

A unit test is a block of code that verifies the accuracy of a smaller, isolated block of application code, typically a function or method. The unit test is designed to check that the block of code runs as expected, according to the developer's theoretical logic behind it.

### **Integration Testing:**

Integration testing is a type of software testing where components of the software are gradually integrated and then tested as a whole. Usually, these components are already working well individually. However, they may break when integrated with other components. Integration testing aims to pinpoint those communication issues.



### Virtual envs vs Docker:

A virtualenv only encapsulates Python dependencies. A Docker container encapsulates an entire OS.

With a Python virtualenv, you can easily switch between Python versions and dependencies, but you're stuck with your host OS.

With a Docker image, you can swap out the entire OS - install and run Python on Ubuntu, Debian, Alpine, even Windows Server Core.

### Software Versioning:



### Assert:

```
x = "hello"

#if condition returns True, then nothing happens:
assert x == "hello"

#if condition returns False, AssertionError is raised:
assert x == "goodbye"
```

## **Environment Variables in Notebooks:**

import os

os.environ['NAME\_VARIABLE']='value'