26.28Apr.Linux & Continues Testing

28 April 2023

Linux

$ sudo su

xyz@mycomputer$ sudo su abc

abc@mycomputer$ sudo su abc

Package Management

- Allow install/remove package(Program/software) using Command Line
- Linux:
  - Debian: **apt** = Advance Packaging Tool(Ubuntu, Kali)
  - Redhat:
    - yum = yellowdog updater modifer
    - rpm = Redhat Package Manager
  - Fedora: dnf
- Python:
  - $ pip
  - $ conda

Kali(APT)

$ apt-get update

$ apt update

$ apt list

$ apt list --installed

$ apt list --installed | more

$ apt list --installed | grep tree

$ apt purge package_name

$ apt install tree -y

$ apt purge tree # Uninstall and Remove Configurations of Package(tree)

$ apt remove tree # Uninstall Package(tree)

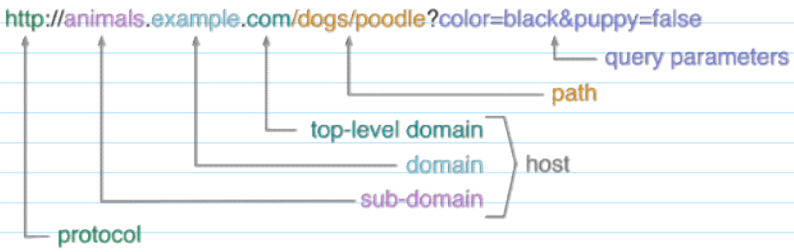
Web Server(nginx)
WebApp1

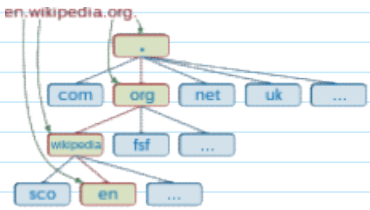
TLD(Category of your website)
.com = Business Purpose
.in = India
.uk = United Kingdom
.io = Techi
.ai = Artificial Intelligence
.org = Non-Profit Website
.gov.in
NIC = National Information Center = gov.in ---> DNS ===> Data Center(Set of Server) = Website(SubDomain1)

SubDomain1.gov.in

skit.org.in

a. **Register**
    a. IANA = mujahedh.com <--- GoDaddy(DNS Service Provider) <-- Paid(3 Yrs)
b. Web Development(**SDLC**)
    a. Web Analysis
    b. Web Designing
    c. Web Coding
    d. Web Testing
c. Web Hosting(**Deployment**)
    a. Installing NGINX(Web server)
    b. Configuration(Configure web server)
    c. Start Service (Web server start)
    d. Upload Website(Consume webserver using Web App1)





Logical Server

Web/Application Server
1. Nginx = Any one
2. Apache2(Debian) or httpd(Redhat) = PHP
3. Tomcat = Java
4. IIS = MS.Net

1. Register(GoDaddy/domain.Google)
2. Develop website
3. Deploy
4. Web Hosting

Input --> [Arduino] -----> Google Search Engine --> WS1

Result
WS1
WS2
WS3

Website

a. Static(Webserver) = 100Rs/Page
    1. Wikipedia
b. Dynamic(Webserver, Application server, Database server) = 1000-5000 Rs/Page
    1. Web Application
        a. Login & Dashboard (Gmail, LMS, ERP, CRM)
        b. MPA
        c. SPA
    2. Web Service
    3. Web Search Engine(Go, Python, NGINX)

Continues Delivery/Continues Deployment

1. Analysis = Requirement
2. Developer = Code --> Push github
3. Tester = Testing Cases
4. DevOps = Integrate(Jenkins)
5. Acceptance Test = Report
6. Result:
    a. Pass = Deploying to production environment
    b. Fail = Email(Notify)

1-5 = Continues Delivery

1-6 = Continues Deployment

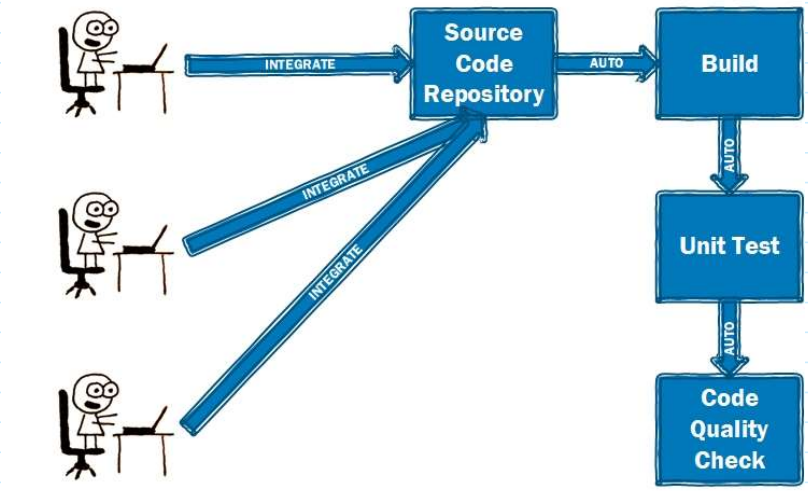
Continues Testing

Dev1(F1)

Dev2(F2) CI(F1,F2,F3) --> (**Integration Test -->System Test --> Regression Test --> UAT-User Acceptance Test**)

Dev3(F3)

Continues Integration



JAVA BASED APPLICATION

IDE = Eclipse/VSCode

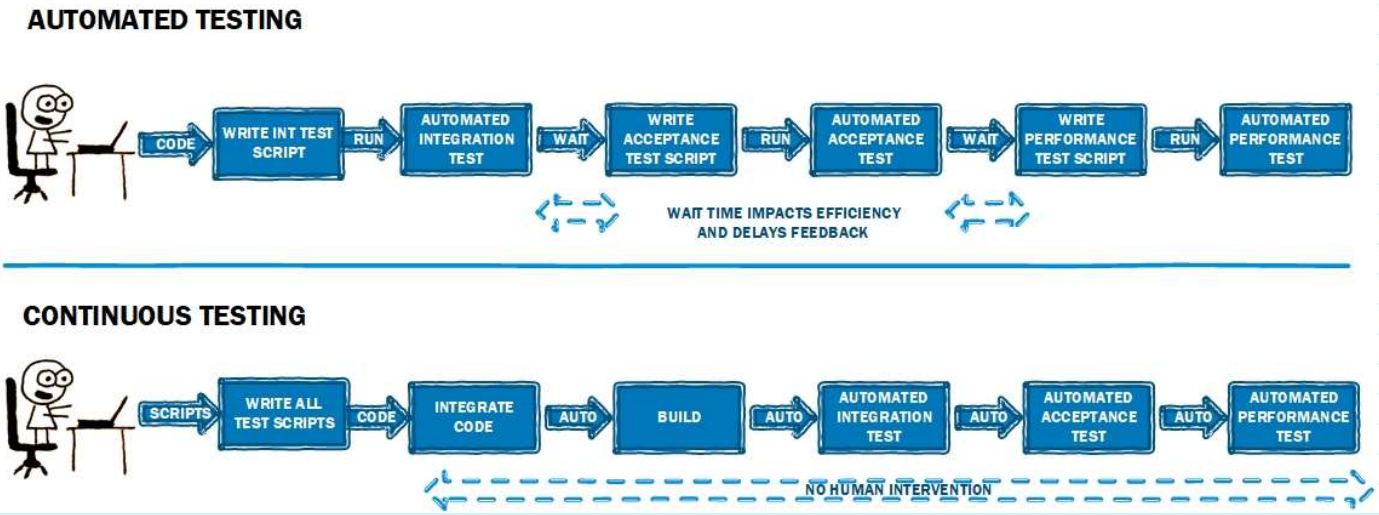
Source Code = Git --> Github

Framework: Spring Boot

Database: Postgresql

Build Tool= Apache Maven
Unit Test = Junit
Code Quality = JaCoCo[Java COde quality COverage]/Surefire
Continues Testing = Selenium JAVA(TestNG)
Integration Tool = Jenkins(Government Clerk/Bring and give)

Pen Testing



IDE: **VSCode**
Source Code: Github
Framework: Flask, Django
Database: SQLite/MySQL
Build: PyBuilder
Testing: Selenium(Python), Beautiful soap, Request
Continues Integration: Jenkins

VSCode:
Java
Python
Go
Node.js
C++
MS.Net
Terraform
Ansible
Docker
Kubernetes

Github:
- Python, Java, Go, PHP, MS.Net, Node.js
- DevOps = Github Actions, Pipeline

CI:
Jenkins(80% +) --> Pipeline

Container:
Docker --> Kubernetes

Url: https://github.com/login

UserName:
Password:

Sign In

URL UN1 PWD1
URL UN1 PWD1
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