

Arinash Pandey

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## CI/CD

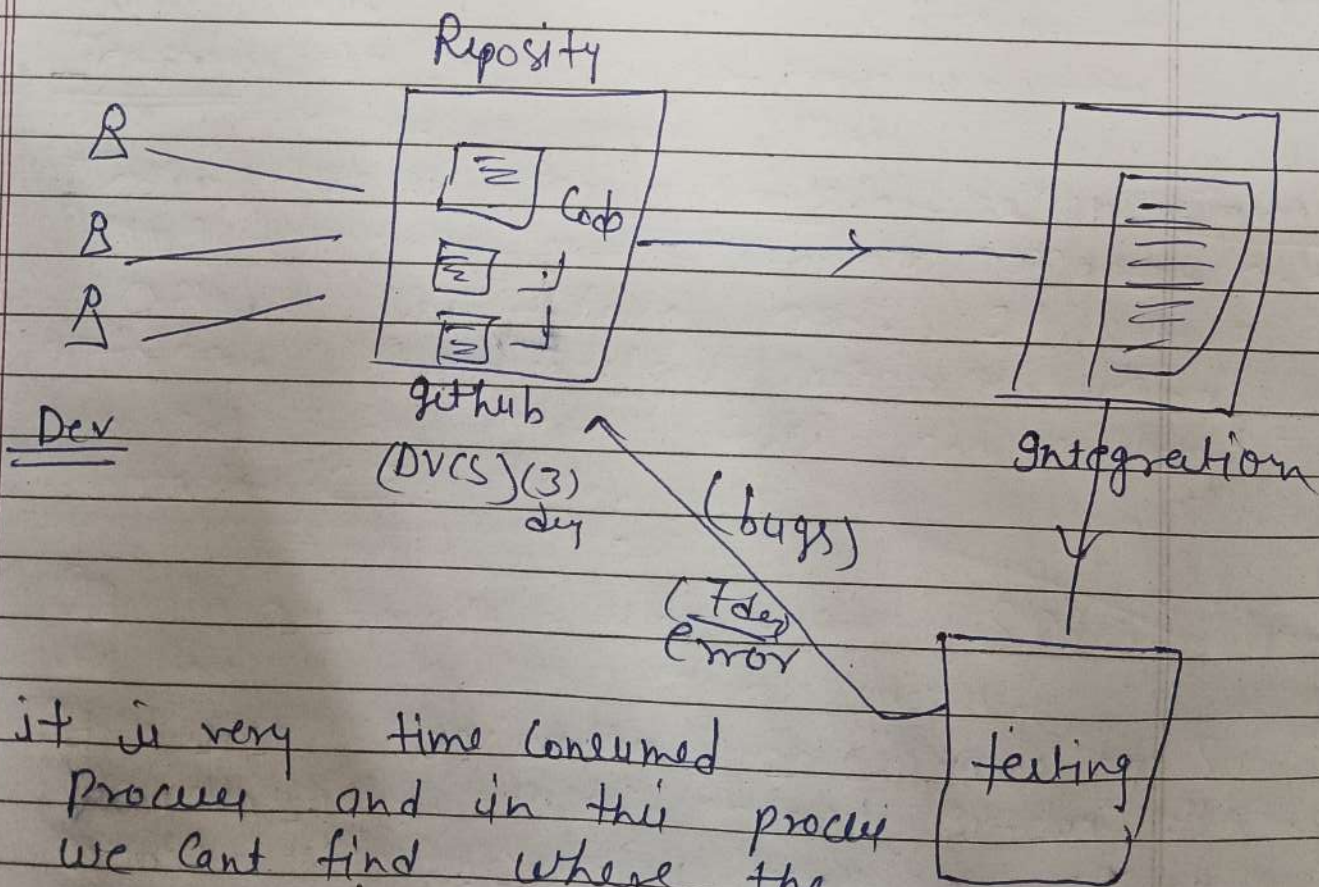
Continuous Integration | Continuous Delivery  
Continuous Deployment

(FCFS)

this is a SDLC methodology

↓  
Software development life cycle.

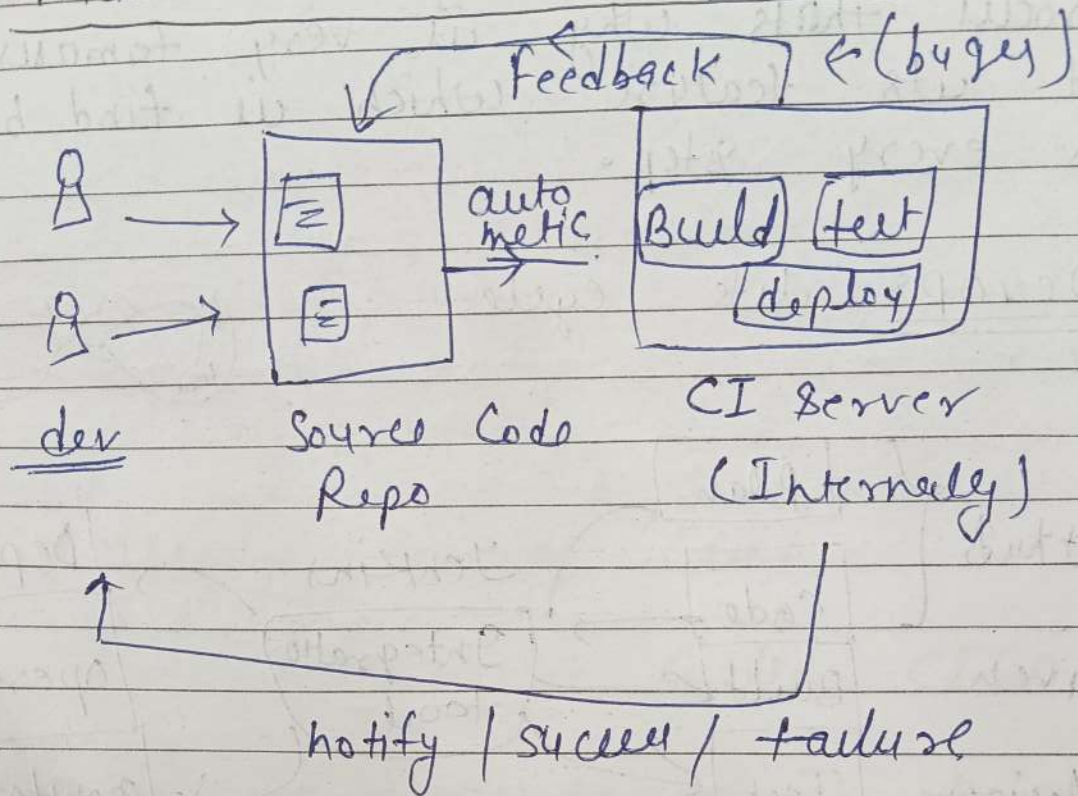
Before CI :-



it is very time consumed  
process and in this process  
we can't find where the  
generate is bugs so developer will  
find to all code.



After Continuous Integration :-



In this process work in real time  
So we minimize error and time

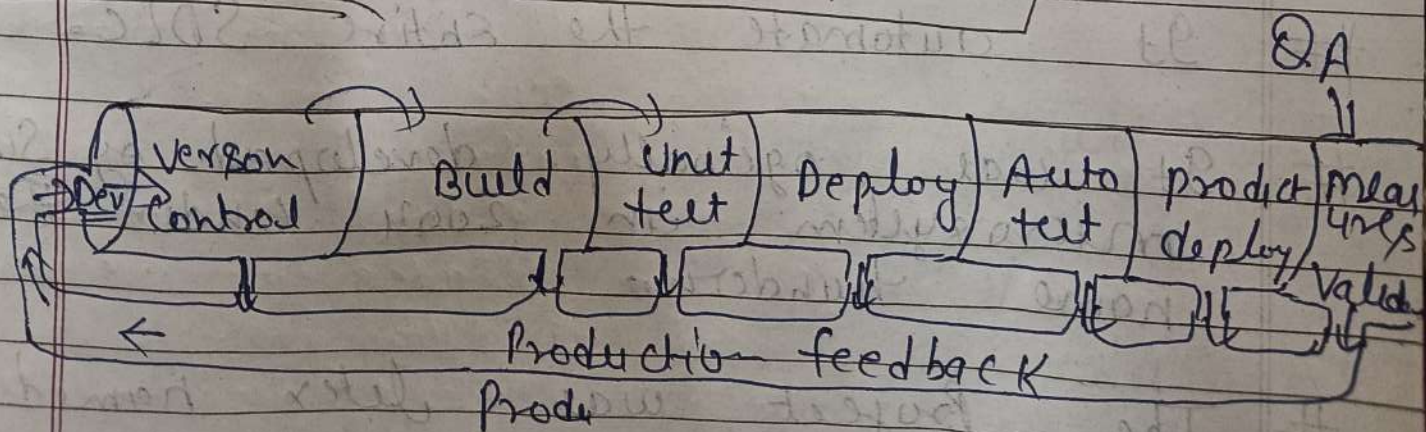
the means we automate this process

**Continuous Build + Continuous testing**

Continuous integration

Practicals

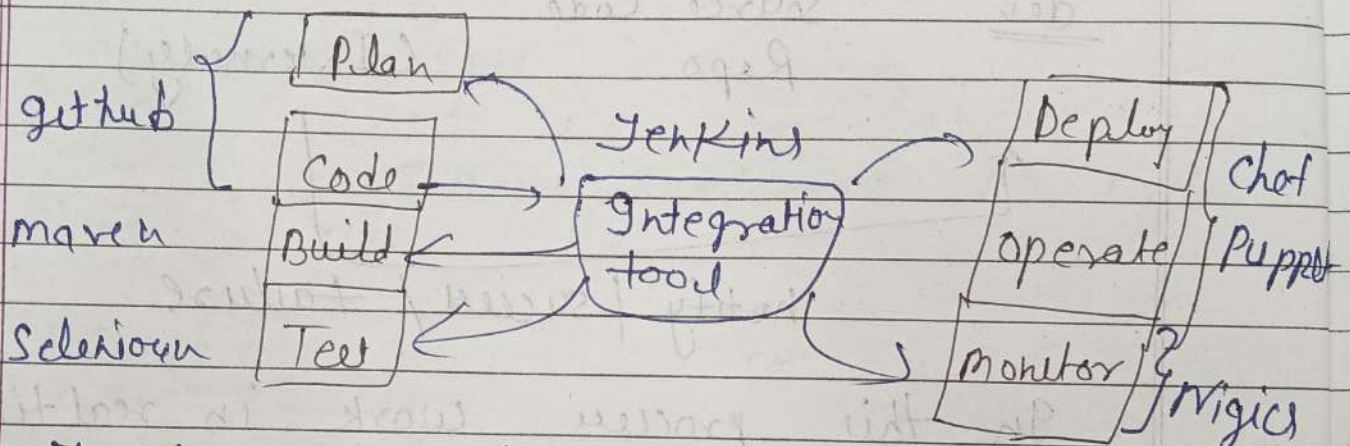
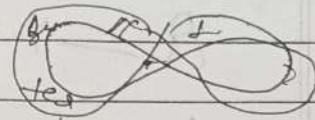
**CI/CD Pipeline**





In this process testing catch and every process that's why it very famous because of its feature which we find bugs in every step.

## Devops life cycle



Jenkins ⇒ It is a integration tool.

# Jenkins is an open-source written Java that runs on windows / macos and other Unix-like OS. It is a free, Community supported and might be our first choice tool for CI.

# It automate the entire SDLC.

# It was originally developed by Sun microsystem in 2004 under the name hudson.

# The Project was later named



Port ( 8080 )

(Jawa) installed  
Date: 19/11/2019

Jenkins when Oracle bought microsystems

# It can run on any major platform without any compatibility issues.

# Whenever developer write code, we integrate all the code of all developers and that point of time and we build, test and deploy to the client.

This process is called CI/CD

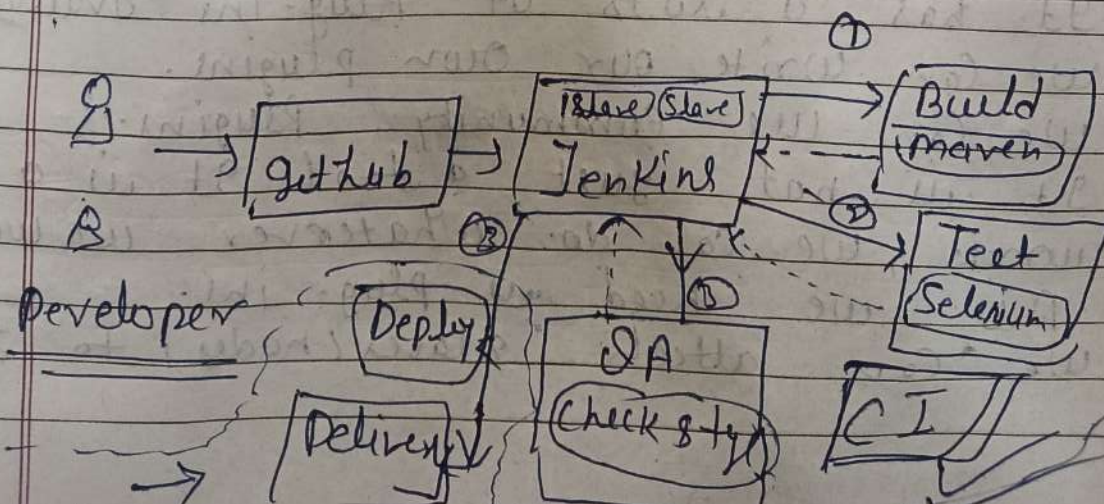
# Jenkins help us to achieve this

# Because of CI, Now Bug will be reported fast and get rectified fast. So entire software development fast.

Jenkins  
Open source

Handson  
Paid

Workflow of Jenkins





Plugins which port to connect to play or  
of our work.

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Rich of Plugins → Jenkins

CI/CD

pull  
to read

Artifactory →  
for future use  
code

We can attach git, maven, Selenium  
and Artifactory plugin to Jenkins.

ready to use code store in Artifactory  
Archiving Purpose

Once developer puts code in github,  
Jenkins pull that code & send to maven  
for build.

Once build is done, Jenkins pull that  
code and send to Selenium for testing.

Once testing is done, then Jenkins will  
pull that code and send to artifactory  
as per requirement and so on

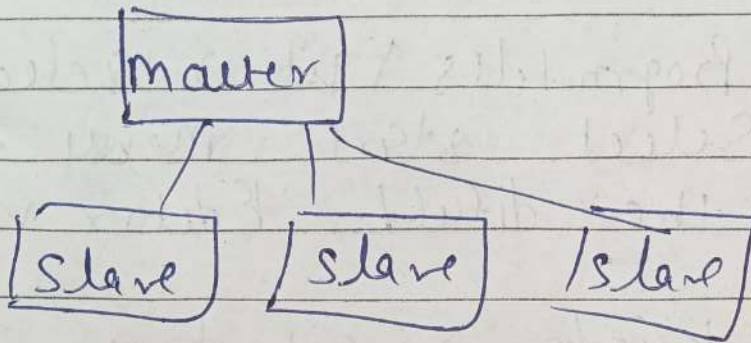
We can also deploy on Jenkins.

Advantage of Jenkins

- # It has a lots of Plug-ins available.
- # We can write our own plugin.
- # We can use Community Plugins.
- # It is not just a tool. It is a true work, we can do whatever we want.
- # All we need is plug-in.
- # We can attach slaves (nodes) to Jenkins

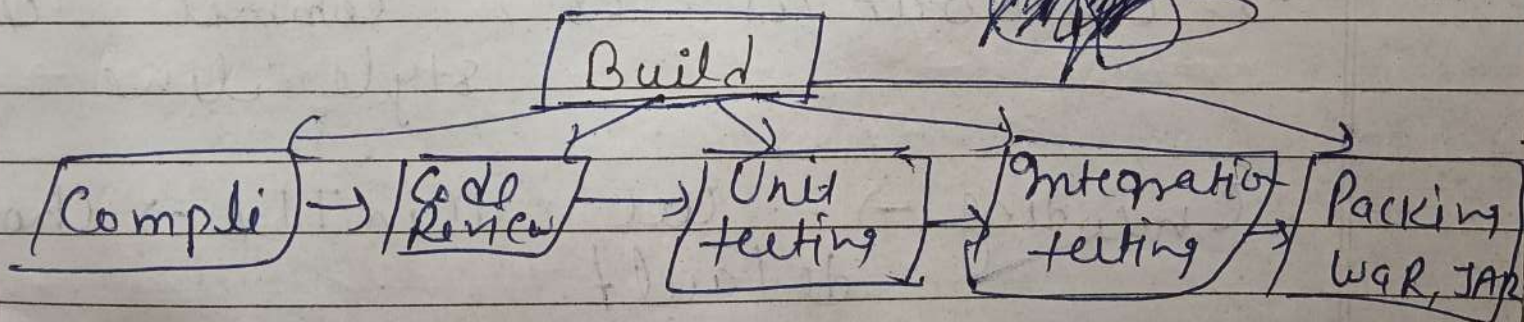


Master. It instruct others (Slaves) to do job. If slave are not available, Jenkins itself does the job.



# Jenkins also ~~become~~ behave as Cron Server Replacement. Can do schedule task.

# It Can Create Jobs. (assign the work)





First to git download for window  
open to downloaded file

Preamble → C: \ Program Files \ git → Select  
Component → Select start menu folder  
→ Choosing the default Editor vim

→ Let git decide → git from the  
Command line and also from  
the 3<sup>rd</sup> party software →  
(Arinach Pandey)  
Use the open SSL library

→ Checkout as - ls, Commit unix-  
style line

Encoding → Use MinTTY → choose  
default

behaviours → git Credentials Manager  
Core

→ ☒ Enable file system caching  
→ install

go to Command Prompt in Laptop

→ git Config. -- global username  
"Arinach Pandey"



git Config --global userEmail "

"apandey71357@gmail.com"

→ git Config --global --list

→ git --version

After that we install Java 16:48

Maven install (Arinam Rander)

Go to google chrome - Search Maven.  
apache.org → Download → Binary zip  
archive.

Extract file → C:\Devtools

Go to C:\ → Devtools → Apache-Maven  
Copy to path

Now search Edit Environment variable

→ System variable → New

Variable Name → m2-home

Variable Value → past the path

Now go inside Apache Maven folder  
→ bin → Copy path

Now again go to "Environment  
variable"



System variable → path → new - path.

Now open cmd

C:\User\Home> mvn -version

C:\user\home> echo %M2-HOME%

now Restart the Laptop.

Jenkins

Arinall Pandey

Go to google chrome → jenkins.io →  
download → Select LTS → window →  
download

Open download file → Run it and install  
After Uninstallation it automatically  
open as local host 8080

Unlock the page by using password

(Path → (password))

Now install pluggable plugins

Username — admin

Password → admin@123



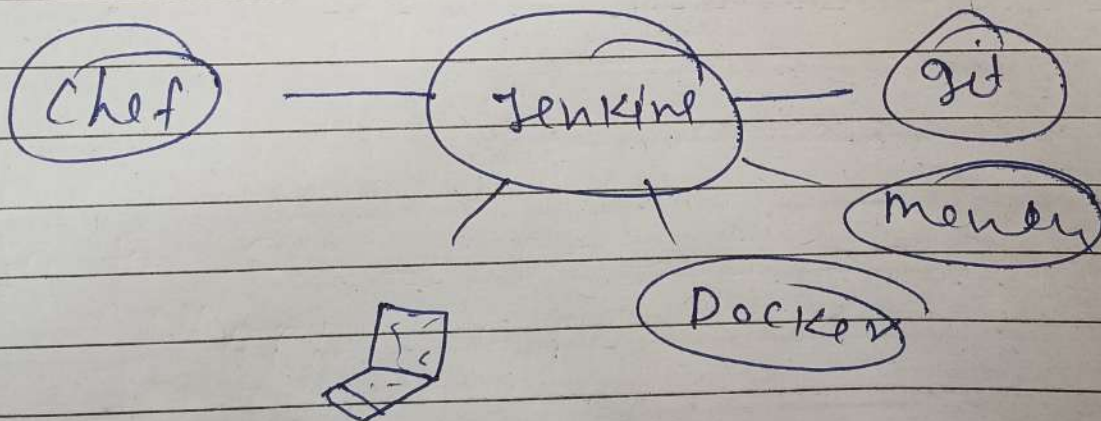
email address - apandey71357@gmail.com

→ Save & Continue

→ Start using Jenkins.

Plugins :-

This is a small libraries that add new abilities to Jenkins and can provide integration point to other tools



Rich in plugins.