Q: What is the CI-CD pipeline? What is Jenkins?



Ans: CI-CD is not a tool but it is a methodology.

* CI-CD continuous integration-continuous delivery or deployment.
* Jenkins is an open-source project written in JAVA that runs on Windows, macOS, and other UNIX-like operating systems.
* It is free, community supported, and might be your first choice tool for CI.

Q: Why is Jenkins so popular in the world?

Ans: just because of community support and lots of plugins are available.

* Jenkin automates the entire software development life cycle.
* Jenkins was originally developed by sun Microsystems in 2004 under the same Hudson.
* The project was later named Jenkins when oracle bought microsystem.
* It can run on any major platform without any compatibility issues.
* Whenever developers write code, we integrate all that code of all developers at the point in time and we build, test, and deliver/deploy to the client. this process is called CI-CD.
* Jenkins help us to achieve this because of CI, now bugs will be reported fast and get rectified fast so the entire software development happens fast.
* **Workflow of Jenkins:-**
* We can attach git, maven, selenium, and artifactory plugins to Jenkins.
* Once developers put code in GitHub, Jenkins pulls that code & sends it to maven for the build.
* Once the build is done, Jenkins pulls that code and sends it to selenium for testing.
* Once testing is done, then Jenkins will pull that code and send it to the artifactory as

Per requirement and so on.

* We can also deploy with Jenkins.

**Advantages of Jenkins:-**

* It has lots of plug-ins available.
* we can write your own plug-in.
* we can use a community plug-in.
* Jenkins is not just a tool. it is a framework i.e we can do whatever we want

All we need is a plug-in.

* We can attach slave(nodes) to Jenkins master it instruct other(slaves) to do

Job. It slaves are not available, Jenkins does the job itself.

* Jenkin also behaves as a crone server replacement i.e can do the scheduled task.
* It can create labels.

Scenario of jenkins

build

MAVEN

Jenkins

GitHub

Dev

selenium

source code

test

CI

QA

CD delivery

deploy

BUILD

COMPILE

CODE REVIEW

UNIT TESTING

INTIGRATION TESTING

PACKAGING (WAR,JAR)