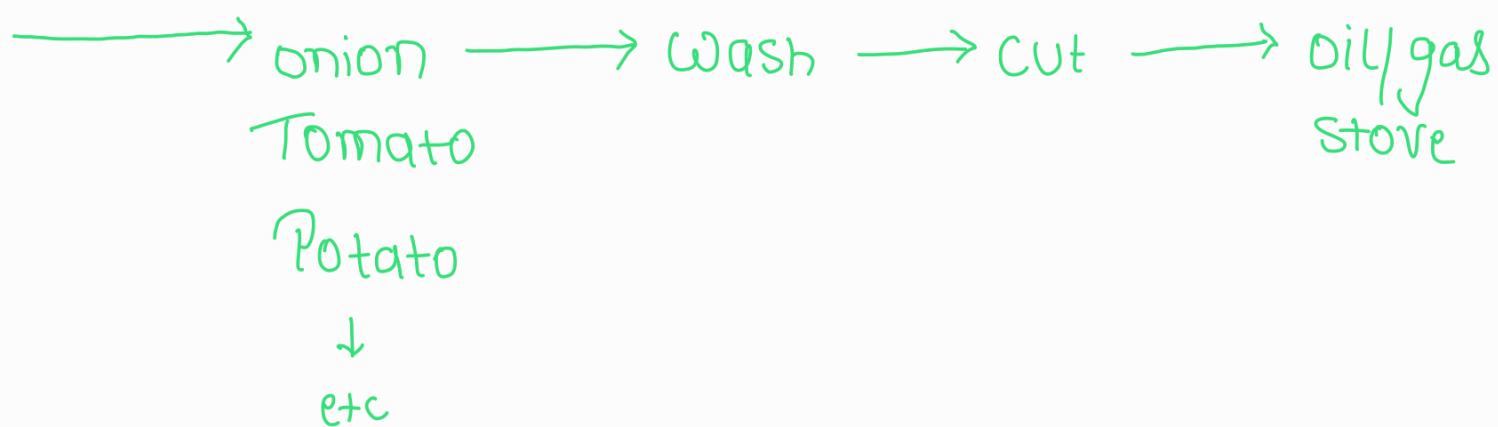


→ What is CI/CD Pipeline ?
→ What is Jenkins ?

CI / CD
↓
COntinuous Integration continuous Delivery / continuous Deployment

Now what is pipeline here ?

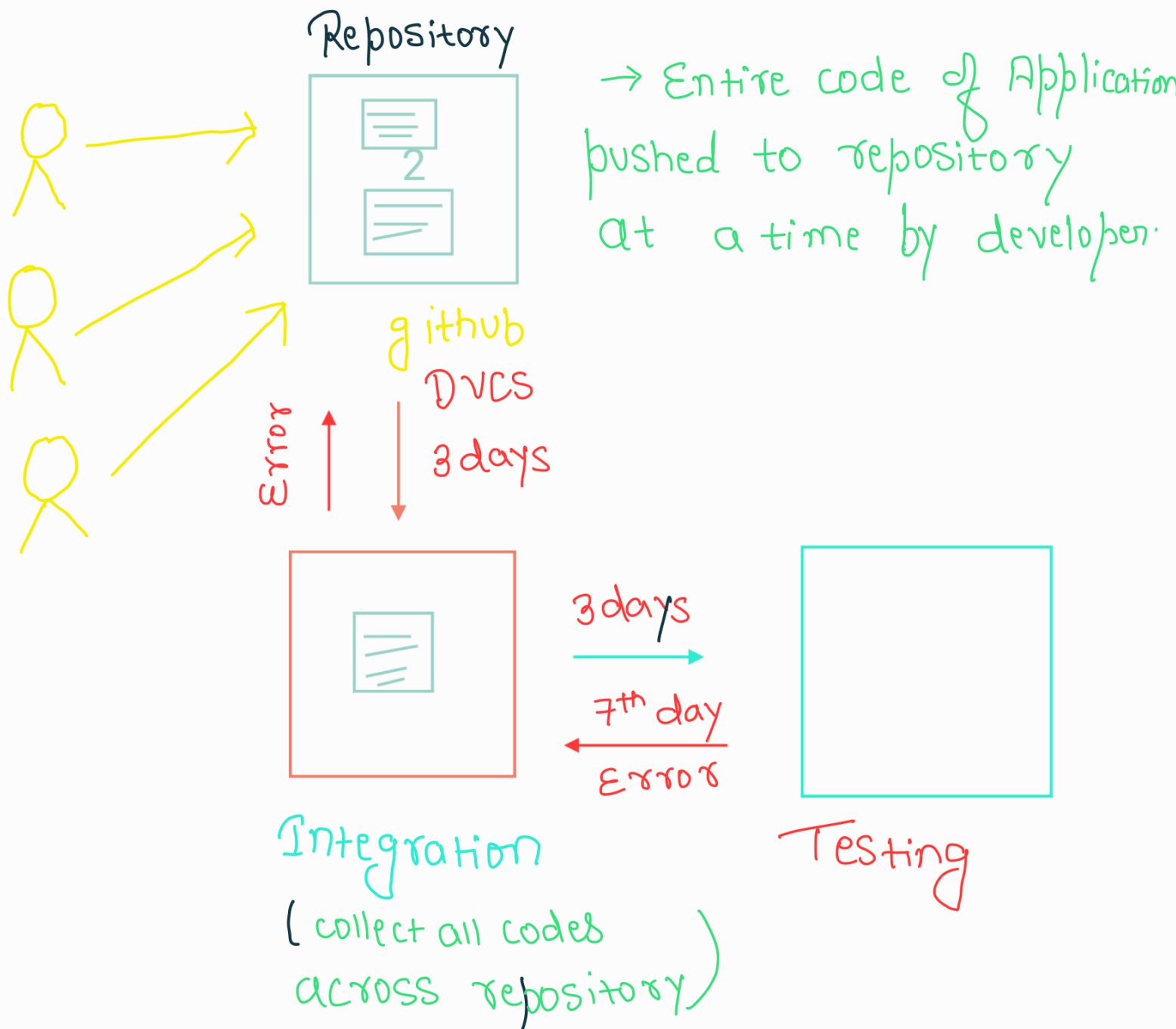
Let's take an example you want to prepare food. What will be the process ?



First come and first serve

→ CICD is a Methodology used in SDLC.

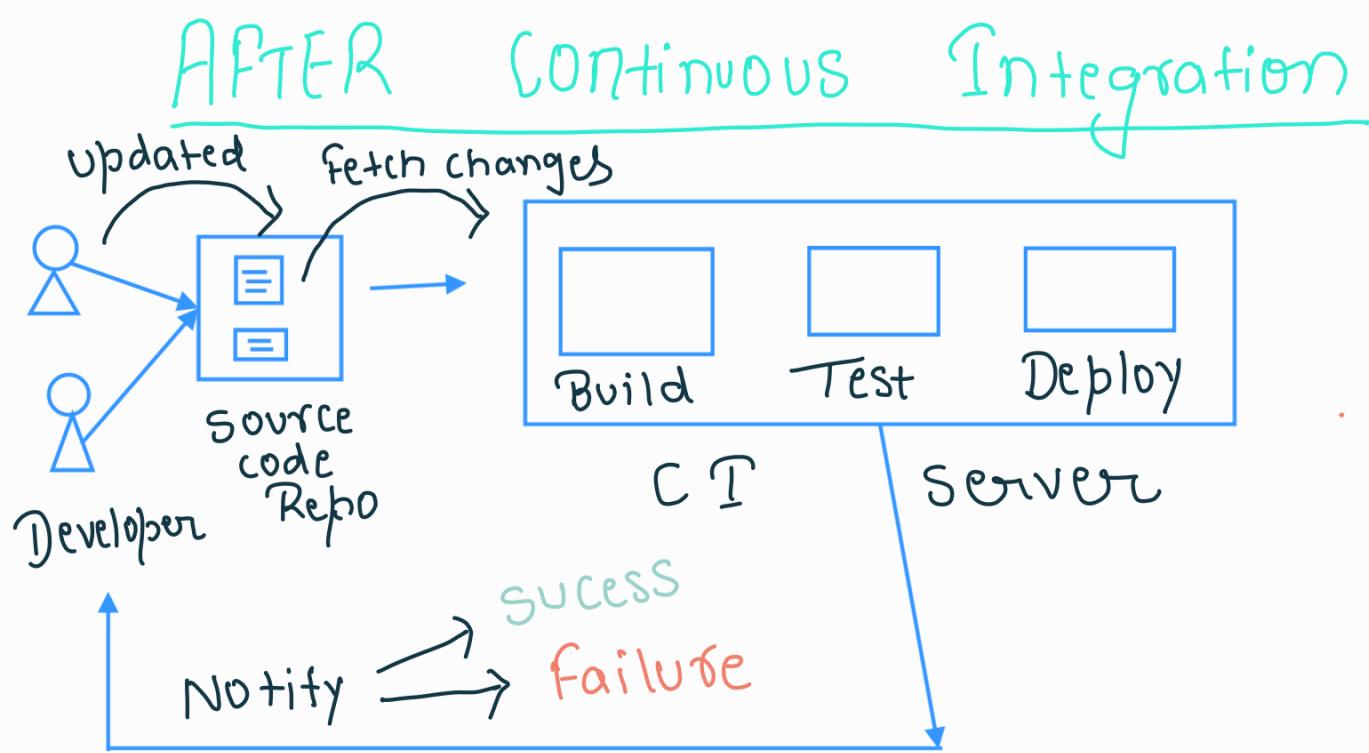
Before continuous Integration



* Testing guy notified to developer that Some error is coming in code. Now developer will again sit and check the entire code to find the

error, then updated the code and again pushed the code to github.

→ This was time taking process and hence delivery on time was frequently not possible.



→ Here developer is not pushing the entire application code at a time.

→ They divided the code in part-wise like, first day just pushed the login code, the second day pushed payment page code like that.

So, What's the benefit?

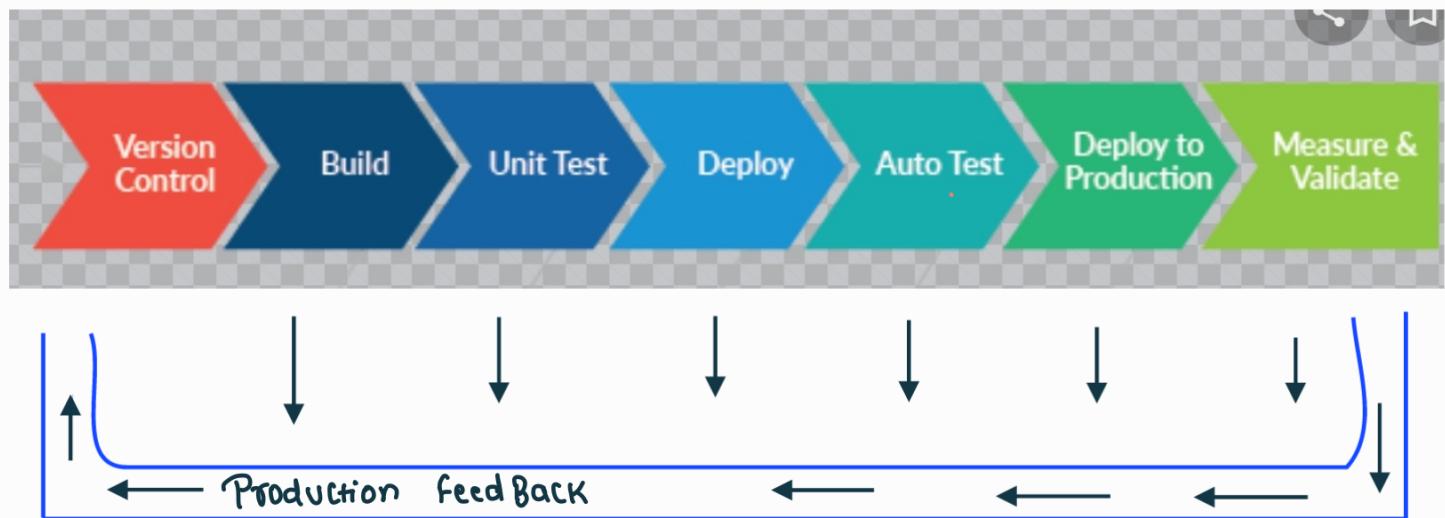
- As developers are pushing code part-wise and also due to continuous integration testing team keep testing part-wise and they keep notifying about any error to developers if found.
- If error is there then now developer have to just go through that part of code not entire code.
- Hence, save time and deliver the project quickly.

Continuous Integration

= Continuous Build
+

Continuous Testing

CI/CD Pipeline

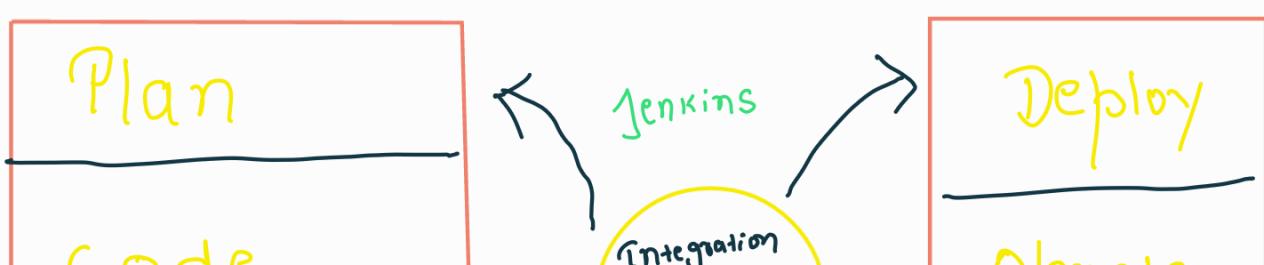


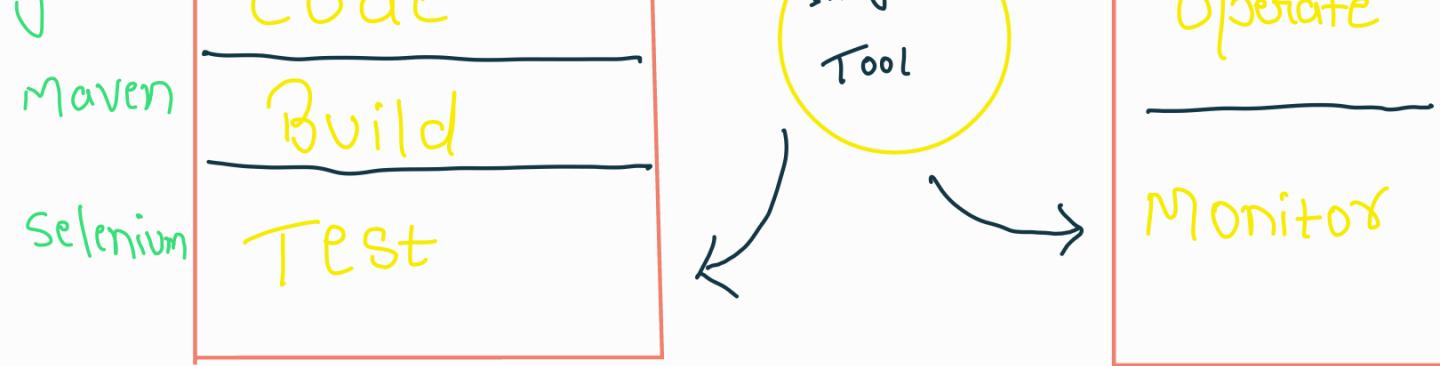
→ This feedback is coming from every level of pipeline.

↳ If at any level error comes, developer will get the feedback.

↳ If code passes till last level, developer will be notified that code is success.

→ Systematic way to find the error at every level.





→ Jenkins helps us to Automate the process by integration of Tools.



→ Jenkins is an Open-source project

written in java and can run on any operating system.

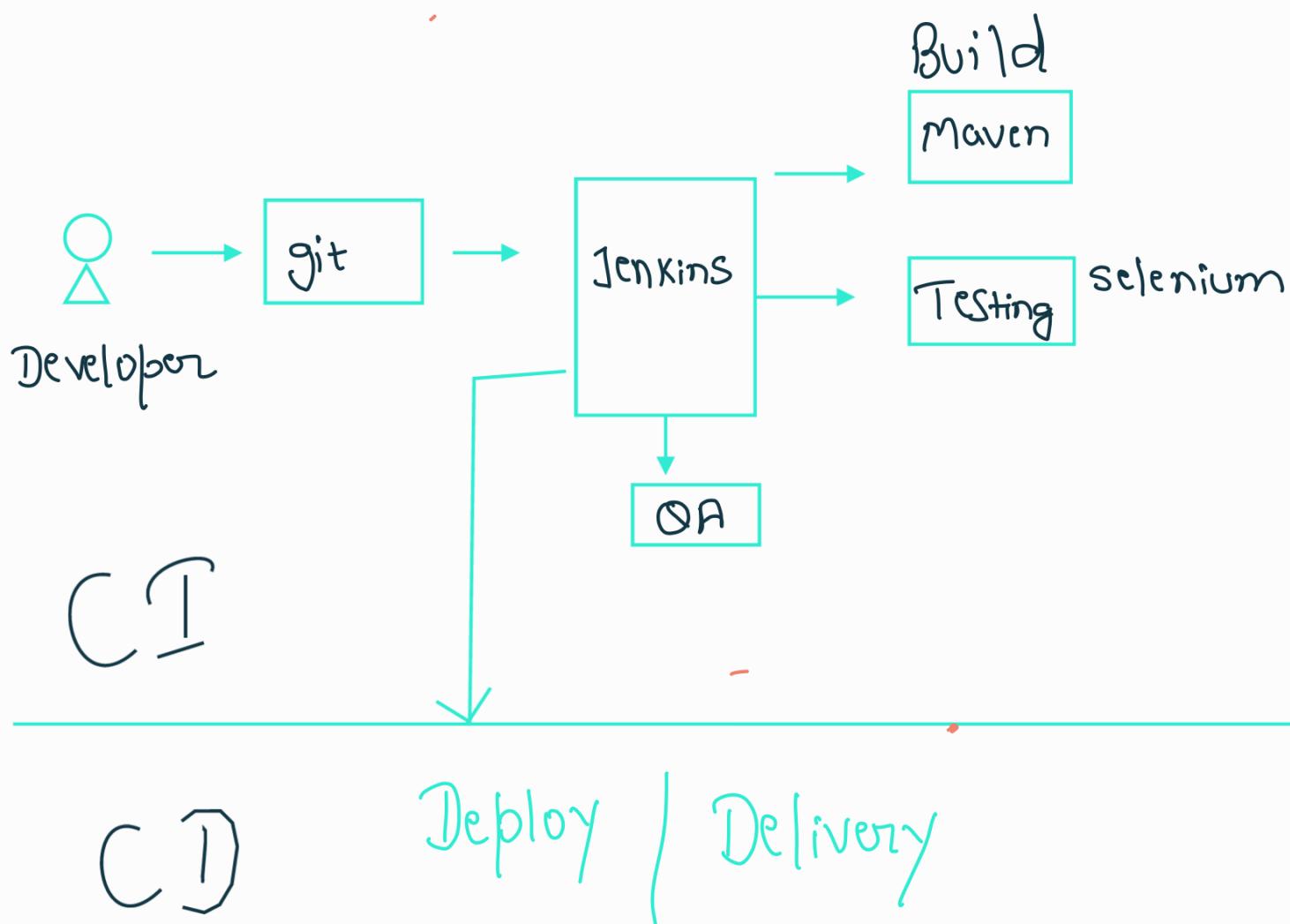
- work on port 8080.
- Strong community support and plugin available for most of the usecases.
- Automates the entire software development cycle.
- git can run on any major platform.

→ Whenever developers write code, we integrate all that code of all developers at that point of time and we build, test and deliver/deploy to the client.

→ This process is called CI/CD.

→ Because of CI now bugs/errors will be reported fast and get rectified fast.

Workflow of jenkins



→ Delivery: Client is technical person and they know how to install and setup the application.

Deploy: Client is non-technical person hence we go to client side and install and configure the application.

up to now

Plugin → Plug and play like feature.

↳ For every tools we will require some plugins which will help us to integrate these tools with jenkins.

→ we can attach git, Maven, Selenium and artifactory plugins to jenkins.

↓
final source code ready to deploy
we store it here.

→ In git we store raw code.

Workflow

→ Once developer puts code on github, jenkins pull that code and send to Master 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 (Archiving purpose) as per requirement and so on.
- ↳ we can also deploy with jenkins.

* Jenkins also behave as crone server i.e can do scheduled task.

↳ Scheduling of task like pull code every 4 hours.

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