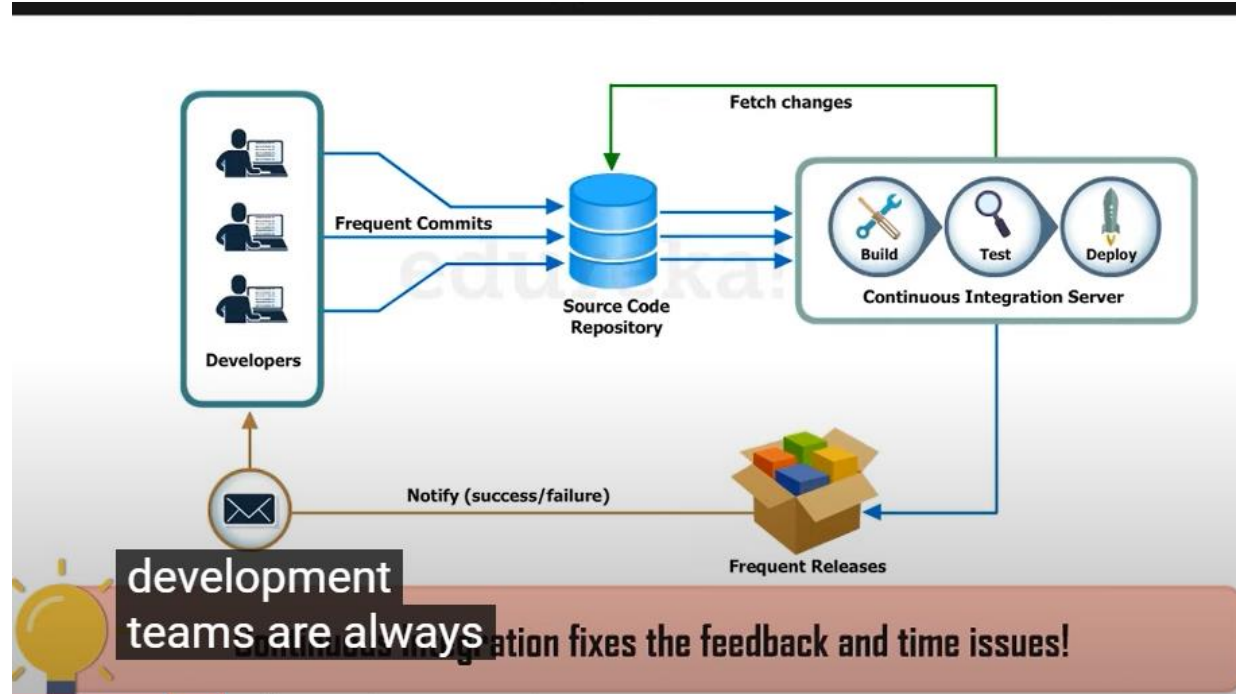


What happened before CI ? All tasks were manual . Entire code will be built at once . Difficult to debug . Slow delivery , Continuous feedback were not present .

CI – Frequent commits ,



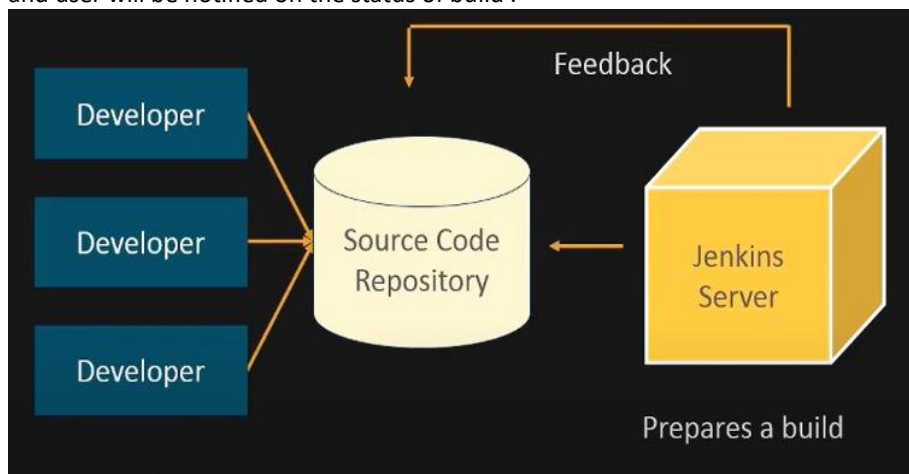
Jenkins is CI tool written in java .

The first project is to teach you to compile a code that is present in GitHub, Review that code and Analyze the test cases present in the GitHub repository through building a Jenkins Pipeline.

PRE – REQS : Jenkins server , install html publisher plugin , install maven plugin , global tool configuration
> maven – add maven .

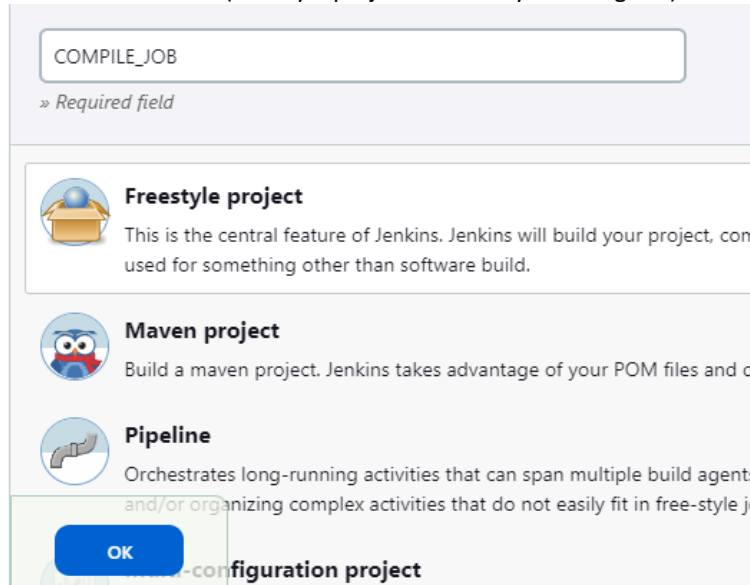
Create build pipeline in Jenkins .

- 1) Developer will commit code to vcs .
- 2) Jenkins servers pull code from vcs at regular intervals and if source code is changed then build will start and user will be notified on the status of build .



We will create 3 jobs .

Create COMPILE JOB (freestyle project – it is easy to configure) .



COMPILE_JOB

» Required field

Freestyle project
This is the central feature of Jenkins. Jenkins will build your project, configured for something other than software build.

Maven project
Build a maven project. Jenkins takes advantage of your POM files and dependencies.


Pipeline
Orchestrates long-running activities that can span multiple build agents and/or organizing complex activities that do not easily fit in free-style jobs.

Configuration project

OK

1) Use <https://github.com/upasanatestgit/Demo.git> for git scm .

Source Code Management



☐ None

☒ Git ?

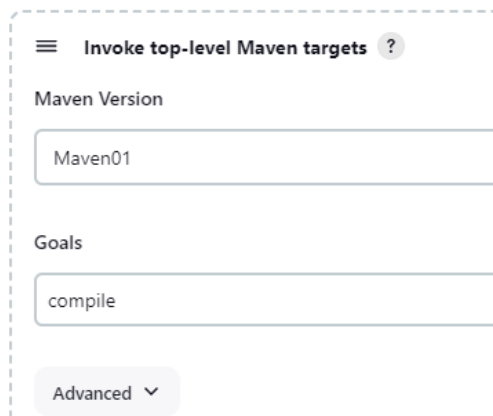
Repositories ?

Repository URL ?

https://github.com/sapnarsy2612/COMPILE_REVIEW_PIPELINE.git

2) Build – invoke top level maven targets .maven version – Maven01 , Goals – compile .

Build Steps



≡ **Invoke top-level Maven targets** ?

Maven Version

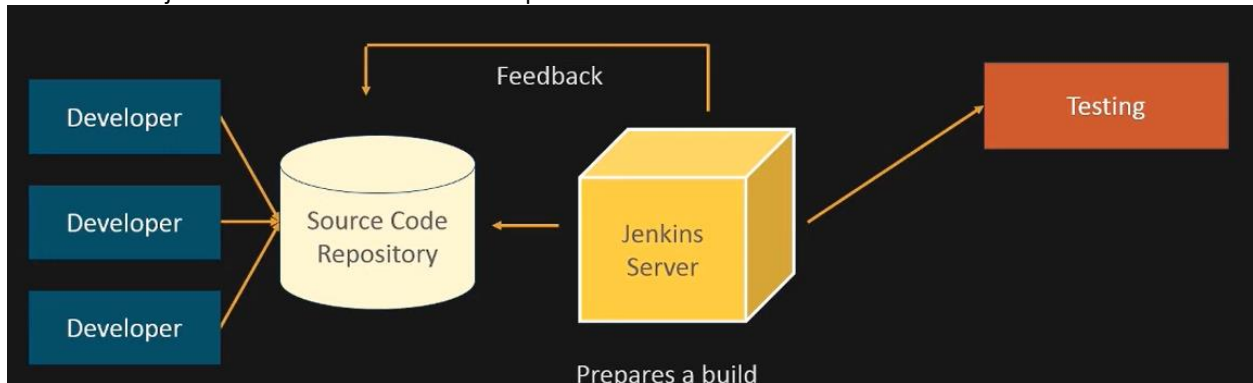
Maven01

Goals

compile

Advanced ▼

Maven has a build lifecycle with multiple build stages which can be used to validate , compile , test , and after that we perform unit tests using suitable unit test framework . Then we package our code in jar / war .
Now build the job . Our source code will be compiled .



Now we need to test our code , jenkins will deploy code to test server at same time developer will be notified for test results . Before applying unit test in the code we need to review the code using pmd plugin – this job will come between compile and test job .

invoke top level maven target – is used to execute a specific maven goal or target on maven project within jenkins pipeline .

Create review job > freestyle project > scm > git url > build

The screenshot shows the 'Create new job' dialog in Jenkins. At the top, it says 'Enter an item name' with a text input field containing 'REVIEW_JOB'. Below this, it says '» Required field'. There are three project type options: 'Freestyle project' (with a box icon), 'Maven project' (with a face icon), and 'Pipeline' (with a pipe icon). Each option has a brief description. At the bottom, there is an 'OK' button and a partially visible 'configuration project' option.

> invoke top level maven target > -P matrix pmd:pmd >

Build Steps

≡

Invoke top-level Maven targets ?

Maven Version

Maven01

Goals

-P matrix pmd:pmd

Advanced ▾

Add build step ▾

post build actions > publish html reports > build .

Post-build Actions

≡

Publish HTML reports ?

Reports

Add

Add post-build action ▾

Now build , once successful . report can be found as below pmd.html in workspace .

Dashboard > REVIEW_JOB > Workspace

☰ Status

</> Changes

📁 Workspace

▶ Build Now

⚙️ Configure

Workspace of REVIEW_JOB on Built-In Node

REVIEW_JOB / target / site /

→





📁 css






📁 images

📄 pmd.html Mar 12, 2023, 6:06:12 AM 1.89 KB 🔍 📄


[📄\(all files in zip\)](#)

PMD report :

    Not secure | 23.23.21.229:8080/job/REVIEW_JOB/ws/target/site/pmd.html

 GERMAN  CLOUD_GCP  PLATFORMS_CICD_...  DAILY_URLS  IMP_LEARNINGS

Last Published: 2023-03-12 | Version: 2.0

 [Built by Maven](#)

PMD Results

The following document contains the results of [PMD](#) 6.53.0.


PMD found no problems in your source code.


Copyright © 2023..


Now create Test Job – freestyle project .


TEST_JOB

» Required field

**Freestyle project**
This is the central feature of Jenkins. Jenkins will be used for something other than software build.

**Maven project**
Build a maven project. Jenkins takes advantage of

**Pipeline**
Orchestrates long-running activities that can span and/or organizing complex activities that do not e

**Configuration project**

OK

SCM – git ,

Source Code Management

☐ None

☒ Git ?

Repositories ?

Repository URL ?

https://github.com/sapnarsy2612/COMPILE_REVIEW_PIPELINE.git

Credentials ?

64c5f616-3a55-4a6f-ad15-f711e28e5ade

Build – invoke top level maven targets - > test . > build

Build Steps

≡ **Invoke top-level Maven targets** ?

Maven Version

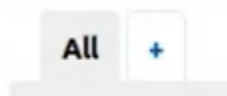
Maven01

Goals

test

Now we can deploy the application to production server .

Now create pipeline .



Click on + .

New view

Name

COMPILE_REVIEW_TEST_PIPELINE

Type



Build Pipeline View

Shows the jobs in a build pipeline view. The comp are shown as a row in the view.

Create pipeline . > select initial job – Compile job .

Upstream / downstream config

Select Initial Job ?

COMPILE_JOB

No of displayed build – 5 .

Display Options

No Of Displayed Builds ?

5

For next job , go to review job and select option

> REVIEW_JOB > Configuration

Figure

General

Source Code Management

Build Triggers

Build Environment

Build Steps

Do similar for test job .

> TEST_JOB > Configuration

Build Triggers

☐ Trigger builds remotely (e.g., from scripts) ?

☒ Build after other projects are built ?

Projects to watch

COMPILE_JOB,

☒ Trigger only if build is stable

Figure

General

Source Code Management

Build Triggers

Build Environment

Build Triggers

☐ Trigger builds remotely (e.g., from scripts) ?

☒ Build after other projects are built ?

Projects to watch

REVIEW_JOB,

 No such project 'R'. Did you mean 'TEST_JOB'?


And now run pipeline .

Dashboard > COMPILE_REVIEW_TEST_PIPELINE >

Build Pipeline

 Trigger a Pipeline  Pipeline History  Configure  Add Step  Delete  Manage

Pipeline
#4

#4 COMPILE_JOB
Mar 12, 2023 6:24:16 AM
0.39 sec and counting
admin


REVIEW_JOB
N/A
N/A

TEST_JOB
N/A
N/A

Pipeline is created .