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CICD Lab Experiment 4

JENKINS INTEGRATION WITH GITHUB AND MAVEN

This particular experiment deals with three tools altogether.

- Jenkins deals with the continuous integration of our project.
 - Maven helps to the build the project
 - Github manages the source code of our project.

Step 1) Start the Jenkins server with the command

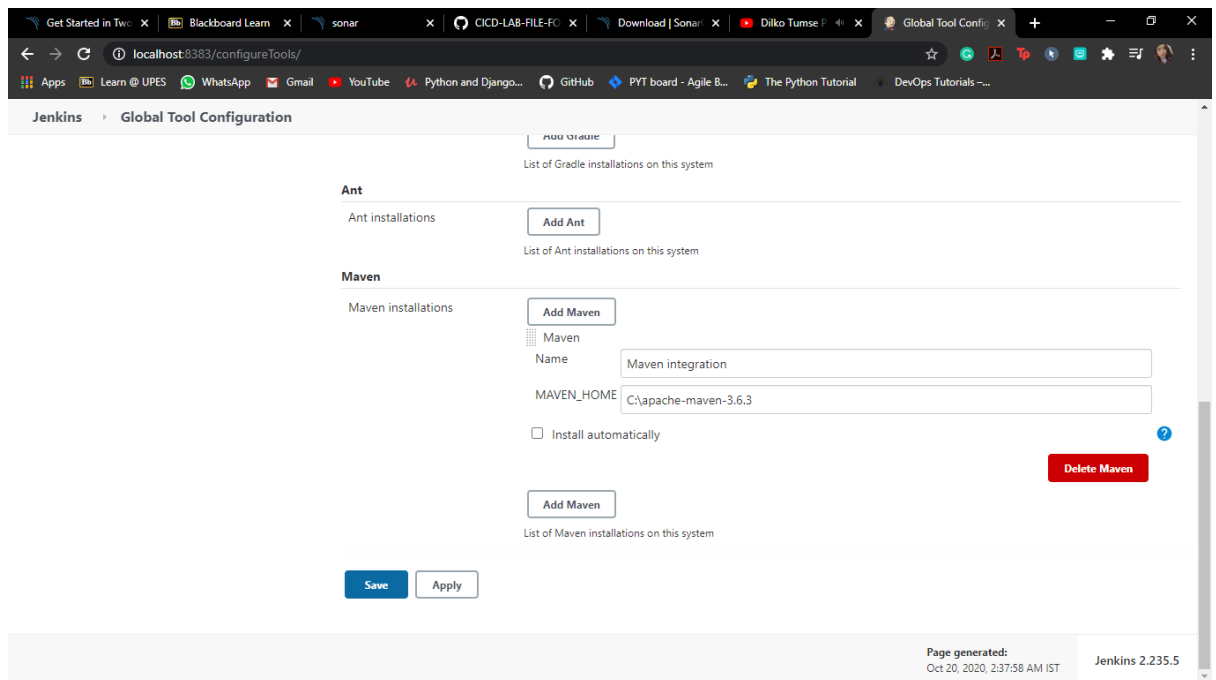
```
>> java -jar Jenkins.war -httpPort=8383
```

```
C:\WINDOWS\system32\cmd.exe - java -jar jenkins.war --httpPort=8383
2020-10-19 21:06:57.335+0000 [id=1] INFO o.e.j.server.AbstractConnector#doStart: Started ServerConnector@a613544[HTTP/1.1, (http/1.1)]{0.0.0.0:8383}
2020-10-19 21:06:57.335+0000 [id=1] INFO org.eclipse.jetty.server.Server#doStart: Started @3156ms
2020-10-19 21:06:57.337+0000 [id=25] INFO winstone.Logger#logInternal: Winstone Servlet Engine running: controlPort=disabled
2020-10-19 21:06:57.937+0000 [id=31] INFO jenkins.InitReactorRunner$1#onAttained: Started initialization
2020-10-19 21:06:59.302+0000 [id=31] INFO jenkins.InitReactorRunner$1#onAttained: Listed all plugins
2020-10-19 21:07:04.671+0000 [id=34] INFO jenkins.InitReactorRunner$1#onAttained: Prepared all plugins
2020-10-19 21:07:04.681+0000 [id=41] INFO jenkins.InitReactorRunner$1#onAttained: Started all plugins
2020-10-19 21:07:06.333+0000 [id=39] INFO jenkins.InitReactorRunner$1#onAttained: Augmented all extensions
2020-10-19 21:07:06.421+0000 [id=30] INFO jenkins.InitReactorRunner$1#onAttained: System config loaded
2020-10-19 21:07:06.422+0000 [id=36] INFO jenkins.InitReactorRunner$1#onAttained: System config adapted
2020-10-19 21:07:06.627+0000 [id=32] INFO jenkins.InitReactorRunner$1#onAttained: Loaded all jobs
2020-10-19 21:07:06.627+0000 [id=37] INFO jenkins.InitReactorRunner$1#onAttained: Configuration for all jobs updated
2020-10-19 21:07:06.673+0000 [id=58] INFO hudson.model.AsyncPeriodicWork$lambda$doRun$0: Started Download metadata
2020-10-19 21:07:06.683+0000 [id=58] INFO hudson.model.AsyncPeriodicWork$lambda$doRun$0: Finished Download metadata, 9 ms
2020-10-19 21:07:07.069+0000 [id=37] INFO o.s.c.s.AbstractApplicationContext#prepareRefresh: Refreshing org.springframework.web.context.support.StaticWebApplicationContext@363ed5f5: display name [Root WebApplicationContext]; startup date [Tue Oct 20 02:37:07 IST 2020]; root of context hierarchy
2020-10-19 21:07:07.070+0000 [id=37] INFO o.s.c.s.AbstractApplicationContext#obtainFreshBeanFactory: Bean factory for application context [org.springframework.web.context.support.StaticWebApplicationContext@363ed5f5]: org.springframework.beans.factory.support.DefaultListableBeanFactory@14ff1f36
2020-10-19 21:07:07.084+0000 [id=37] INFO o.s.b.f.s.DefaultListableBeanFactory#preInstantiateSingletons: Pre-instantiating singletons in org.springframework.beans.factory.support.DefaultListableBeanFactory@14ff1f36: defining beans [authenticationManager]; root of factory hierarchy
2020-10-19 21:07:07.288+0000 [id=37] INFO o.s.c.s.AbstractApplicationContext#prepareRefresh: Refreshing org.springframework.web.context.support.StaticWebApplicationContext@4750c42c: display name [Root WebApplicationContext]; startup date [Tue Oct 20 02:37:07 IST 2020]; root of context hierarchy
2020-10-19 21:07:07.288+0000 [id=37] INFO o.s.c.s.AbstractApplicationContext#obtainFreshBeanFactory: Bean factory for application context [org.springframework.web.context.support.StaticWebApplicationContext@4750c42c]: org.springframework.beans.factory.support.DefaultListableBeanFactory@7e4f8809
2020-10-19 21:07:07.290+0000 [id=37] INFO o.s.b.f.s.DefaultListableBeanFactory#preInstantiateSingletons: Pre-instantiating singletons in org.springframework.beans.factory.support.DefaultListableBeanFactory@7e4f8809: defining beans [filter, legacy]; root of factory hierarchy
2020-10-19 21:07:07.374+0000 [id=37] INFO jenkins.InitReactorRunner$1#onAttained: Completed initialization
2020-10-19 21:07:07.434+0000 [id=24] INFO hudson.WebAppMain$3#run: Jenkins is fully up and running
```

Step 2) Navigate to localhost:8383 and add maven settings to you Jenkins by

:

>>Jenkins dashboard>> manage Jenkins >> global tool configuration



Step 3) Make a Maven project. Save it. Add it to you github.

vanshika1009

Update README.md

b3f9994

2 days ago

🕒 4 commits

src	Add files via upload	7 days ago
target	Add files via upload	7 days ago
README.md	Update README.md	2 days ago
pom.xml	Add files via upload	7 days ago

README.md

✎

🔗

CICD_L3

Integration of Jenkins with maven

This repository serves the purpose of integration between Git, Maven and Jenkins.

Jenkins - It will automate the build for us.

Maven - It is the project management tool that will serve the purpose of building the project.

Github - It will remotely keep our source code of project.

This repository has a sample maven code to illustrate the whole process.

We have to put in some add-ons on the `pom.xml` of our project.

provided.

📖 Readme

Releases

No releases published

[Create a new release](#)

Packages

No packages published

[Publish your first package](#)

Languages

Java 100.0%

Integration of Jenkins with maven

Jenkins - It will automate the build for us.

Github - It will remotely keep our source code of project.

We have to put in some add-ons on the `pom.xml` of our project.

Step 4) Come to your Jenkins and create a new item and give the specifications as the following:

General

Source Code Management

Build Triggers

Build Environment

Build

Post-build Actions

Source Code Management

☐ None

☒ Git

Repositories

Repository URL

?

Credentials

- none -

Add

?

Advanced...

Add Repository

Branches to build

Branch Specifier (blank for 'any')

X

?

Add Branch

Repository browser

(Auto)

?

Additional Behaviours

Add

Save

Apply

?

☐ None

References

Credentials - none -

Advanced...

Add Repository

Branches to build

Add Branch

Repository browser

Additional Behaviours

Save

Apply

General Source Code Management Build Triggers Build Environment **Build** Post-build Actions

Build

Execute Windows batch command

Command

```
mvn clean
mvn install
```

See [the list of available environment variables](#)

Advanced...

Add build step ▾

Post-build Actions

Add post-build action ▾

Save Apply

Step 5) Build now

Jenkins > exp3 > #7

- Status
- Changes
- Console Output**
 - View as plain text
- Edit Build Information
- Delete build '#7'
- Git Build Data
- No Tags
- Previous Build

Console Output

```

Started by user vanshika
Running as SYSTEM
Building in workspace C:\Users\Dell\.jenkins\workspace\exp3
The recommended git tool is: NONE
No credentials specified
> C:\Program Files\Git\cmd\git.exe rev-parse --is-inside-work-tree # timeout=10
Fetching changes from the remote Git repository
> C:\Program Files\Git\cmd\git.exe config remote.origin.url https://github.com/vanshika1009/CICD_13.git # timeout=10
Fetching upstream changes from https://github.com/vanshika1009/CICD_13.git
> C:\Program Files\Git\cmd\git.exe --version # timeout=10
> git --version # 'git version 2.25.1.windows.1'
> C:\Program Files\Git\cmd\git.exe fetch --tags --force --progress -- https://github.com/vanshika1009/CICD_13.git
+refs/heads/*:refs/remotes/origin/* # timeout=10
> C:\Program Files\Git\cmd\git.exe rev-parse "refs/remotes/origin/master^{commit}" # timeout=10
> C:\Program Files\Git\cmd\git.exe rev-parse "refs/remotes/origin/master^{commit}" # timeout=10
Checking out Revision 44be4495b3947ea8d4d1255989404a708f31e5d7 (refs/remotes/origin/master)
> C:\Program Files\Git\cmd\git.exe config core.sparsecheckout # timeout=10
> C:\Program Files\Git\cmd\git.exe checkout -f 44be4495b3947ea8d4d1255989404a708f31e5d7 # timeout=10
Commit message: "Update pom.xml"
First time build. Skipping changelog.
[exp3] $ cmd /c call C:\Users\Dell\AppData\Local\Temp\jenkins9453052694241521607.bat

C:\Users\Dell\.jenkins\workspace\exp3>mvn clean
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.mycompany:SONAR >-----
[INFO] Building SONAR 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ SONAR ---
[INFO]

```