

BUILD AND RELEASE MANAGEMENT LAB FILE

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COURSE : Btech CSE DevOps(Semester –4th) (B1)

Experiment 4

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OBJECTIVE

1. Create a Maven project and create a Java class in it. Write a simple program in Java class.
2. Push the project to a remote Github repository.
3. Configure a job in Jenkins to be performed on the project in Github repository.
4. Run the jobs on Jenkins and perform builds.
5. Automate the job in Jenkins.

IMPLEMENTATION

- Create a Maven project.

New Maven Project

New Maven project

Configure project

M

Artifact

Group Id: golem

Artifact Id: Jenkintest

Version: 0.0.1-SNAPSHOT

Packaging: jar

Name:

Description:

Parent Project

Group Id:

Artifact Id:

Version:

Browse...

Clear

Advanced

?

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Finish

Cancel

- Add Java class to maven project.

New Java Class

Java Class

⚠ The use of the default package is discouraged.

Source folder:

Package:

☐ Enclosing type:

Name:

Modifiers: ☐ public ☐ package ☐ private ☐ protected
☐ abstract ☐ final ☐ static

Superclass:

Interfaces:

Which method stubs would you like to create?

☒ public static void main(String[] args)

☐ Constructors from superclass

☒ Inherited abstract methods

Do you want to add comments? (Configure templates and default value [here](#))

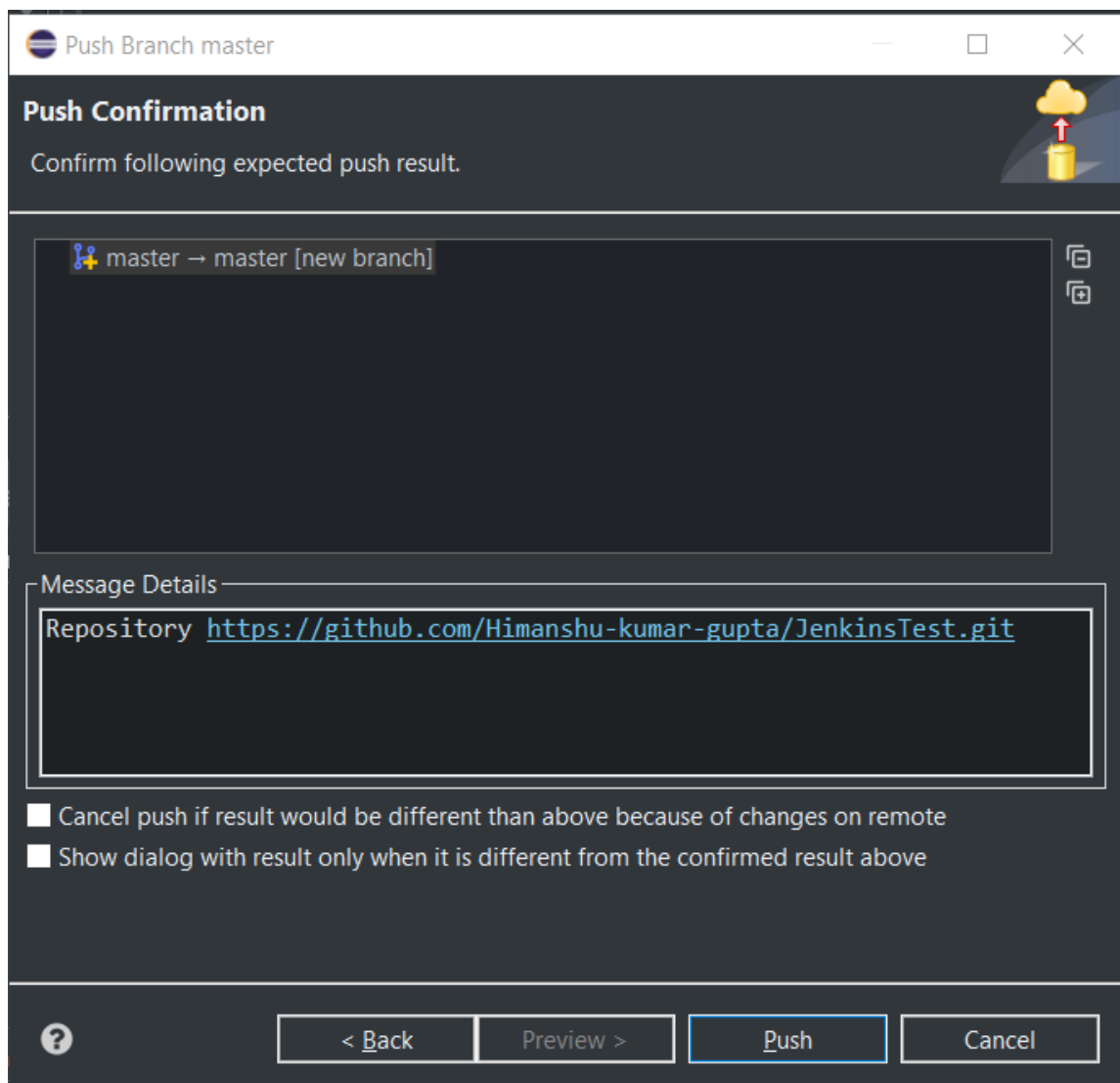
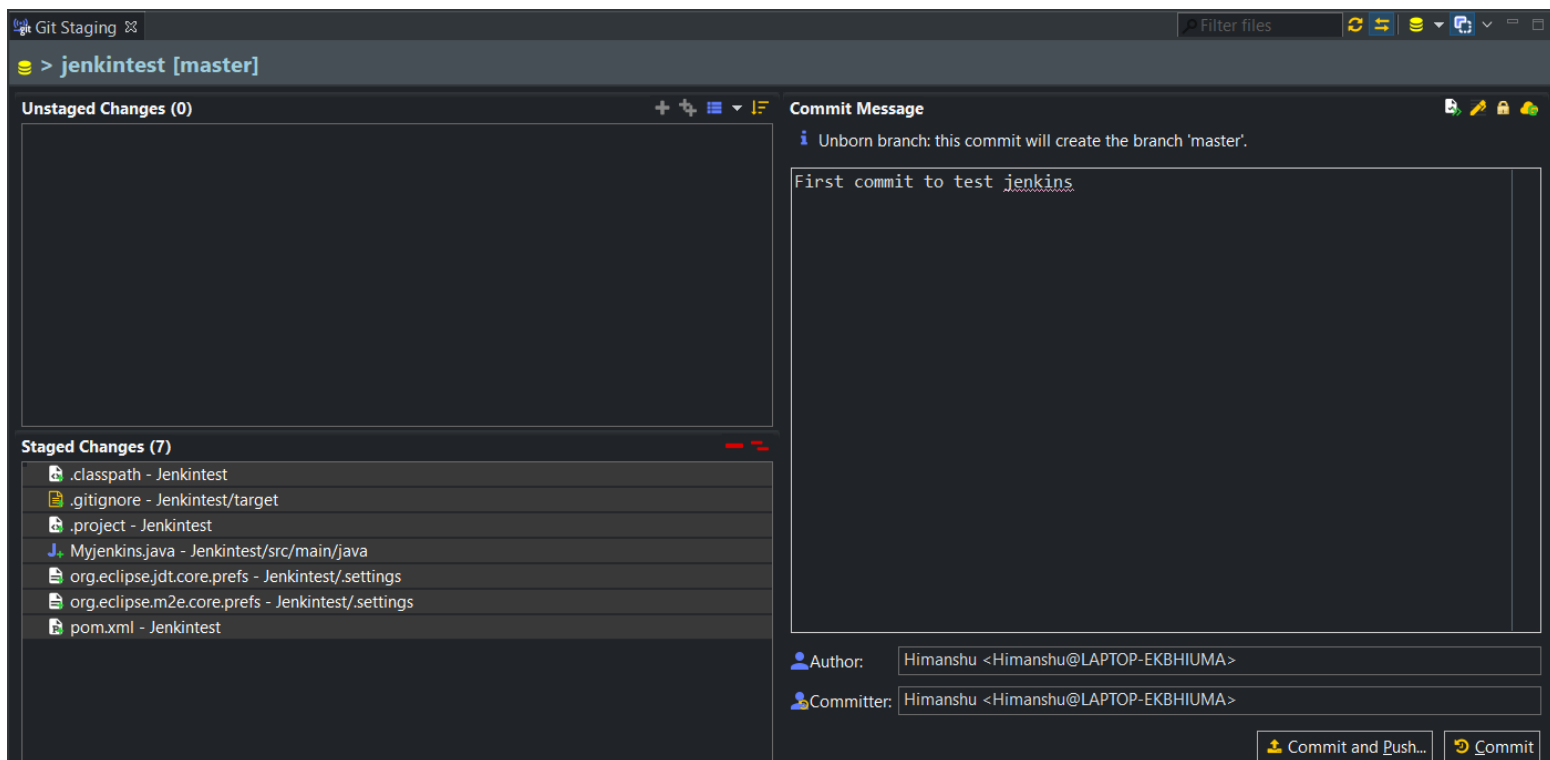
☐ Generate comments

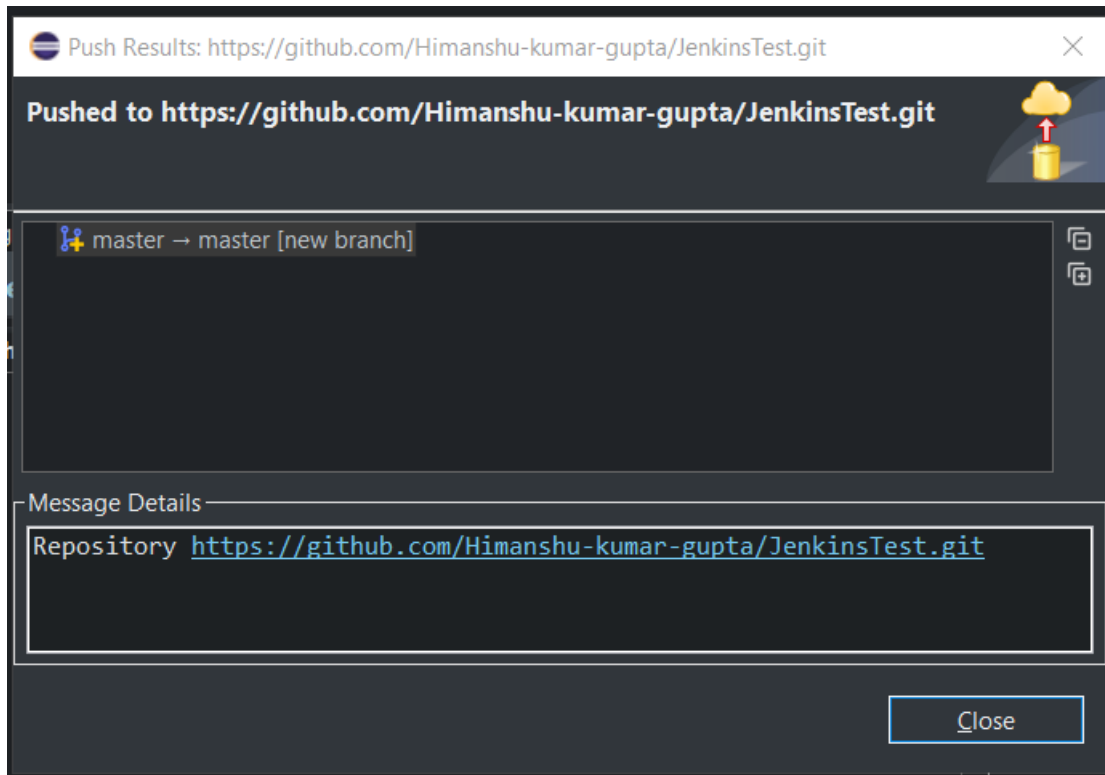
- Created a simple program in java class with output.

```
Myjenkins.java
1
2 public class Myjenkins {
3
4     public static void main(String[] args) {
5         System.out.println("This project is to test jenkins");
6     }
7 }
8
9
10
```

```
Console
<terminated> Myjenkins [Java Application] C:\Program Files (x86)\eclipse\plugins\org.eclipse.
This project is to test jenkins
```

- Commit and push the project to a remote Github repository.





- Add git repo url in a jenkins job.

Source Code Management

☐ None
☒ Git

Repositories

Repository URL

Credentials

Branches to build

Branch Specifier (blank for 'any')

Repository browser

Additional Behaviours

- Build using compile command in maven project in jenkins job.

Pre Steps

Add pre-build step ▼

Build

Root POM ?

Goals and options ?

Advanced...

Post Steps

☐ Run only if build succeeds
 ☐ Run only if build succeeds or is unstable
 ☒ Run regardless of build result

Should the post-build steps run only for successful builds, etc.

Add post-build step ▼

Build Settings

☐ E-mail Notification

Save Apply

- Output after running the job.

```
C:\Windows\system32\config\systemprofile\AppData\Local\Jenkins\.jenkins\plugins\maven-plugin\WEB-INF\lib\maven3-interc
<==[JENKINS REMOTING CAPACITY]==>channel started
Executing Maven: -B -f C:\Users\Himanshu\git\jenkintest\Jenkintest\pom.xml compile
[INFO] Scanning for projects...
[INFO]
[INFO] -----< golem:Jenkintest >-----
[INFO] Building Jenkintest 0.0.1-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ Jenkintest ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] Copying 0 resource
[INFO]
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ Jenkintest ---
[INFO] Nothing to compile - all classes are up to date
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 1.133 s
[INFO] Finished at: 2021-02-16T00:27:10+05:30
[INFO] -----
Waiting for Jenkins to finish collecting data
[JENKINS] Archiving C:\Users\Himanshu\git\jenkintest\Jenkintest\pom.xml to golem/Jenkintest/0.0.1-SNAPSHOT/Jenkintest-0
channel stopped
Finished: SUCCESS
```

- Configure the job to automate the build.
- To automate the build add 5 stars(*) separated by space. This will check the repository for build every minute.

POST-BUILD ACTIONS

Additional behaviours Add ▾

Build Triggers

- ☒ Build whenever a SNAPSHOT dependency is built ?
- ☐ Schedule build when some upstream has no successful builds ?
- ☐ Trigger builds remotely (e.g., from scripts) ?
- ☐ Build after other projects are built ?
- ☐ Build periodically ?
- ☐ GitHub hook trigger for GITScm polling ?
- ☒ Poll SCM ?

Schedule ***** ?

⚠ Do you really mean "every minute" when you say "***"? Perhaps you meant "H *****" to poll once per hour**

Would last have run at Wednesday, 17 February, 2021 3:02:48 PM IST; would next run at Wednesday, 17 February, 2021 3:02:48 PM IST.

Save Apply post-commit hooks ?

- Save some changes in the java class.

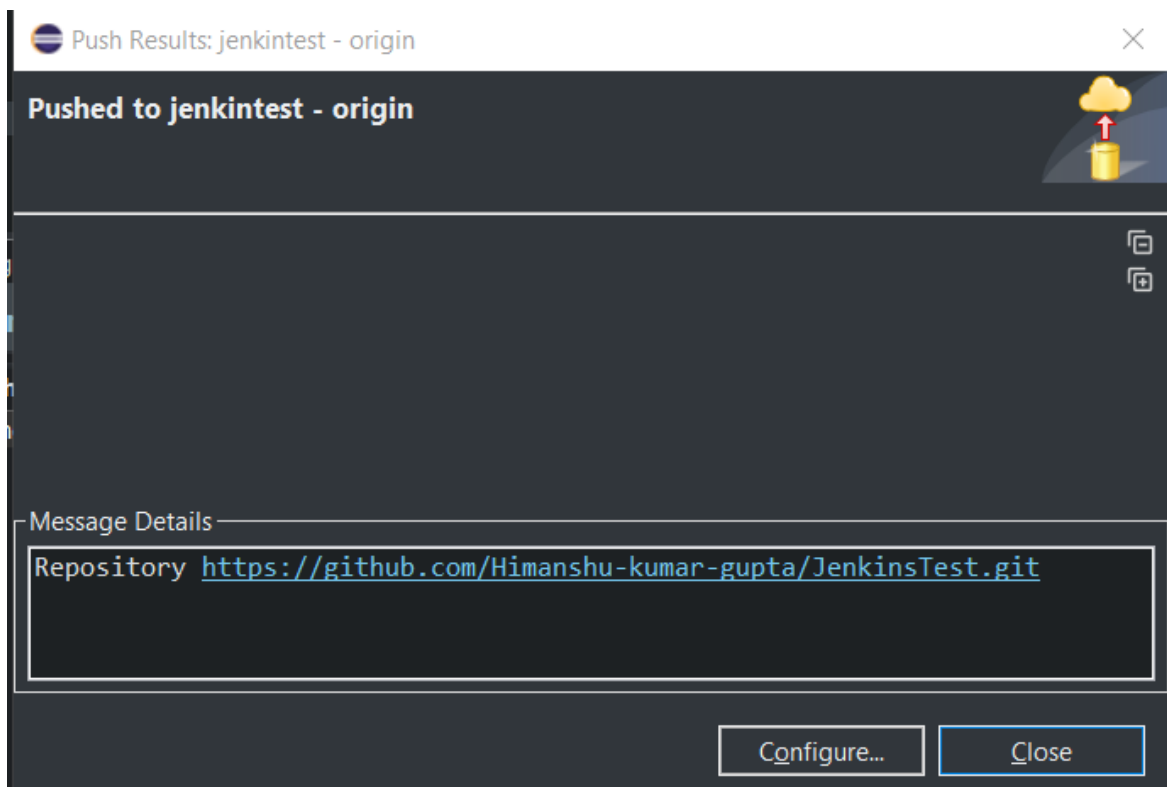
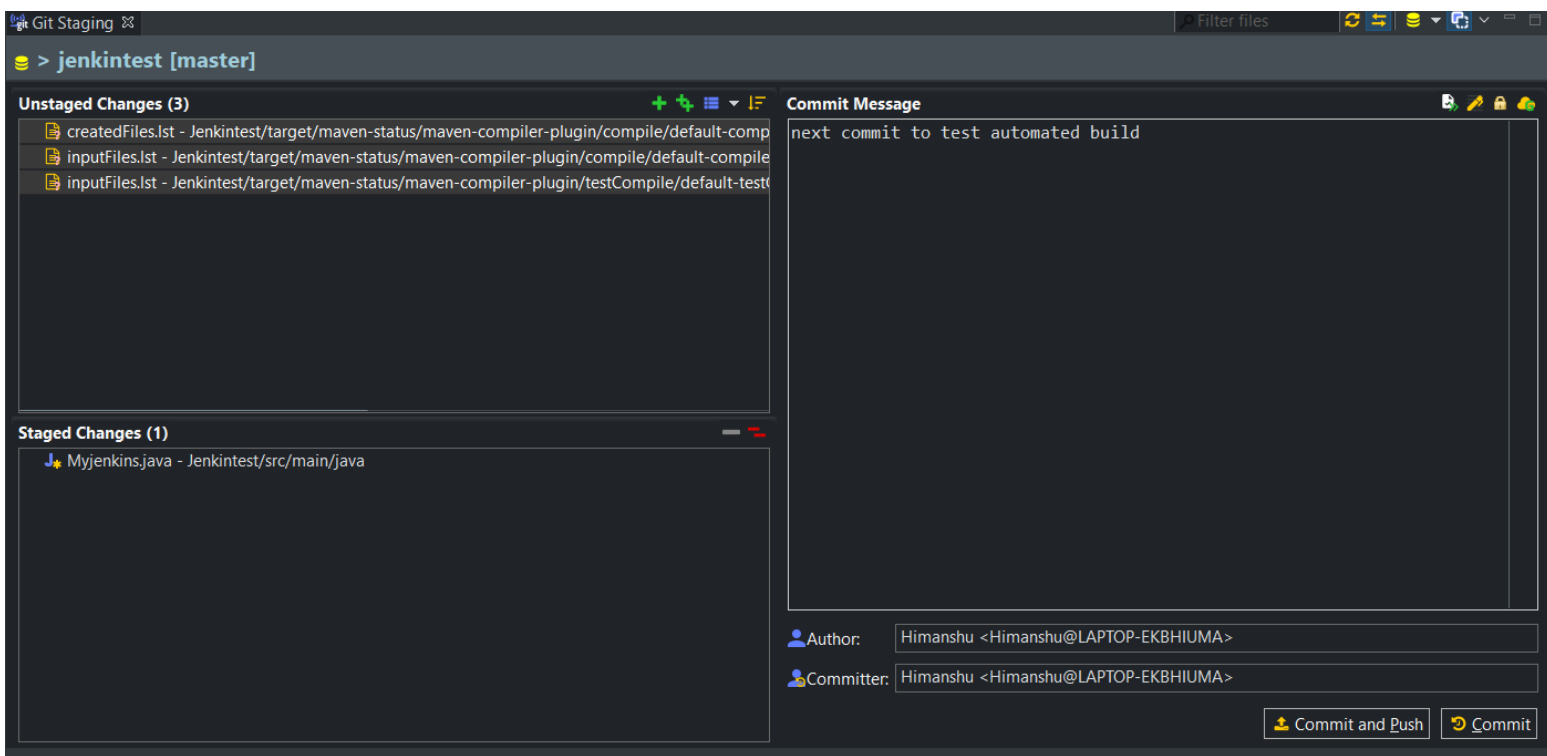
```

J Myjenkins.java
1
2 public class Myjenkins {
3
4     public static void main(String[] args) {
5         System.out.println("This project is to test jenkins");
6         System.out.println("Lets automate the bulid ");
7
8     }
9
10 }
11

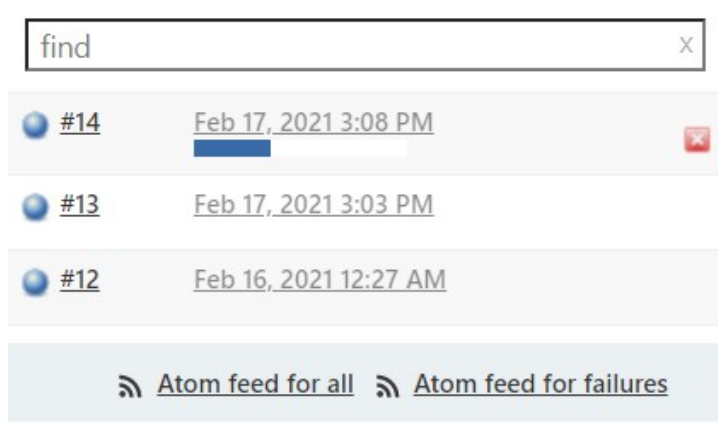
Console
<terminated> Myjenkins [Java Application] C:\Program Files (x86)\eclipse\plugins\org.eclipse.justj
This project is to test jenkins
Lets automate the bulid

```

- Push the code to the remote github repository.



- Automated build started in jenkins after a minute.



- Output of the automated build.

```
<===[JENKINS REMOTING CAPACITY]===>channel started
Executing Maven: -B -f C:\Users\Himanshu\git\jenkintest\Jenkintest\pom.xml compile
[INFO] Scanning for projects...
[INFO]
[INFO] -----< golem:Jenkintest >-----
[INFO] Building Jenkintest 0.0.1-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ Jenkintest ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] Copying 0 resource
[INFO]
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ Jenkintest ---
[INFO] Changes detected - recompiling the module!
[WARNING] File encoding has not been set, using platform encoding Cp1252, i.e. build is platform dependent!
[INFO] Compiling 1 source file to C:\Users\Himanshu\git\jenkintest\Jenkintest\target\classes
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 1.221 s
[INFO] Finished at: 2021-02-17T15:08:16+05:30
[INFO] -----
Waiting for Jenkins to finish collecting data
[JENKINS] Archiving C:\Users\Himanshu\git\jenkintest\Jenkintest\pom.xml to golem/Jenkintest/0.0.1-SNAPSHOT/Jenkintest-0.0.1-SNAPSHOT.pom
channel stopped
Finished: SUCCESS
```