

# Project 1

Created a Jenkins pipeline using groovy language

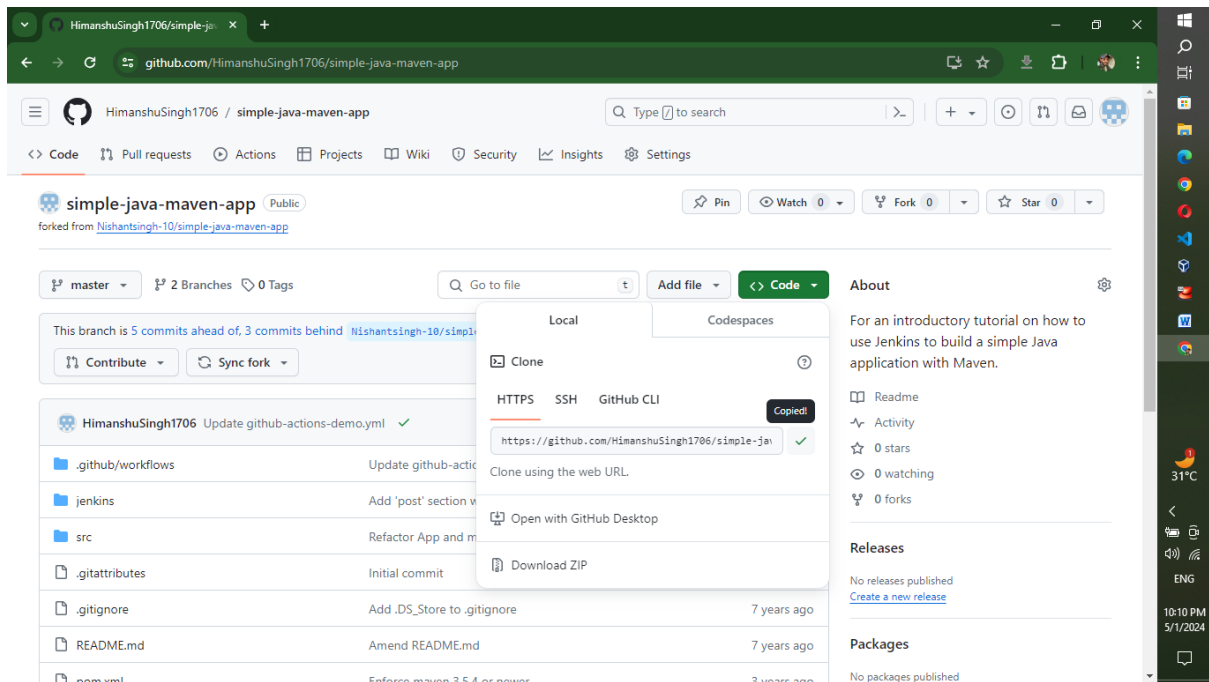
Technology Used:

Github , Maven , Jenkins groovy language,

The image shows a terminal window and a GitHub repository page. The terminal window is titled 'root@localhost:~/apache-maven-3.9.6/bin' and shows the following commands and output:

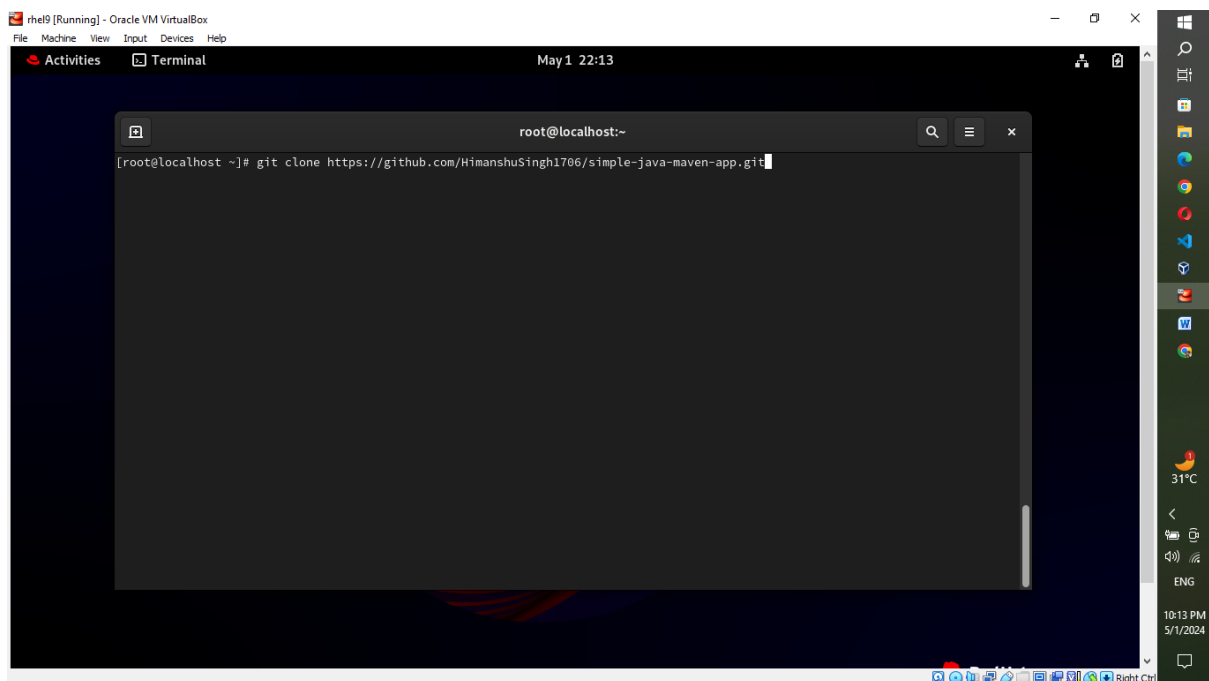
```
[root@localhost ~]# ls
anaconda-ks.cfg  apache-maven-3.9.6-bin.tar.gz  Documents  mavenapp  Pictures  Templates
[root@localhost ~]# cd apache-maven-3.9.6/
[root@localhost apache-maven-3.9.6]# ls
bin  boot  conf  lib  LICENSE  NOTICE  README.txt
[root@localhost apache-maven-3.9.6]# cd bin/
[root@localhost bin]# ls
m2.conf  mvn  mvn.cmd  mvnDebug  mvnDebug.cmd  mvnDebug.jar
[root@localhost bin]#
```

The GitHub repository page is titled 'simple-java-maven-app' and is a fork of 'Nishantsingh-10/simple-java-maven-app'. The page shows the repository structure, including files like .github/workflows, jenkins, src, .gitattributes, .gitignore, README.md, and pom.xml. The 'Code' button is highlighted, and a dropdown menu is open showing options to clone the repository using HTTPS, SSH, or GitHub CLI, or to open it with GitHub Desktop or download it as a ZIP file.



Now with help of git clone copy the repository on local system

#git clone



```
root@localhost:~ — /usr/bin/python3.9 /usr/bin/yum install jenkins -y

--2024-05-01 22:16:09-- https://pkg.jenkins.io/redhat-stable/jenkins.repo
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.2.133, 151.101.66.133, 151.101.130.133, ...
Connecting to pkg.jenkins.io (pkg.jenkins.io)[151.101.2.133]:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 85
Saving to: '/etc/yum.repos.d/jenkins.repo'

/etc/yum.repos.d/jenkins.repo 100%[=====] 85 --.-KB/s in 0s

2024-05-01 22:16:10 (1.49 MB/s) - '/etc/yum.repos.d/jenkins.repo' saved [85/85]

[root@localhost ~]# sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key
[root@localhost ~]# yum install fontconfig java-17-openjdk
Updating Subscription Management repositories.
Jenkins-stable
Last metadata expiration check: 0:00:01 ago on Wed 01 May 2024 10:16:36 PM IST.
Package fontconfig-2.14.0-2.el9_1.x86_64 is already installed.
Dependencies resolved.
=====
Package Architecture Version Repository Size
=====
Installing:
java-17-openjdk x86_64 1:17.0.11.0.9-2.el9 rhel-9-for-x86_64-appstream-rpms 433 k
Installing dependencies:
java-17-openjdk-headless x86_64 1:17.0.11.0.9-2.el9 rhel-9-for-x86_64-appstream-rpms 45 M
=====
Transaction Summary
=====
Install 2 Packages
```

```
root@localhost:~ — /usr/bin/python3.9 /usr/bin/yum install jenkins -y

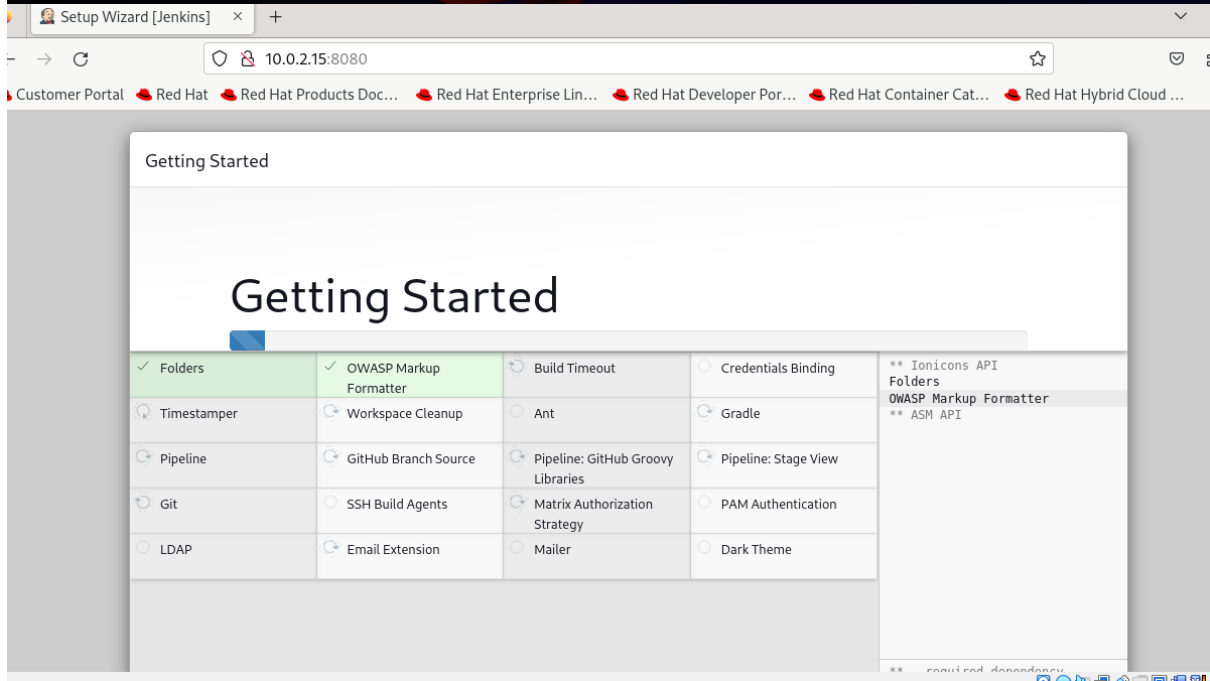
Running scriptlet: java-17-openjdk-1:17.0.11.0.9-2.el9.x86_64 2/2
Running scriptlet: java-17-openjdk-headless-1:17.0.11.0.9-2.el9.x86_64 2/2
Running scriptlet: java-17-openjdk-1:17.0.11.0.9-2.el9.x86_64 2/2
Verifying : java-17-openjdk-1:17.0.11.0.9-2.el9.x86_64 1/2
Verifying : java-17-openjdk-headless-1:17.0.11.0.9-2.el9.x86_64 2/2
Installed products updated.

Installed:
java-17-openjdk-1:17.0.11.0.9-2.el9.x86_64 java-17-openjdk-headless-1:17.0.11.0.9-2.el9.x86_64

Complete!
[root@localhost ~]# yum install jenkins -y
Updating Subscription Management repositories.
Last metadata expiration check: 0:01:19 ago on Wed 01 May 2024 10:16:36 PM IST.
Dependencies resolved.
=====
Package Architecture Version Repository Size
=====
Installing:
jenkins noarch 2.440.3-1.1 jenkins 89 M
=====
Transaction Summary
=====
Install 1 Package

Total download size: 89 M
Installed size: 89 M
Downloading Packages:
jenkins-2.440.3-1.1.noarch.rpm 33% [=====] 436 kB/s | 30 MB 02:18 ETA
```

```
root@localhost:~  
[root@localhost ~]# systemctl start jenkins  
[root@localhost ~]# systemctl status jenkins  
jenkins.service - Jenkins Continuous Integration Server  
Loaded: loaded (/usr/lib/systemd/system/jenkins.service; disabled; preset: disabled)  
Active: active (running) since Wed 2024-05-01 22:23:01 IST; 26s ago  
Main PID: 40634 (java)  
Tasks: 49 (limit: 22716)  
Memory: 1.0G  
CPU: 1min 22.574s  
CGroup: /system.slice/jenkins.service  
└─40634 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --p  
May 01 22:22:23 localhost.localdomain jenkins[40634]: bd05bb9dfb6c428081483b0b5e101357  
May 01 22:22:23 localhost.localdomain jenkins[40634]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword  
May 01 22:22:23 localhost.localdomain jenkins[40634]: *****  
May 01 22:22:23 localhost.localdomain jenkins[40634]: *****  
May 01 22:22:23 localhost.localdomain jenkins[40634]: *****  
May 01 22:23:01 localhost.localdomain jenkins[40634]: 2024-05-01 16:53:01.760+0000 [id=31] INFO jenkins.InitReact>  
May 01 22:23:01 localhost.localdomain jenkins[40634]: 2024-05-01 16:53:01.870+0000 [id=22] INFO hudson.lifecycle.b>  
May 01 22:23:01 localhost.localdomain systemd[1]: Started Jenkins Continuous Integration Server.  
May 01 22:23:04 localhost.localdomain jenkins[40634]: 2024-05-01 16:53:04.254+0000 [id=47] INFO h.m.DownloadServi>  
May 01 22:23:04 localhost.localdomain jenkins[40634]: 2024-05-01 16:53:04.256+0000 [id=47] INFO hudson.util.Retri>  
lines 1-20/20 (END)  
[root@localhost ~]#
```



← → ↻

10.0.2.15:8080/manage/pluginManager/available


☆

🔒

📄

☰

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 **Jenkins**

Search (CTRL+K) ?

himanshu ▾

log out

Dashboard > Manage Jenkins > Plugins

📄 Updates

**📁 Available plugins**

⚙️ Installed plugins

⚙️ Advanced settings

☰ Download progress

🔍 maven

Install ▾

↻

Install	Name ▾	Released
<input checked="" type="checkbox"/>	<div>Maven Integration 3.23</div> <div>Build Tools</div> <div>This plugin provides a deep integration between Jenkins and Maven. It adds support for automatic triggers between projects depending on SNAPSHOTS as well as the automated configuration of various Jenkins publishers such as Junit.</div>	9 mo 0 days ago
<input type="checkbox"/>	<div>Config File Provider 973.vb_a_80ecb_9a_4d0</div> <div>Groovy-related External Site/Tool Integrations Maven</div> <div>Ability to provide configuration files (e.g. settings.xml for maven, XML, groovy, custom files,...) loaded through the UI which will be copied to the job workspace.</div>	13 days ago
<input type="checkbox"/>	<div>Jira 3.13</div> <div>External Site/Tool Integrations Maven jira</div> <div>This plugin integrates Jenkins to Atlassian Jira.</div>	1 mo 18 days ago

← → ↻

10.0.2.15:8080/manage/pluginManager/updates/

☆

🔒

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Dashboard > Manage Jenkins > Plugins

📄 Updates

📁 Available plugins

⚙️ Installed plugins

⚙️ Advanced settings

**☰ Download progress**


Matrix Authorization Strategy	✓ Success
PAM Authentication	✓ Success
LDAP	✓ Success
Email Extension	✓ Success
Mailer	✓ Success
Theme Manager	✓ Success
Dark Theme	✓ Success
Loading plugin extensions	✓ Success
Javadoc	✓ Success
JSch dependency	✓ Success
Maven Integration	⋮ Installing
Loading plugin extensions	⋮ Pending
Restarting Jenkins	⋮ Pending

→ [Go back to the top page](#)  
(you can start using the installed plugins right away)

→ ☒ Restart Jenkins when installation is complete and no jobs are running

+ New Item

 People

 Build History

 **Manage Jenkins**

 My Views

Build Queue

No builds in the queue.

Build Executor Status

1 Idle

2 Idle

## Manage Jenkins

### System Configuration



#### System

Configure global settings and paths.



#### Plugins

Add, remove, disable or enable plugins that can extend the functionality of Jenkins.



#### Clouds

Add, remove, and configure cloud instances to provision agents on-demand.



#### Tools

Configure tools, their locations and automatic installers.



#### Nodes

Add, remove, control and monitor the various nodes that Jenkins runs jobs on.



#### Appearance

Configure the look and feel of Jenkins

### Security

#### Maven installations

Maven installations ^

 Edited

Add Maven

##### Maven

Name

mymaven

MAVEN\_HOME

/maven

☐ Install automatically ?

Add Maven





Save

Apply

Dashboard > All >







### Enter an item name

» Required field

- **Freestyle project**  
Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications.
- **Maven project**  
Build a maven project. Jenkins takes advantage of your POM files and drastically reduces the configuration.
- **Pipeline**  
Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.
- **Multi-configuration project**  
Builds for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.

Dashboard > javamavenapp > Configuration

## Configure

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

### Source Code Management

☐ None

☒ Git ?

Repositories ?

Repository URL ?

Credentials ?







- none -

+ Add

Advanced

Dashboard > javamavenapp > Configuration

## Configure

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

### Build Steps

 **Invoke top-level Maven targets** ?

Maven Version

mymaven

Goals

test

Advanced

Add build step

### Post-build Actions

10.0.2.15:8080/job/javamavenapp/1/

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Jenkins

Search (CTRL+K)

himanshu log out

Dashboard > javamavenapp > #1

Status

Changes

Console Output

Edit Build Information

Git Build Data

#1 (May 1, 2024, 11:26:47 PM)

Progress:

Keep this build forever

Add description

Started 12 sec ago

Build has been executing for 12 sec

No changes.

Started by user himanshu

Revision: c3b8858baff37e3ff48f0b089dc1ebc9346e37f3

Repository: <https://github.com/HimanshuSingh1706/simple-java-maven-app.git>

refs/remotes/origin/master

Jenkins

Search (CTRL+K)

himanshu log out

Dashboard > javamavenapp > #1 > Console Output

Status

Changes

Console Output

View as plain text

Edit Build Information

Delete build '#1'

Git Build Data

Console Output

Started by user himanshu

Running as SYSTEM

Building in workspace /var/lib/jenkins/workspace/javamavenapp

The recommended git tool is: NONE

No credentials specified

Cloning the remote Git repository

Cloning repository <https://github.com/HimanshuSingh1706/simple-java-maven-app.git>

> git init /var/lib/jenkins/workspace/javamavenapp # timeout=10

Fetching upstream changes from <https://github.com/HimanshuSingh1706/simple-java-maven-app.git>

> git --version # timeout=10

> git --version # 'git version 2.39.3'

> git fetch --tags --force --progress -- <https://github.com/HimanshuSingh1706/simple-java-maven-app.git> +refs/heads/\*:refs/remotes/origin/\* # timeout=10

> git config remote.origin.url <https://github.com/HimanshuSingh1706/simple-java-maven-app.git> # timeout=10

> git config --add remote.origin.fetch +refs/heads/\*:refs/remotes/origin/\* # timeout=10

Dashboard > javamavenapp > #1 > Console Output

Downloaded from central: <https://repo.maven.apache.org/maven2/org/apache/maven/surefire/common-java5/3.2.2/common-java5-3.2.2.jar> (18 kB at 214 kB/s)

[INFO]

[INFO] -----

[INFO] T E S T S

[INFO] -----

[INFO] Running com.mycompany.app.AppTest

[INFO] Tests run: 2, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.431 s -- in com.mycompany.app.AppTest

[INFO]

[INFO] Results:

[INFO]

[INFO] Tests run: 2, Failures: 0, Errors: 0, Skipped: 0

[INFO]

[INFO] -----

[INFO] BUILD SUCCESS

[INFO] -----

[INFO] Total time: 40.370 s


[INFO] Finished at: 2024-05-01T23:27:43+05:30


[INFO] -----


Finished: SUCCESS





Dashboard > javamavenapp > #1


 **Status**


 **#1 (May 1, 2024, 11:26:47 PM)**


 Keep this build forever


 **Changes**

 Console Output


 Edit Build Information


 Delete build '#1'


 Git Build Data

 Add description

Started 2 min 38 sec ago  
Took **56 sec**

 No changes.

 Started by user [himanshu](#)

 **git**

Revision: c3b8858baff37e3ff48f0b089dc1ebc9346e37f3  
Repository: <https://github.com/HimanshuSingh1706/simple-java-maven-app.git>

• refs/remotes/origin/master

REST API Jenkins 2.440.3

Dashboard > javamavenapp > Workspace


 **Status**

 **Changes**

 **Workspace**

 Build Now

 Configure

 Delete Project



 Rename


**Workspace of javamavenapp on Built-In Node**



[javamavenapp](#) / [target](#) / [test-classes](#) / [com](#) / [mycompany](#) / [app](#) /

 [AppTest.class](#) May 1, 2024, 11:27:32 PM 1.76 KiB 


 [\(all files in zip\)](#)


 **Build History** [trend](#) 


 **#1** [May 1, 2024, 11:26 PM](#)


 [Atom feed for all](#)  [Atom feed for failures](#)


Dashboard > javamavenapp > #1


 **Status**


 **#1 (May 1, 2024, 11:26:47 PM)**


 Keep this build forever


 **Changes**

 Console Output


 Edit Build Information


 Delete build '#1'


 Git Build Data

 Add description

Started 2 min 38 sec ago  
Took **56 sec**

 No changes.

 Started by user **himanshu**

 **git**

Revision: c3b8858baff37e3ff48f0b089dc1ebc9346e37f3  
Repository: <https://github.com/HimanshuSingh1706/simple-java-maven-app.git>

- refs/remotes/origin/master

REST API Jenkins 2.440.3

Dashboard > javamavenapp > Workspace

 **Status**

 **Changes**

 **Workspace**

 Build Now

 Configure

 Delete Project



 Rename


**Workspace of javamavenapp on Built-In Node**



[javamavenapp](#) / [target](#) / [test-classes](#) / [com](#) / [mycompany](#) / [app](#) /

 [AppTest.class](#) May 1, 2024, 11:27:32 PM 1.76 KiB 

 [\(all files in zip\)](#)

 **Build History** [trend](#) 

 **#1** [May 1, 2024, 11:26 PM](#)

 [Atom feed for all](#)  [Atom feed for failures](#)

Search (CTRL+K)

himanshu

log out

Dashboard > javamavenapp >

Status

Changes

Workspace

Build Now

Configure

Delete Project

Rename

javamavenapp

Last Successful Artifacts

my-app-1.0-SNAPSHOT.jar2.65 KiBview

Permalinks

Last build (#4), 1 min 1 sec ago

Last stable build (#4), 1 min 1 sec ago

Last successful build (#4), 1 min 1 sec ago

Last completed build (#4), 1 min 1 sec ago

Build History

trend

Filter...

Search (CTRL+K)

himanshu

log out

Dashboard > javamavenapp\_pipeline >

Status

Changes

Build Now

Configure

Delete Pipeline

Full Stage View

Rename

Pipeline Syntax

javamavenapp\_pipeline

Add description

Disable Project

Stage View

Average stage times:  
(Average full run time: ~19s)

	Declarative: Tool Install	clone the java app	compile the code	test the code
#9 May 02 12:59 No Changes	219ms	2s	14s	1s
#7 May 02 12:50 No Changes	150ms	1s	13s	949ms
#6 May 02 12:49 No Changes				

Build History

trend

Filter...

#9May 2, 2024, 12:59 PM

#7May 2, 2024, 12:50 PM

#6May 2, 2024, 12:49 PM

#5May 2, 2024, 12:45 PM