

## Module 4: Continuous Integration with Jenkins

### 1. Create a Freestyle Project: QA\_UNIT\_TEST

Build trigger Configure it to be triggered by the DEVELOPER\_CODE\_REVIEW job

Dashboard >

+ New Item

Build History

Project Relationship

Check File Fingerprint

Manage Jenkins

My Views

Build Queue

No builds in the queue.

Build Executor Status

(0 of 2 executors busy)

All

+

S	W	Name	Last Success	Last Failure	Last Duration
✓	☀	DEVELOPER_CODE_REVIEW	23 sec #4	N/A	3.6 sec
✓	☁	QA_UNIT_TEST	12 sec #3	1 min 27 sec #2	7.7 sec

Icon: S M L

Add description

Dashboard > QA\_UNIT\_TEST > #4

Status

Changes

Console Output

Edit Build Information

Delete build '#4'

Timings

Git Build Data

Previous Build

✓ #4 (Dec 14, 2024, 8:17:08 AM)

Started by upstream project DEVELOPER\_CODE\_REVIEW build number 5 originally caused by:

- Started by user sham chaudhari

This run spent:

- 5 sec waiting;
- 5.4 sec build duration;
- 10 sec total from scheduled to completion.

git

Revision: 8a0931378350043b9cdd3558a0952b5f881cb423

Repository: https://github.com/sham9394/samplejavaapp.git

- refs/remotes/origin/master

No changes.

Add description

Keep this build forever

Started 1 min 56 sec ago

Took 5.4 sec

Dashboard > QA\_UNIT\_TEST > #4 > Console Output


```
***** java.lang.Exception: TEST MESSAGE
Cause:at com.devopsdemo.utilities.ExceptionThrower.doCheck(ExceptionThrower.java:43)
Cause:at com.devopsdemo.utilities.TestLogger.testGetErrorMessage5(TestLogger.java:75)
Tests run: 5, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.065 sec - in com.devopsdemo.utilities.TestLogger
Running com.devopsdemo.utilities.TestHexAsciiConversion
testing ascii conversion into hexadecimal
74657374696e6720617363696920636f6e76657274696f6e20696e746f206865786166563696d16c
Tests run: 4, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.031 sec - in com.devopsdemo.utilities.TestHexAsciiConversion
Running com.devopsdemo.utilities.TestGenericComparator
Tests run: 14, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.069 sec - in com.devopsdemo.utilities.TestGenericComparator

Results :

Tests run: 23, Failures: 0, Errors: 0, Skipped: 0

[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 3.360 s
[INFO] Finished at: 2024-12-14T08:17:13Z
[INFO] -----
Finished: SUCCESS
```

## 2. Create a Freestyle Project: QA\_PACKAGE

 **Jenkins**

Search (CTRL+K) ?

🔔 1 🛡️ 1 👤 sham chaudhari 🚪 log out

Dashboard >

+ New Item

📄 Build History

⚙️ Manage Jenkins

📅 My Views


Build Queue  
No builds in the queue.

Build Executor Status  
0/2

All +

S	W	Name ↓	Last Success	Last Failure	Last Duration	Coverage
🟢	☀️	DEVELOPER_CODE_REVIEW	50 min #2	N/A	3.3 sec	▶️ n/a
🟢	☀️	QA_PACKAGE	43 sec #1	N/A	9.3 sec	▶️ n/a
🟢	☀️	QA_UNIT_TEST	49 min #1	N/A	8.2 sec	▶️ n/a

Icon: S M L

 **Jenkins**

Search (CTRL+K) ?

🔔 1 🛡️ 1 👤 sham chaudhari 🚪 log out

Dashboard > QA\_PACKAGE > #1

📄 Status

🔗 Changes

📄 Console Output

📄 Edit Build Information

🗑️ Delete build '#1'

🕒 Timings

🔗 Git Build Data

🟢 #1 (Dec 14, 2024, 10:33:13 AM)

🕒 Started by user sham chaudhari

🕒 This run spent:

- 2 ms waiting;
- 9.3 sec build duration;
- 9.3 sec total from scheduled to completion.

🔗 Revision: 8a0931378350043b9cdd3558a0952b5f881cb423  
Repository: <https://github.com/lerndevops/samplejavaapp.git>


- refs/remotes/origin/master

🔗 No changes.

Add description

Keep this build forever

Started 1 min 4 sec ago  
Took 9.3 sec

 **Jenkins**

Search (CTRL+K) ?

🔔 1 🛡️ 1 👤 sham chaudhari 🚪 log out

Dashboard > QA\_PACKAGE > Workspace of QA\_PACKAGE on Built-In Node

📄 Status

🔗 Changes

📄 Workspace

▶️ Build Now

⚙️ Configure

🗑️ Delete Project

✎ Rename

Builds  
Filter /

Today  
🟢 #1 10:33 AM

Workspace of QA\_PACKAGE on Built-In Node

QA\_PACKAGE / target /

classes/com/devopsdemo

generated-sources/annotations

generated-test-sources/test-annotations

maven-archiver

maven-status/maven-compiler-plugin

sampleapp

surefire-reports

test-classes

jacoco.exec

sampleapp.war

Dec 14, 2024, 10:33:20 AM 13.54 KiB

Dec 14, 2024, 10:33:23 AM 15.80 MiB

(all files in zip)

### 3. Create a Pipeline: SAMPLE\_COMPILE\_VIEW

Dashboard > SAMPLE\_COMPILE\_VIEW >

#### Build Pipeline

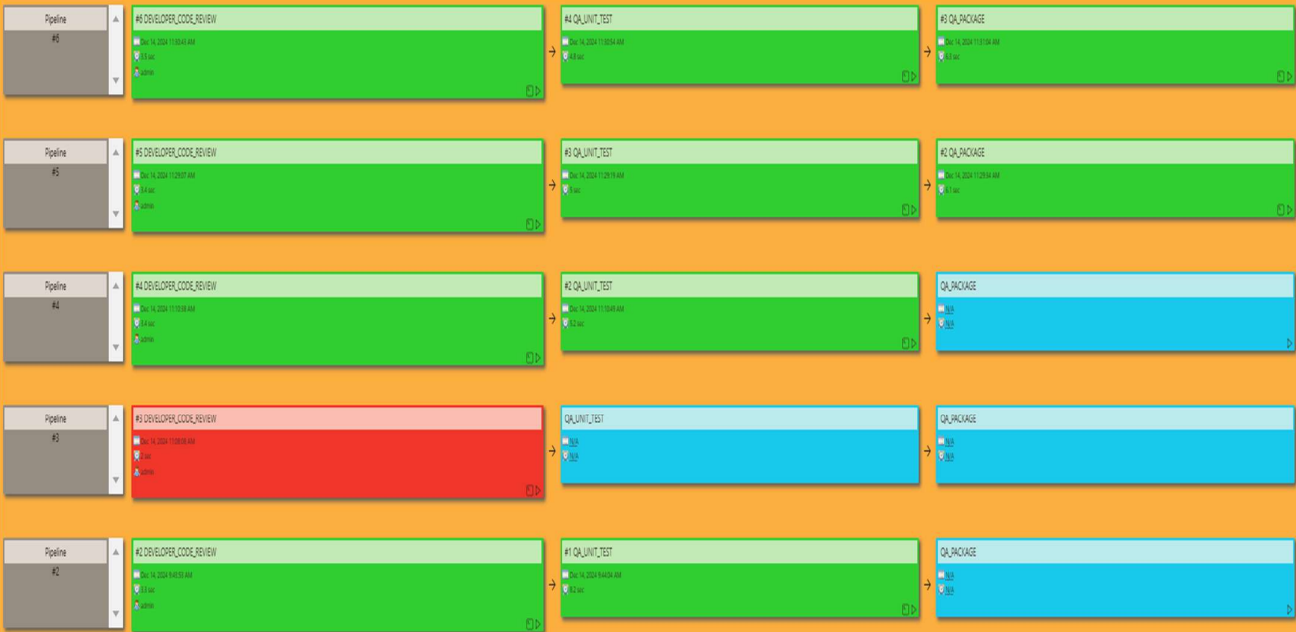
Run History Configure Add Step Delete Manage



Dashboard > SAMPLE\_COMPILE\_VIEW >

#### Build Pipeline

Run History Configure Add Step Delete Manage



#### 4. Creating pipeline using pipeline script.

Jenkins

Q Search (CTRL+K)

sham chaudhari

Dashboard > SAMPLE\_COMPILE\_VIEW

Status

Changes

Build Now

Configure

Delete Pipeline

Full Stage View

Stages

Rename

Pipeline Syntax

SAMPLE\_COMPILE\_VIEW

Add description

Stage View

Average stage times:  
(Average full run time: ~16s)

	Checkout Code	Compile	Test	Package	Declarative: Post Actions
#6 Dec 14 16:53 No Changes	391ms	3s	5s	6s	62ms
#5 Dec 14 16:49 No Changes	383ms	3s	5s	6s	56ms
#4 Dec 14 16:43 No Changes	412ms	3s	5s	6s	64ms
#3 Dec 14 16:41 1 commit	511ms	4s	6s	6s	61ms
#2 Dec 14 16:36 No Changes	446ms	2s failed	57ms failed	57ms failed	62ms
#1 Dec 14 16:28 No Changes	787ms	433ms failed	61ms failed	66ms failed	72ms

BUILDS

Filter /

Today

- #6 11:23 AM ✓
- #5 11:19 AM ✓
- #4 11:13 AM ✓
- #3 11:11 AM ✓
- #2 11:06 AM ✗
- #1 10:58 AM ✗

Jenkins

Q Search (CTRL+K)

sham chaudhari

Dashboard > SAMPLE\_COMPILE\_VIEW > Stages