

Week 13 : SOFTWARE DEVELOPMENT TOOLS AND ENVIRONMENTS

# **LAB 01 : Run Jenkinfile using SCM From Github**

Tuchsanai / DevTools

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Tuchsanai d c89be10 · now History

Name	Last commit message	Last commit date
JENKINFILE	d	now
readme.md	ww	1 minute ago
status.py	ww	1 minute ago

readme.md

Tuchsanai / DevTools

<> Code Issues Pull requests Actions Projects Security Insights Settings

dev DevTools / 03\_Jenkins / week13 / 01\_Run\_Jenkinsfile\_From\_Github / status.py

Tuchsanai s

Code Blame 14 lines (12 loc) · 286 Bytes

```
1 import os
2
3 def main():
4     # Displaying status
5     print("System Status:")
6     print("-----")
7     print("Operating System:", os.name)
8     print("\n")
9     print("Environment Variables:", os.environ)
10    print("\n")
11    print("finished.")
12
13 if __name__ == "__main__":
14    main()
```


main DevTools / 03\_Jenkins / week13 / 01\_Run\_Jenkinsfile\_From\_Github / JENKINFILE

Tuchsanai aa 65dd21b · 6 minutes ago History

29 lines (27 loc) · 814 Bytes

Code Blame Raw Download Edit

```
1 pipeline {
2     agent any
3
4     stages {
5         stage('Check Python Installation') {
6             steps {
7                 script {
8                     // Check if Python is installed
9                     def pythonInstalled = sh(script: "which python3", returnStatus: true) == 0
10                    if (!pythonInstalled) {
11                        // Install Python if not installed
12                        sh 'sudo apt update'
13                        sh 'sudo apt install -y python3'
14                    }
15                }
16            }
17        }
18
19        stage('Run Python Script') {
20            steps {
21                script {
22                    // Run Python script with only os library
23                    sh 'python3 status.py'
24                    sh 'ls -l'
25                }
26            }
27        }
28    }
29 }
```

 **Jenkins**

Search (⌘+K) ?

Tuchsanai Ploysuwan

Dashboard >

+ New Item

1

People

Build History

Project Relationship

Check File Fingerprint

Manage Jenkins

My Views

Build Queue

No builds in the queue.

Build Executor Status

1 Idle

2 Idle

## Welcome to Jenkins!

This page is where your Jenkins jobs will be displayed. To get started, you can set up distributed builds or start building a software project.

### Start building your software project


Create a job +

### Set up a distributed build

Set up an agent

Configure a cloud

Learn more about distributed builds

 **Jenkins**

Search (⌘+K) ?

Tuchsanai Ploysuwan


Dashboard > All >

### Enter an item name

jenkins\_file


» Required field

2


 **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.


3

 **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**


Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.

 **Folder**

Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a separate namespace, so you can have multiple things of the same name as long as they are in different folders.

 **Multibranch Pipeline**

Creates a set of Pipeline projects according to detected branches in one SCM repository.

 **Organization Folder**

Creates a set of multibranch project subfolders by scanning for repositories.

OK

## Configure

General

Advanced Project Options

Pipeline

### Build Triggers

- ☐ Build after other projects are built ?
- ☐ Build periodically ?
- ☐ GitHub hook trigger for GITScm polling ?
- ☐ Poll SCM ?
- ☐ Quiet period ?
- ☐ Trigger builds remotely (e.g., from scripts) ?

### Advanced Project Options

Advanced ▾

### Pipeline

Definition

- ✓ Pipeline script
- Pipeline script from SCM

Script ?

1

try sample Pipeline... ▾

4

main

DevTools / 03\_Jenkins / week13  
/ 01\_Run\_Jenkinsfile\_From\_Github\_WithSCM  
/ JENKINFILE

Go to file

Tuchsanai d

c89be10 · 1 minute ago

History

30 lines (27 loc) · 894 Bytes

Code

Blame

Raw

```
1 pipeline {
2   agent any
3
4   stages {
5     stage('Check Python Installation') {
6       steps {
7         script {
8           // Check if Python is installed
9           def pythonInstalled = sh(script: "which python3", returnStatus: true) == 0
10          if (!pythonInstalled) {
11            // Install Python if not installed
12            sh 'sudo apt update'
13            sh 'sudo apt install -y python3'
14          }
15        }
16      }
17    }
18
19    stage('Run Python Script') {
20      steps {
21        script {
22          // Run Python script with only os library
23          sh 'ls -l'
24          sh 'python3 ../03_Jenkins/week13/01_Run_Jenkinsfile_From_Github_WithSCM/status.py'
25        }
26      }
27    }
28  }
29 }
30 }
```

Dashboard > jenkins\_file > Configuration

Configure

General

Advanced Project Options

Pipeline

Build triggers

☐ Build after other projects are built ?  
☐ Build periodically ?  
☐ GitHub hook trigger for GITScm polling ?  
☐ Poll SCM ?  
☐ Quiet period ?  
☐ Trigger builds remotely (e.g., from scripts) ?

Advanced Project Options

Advanced

Pipeline

Definition

Pipeline script from SCM

SCM ?

None

Git

Script Path ?

./03\_Jenkins/week13/01\_Run\_Jenkinsfile\_From\_Github/JENKINFILE

☒ Lightweight checkout ?

[Pipeline Syntax](#)

Save

Apply

## Configure

General

Advanced Project Options

Pipeline

9

If private account, you need credential

10

### Repositories ?

Repository URL ?

https://github.com/Tuchsanai/DevTools.git

Credentials ?

✓ - none -  
tuchsanai/\*\*\*\*\* (github account)

+ Add

Add Repository

### Branches to build ?

Branch Specifier (blank for 'any') ?

\*/dev

Add Branch

Repository browser ?

(Auto)

Additional Behaviours

Add

Script Path ?

./03\_Jenkins/week13/01\_Run\_Jenkinsfile\_From\_Github/JENKINFILE

Save

Apply

11

Jenkins

Dashboard

>

jenkins\_file

>

Status

Changes

Build Now

Configure

Delete Pipeline

Full Stage View

Rename

Pipeline Syntax

Build History

trend

Filter...

#3

27 s.w. 2024-03-44

Atom feed for all

Atom feed for failures

jenkins\_file

Stage View

Average stage times:  
(Average full run time: ~3s)

	Declarative: Checkout SCM	Check Python Installation	Run Python Script
	1s	394ms	982ms
	1s	394ms	982ms

Permalinks

- Last build (#3), 2 min 15 sec ago
- Last stable build (#3), 2 min 15 sec ago
- Last successful build (#3), 2 min 15 sec ago
- Last completed build (#3), 2 min 15 sec ago

Dashboard > jenkins\_file > #3

Status

Changes

Console Output

View as plain text

Edit Build Information

Delete build '#3'

Git Build Data

Restart from Stage

Replay

Pipeline Steps

Workspaces

Previous Build

## Console Output

Started by user Tuchsana1 Playsuwan

Obtained ./#3\_Jenkins/week13/01\_Run\_Jenkinsfile\_From\_Github/JENKINFILE from git <https://github.com/Tuchsana1/DevTools.git>

[Pipeline] Start of Pipeline

[Pipeline] node

Running on Jenkins in /var/lib/jenkins/workspace/jenkins\_file

[Pipeline] {

[Pipeline] stage

[Pipeline] { (Declarative: Checkout SCM)

[Pipeline] checkout

The recommended git tool is: git

using credential id\_github

> git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/jenkins\_file/.git # timeout=10

Fetching changes from the remote git repository

> git config remote.origin.url <https://github.com/Tuchsana1/DevTools.git> # timeout=10

Fetching upstream changes from <https://github.com/Tuchsana1/DevTools.git>

> git --version # timeout=10

> git --version # 'git version 2.34.1'

using GIT\_ASKPASS to set credentials github account

> git fetch --tags --force --progress -- <https://github.com/Tuchsana1/DevTools.git> +refs/heads/\*:refs/remotes/origin/\* # timeout=10

> git rev-parse refs/remotes/origin/dev^{commit} # timeout=10

Checking out Revision adc46fce6b618509afeccd13d26c1406fd5dbf3 (refs/remotes/origin/dev)

> git config core.sparsecheckout # timeout=10

> git checkout -f adc46fce6b618509afeccd13d26c1406fd5dbf3 # timeout=10

Commit message: "delete files"

> git rev-list --no-walk 32de38e68ab198bf44721d9a241c74dc5f92a427 # timeout=10

[Pipeline] }

[Pipeline] // stage

[Pipeline] withEnv

[Pipeline] {

[Pipeline] stage

[Pipeline] { (Check Python Installation)

[Pipeline] script

[Pipeline] sh

+ which python3

/usr/bin/python3

[Pipeline] }

[Pipeline] // script

[Pipeline] }

[Pipeline] // stage

[Pipeline] { (Run Python Script)

[Pipeline] script

[Pipeline] sh

+ pwd

/var/lib/jenkins/workspace/jenkins\_file

[Pipeline] sh

+ python3 ./#3\_Jenkins/week13/01\_Run\_Jenkinsfile\_From\_Github/status.py

System Status:

-----

Operating System: posix

-----

finished.

Environment Variables: environ({'JENKINS\_HOME': '/var/lib/jenkins', 'USER': 'jenkins', 'CI': 'true', 'RUN\_CHANGES\_DISPLAY\_URL': 'http://54.251.188.144:8080/job/jenkins\_file/3/display/redirect?page=changes', 'NODE\_LABELS': 'built-in', 'HUDSON\_URL': 'http://54.251.188.144:8080/', 'GIT\_COMMIT': 'adc46fce6b618509afeccd13d26c1406fd5dbf3', 'HOME': '/var/lib/jenkins', 'BUILD\_URL': 'http://54.251.188.144:8080/job/jenkins\_file/3/', 'HUDSON\_COOKIE': '49a06cf3-5d30-418d-b9f6-b4626631d20a', 'JENKINS\_SERVER\_COOKIE': 'durable-d51f37cf430a25df33cb3cd9f7893bc2c452d20ea1b32523e4a26025dc82651f', 'NOTIFY\_SOCKET': '/run/systemd/notify', 'SYSTEMD\_EXEC\_PID': '8226', 'WORKSPACE': '/var/lib/jenkins/workspace/jenkins\_file', 'LOGNAME': 'jenkins', 'NODE\_NAME': 'built-in', 'JOURNAL\_STREAM': '8:46337', 'RUN\_ARTIFACTS\_DISPLAY\_URL': 'http://54.251.188.144:8080/job/jenkins\_file/3/display/redirect?page=artifacts', 'STAGE\_NAME': 'Run Python Script', 'EXECUTOR\_NUMBER': '0', 'GIT\_BRANCH': 'origin/dev', 'RUN\_TESTS\_DISPLAY\_URL': 'http://54.251.188.144:8080/job/jenkins\_file/3/display/redirect?page=tests', 'BUILD\_DISPLAY\_NAME': '93', 'HUDSON\_HOME': '/var/lib/jenkins', 'JOB\_BASE\_NAME': 'jenkins\_file', 'PATH': '/usr/local/sbin:/usr/local/bin:/usr/sbin:/bin:/sbin:/usr/sbin:/usr/bin:/usr/sbin', 'INVOCATION\_ID': '3d61b667cf72448d99532ebcf5a349ed', 'BUILD\_ID': '3', 'BUILD\_TAG': 'jenkins-jenkins\_file-3', 'LANG': 'C.UTF-8', 'JENKINS\_URL': 'http://54.251.188.144:8080/', 'JOB\_URL': 'http://54.251.188.144:8080/job/jenkins\_file/', 'GIT\_URL': 'https://github.com/Tuchsana1/DevTools.git', 'BUILD\_NUMBER': '3', 'JENKINS\_NODE\_COOKIE': '9b689257-aaae-4dc4-e44d-6773be581705', 'SHELL': '/bin/bash', 'RUN\_DISPLAY\_URL': 'http://54.251.188.144:8080/job/jenkins\_file/3/display/redirect', 'HUDSON\_SERVER\_COOKIE': '25d1a75683dc7e3e', 'JOB\_DISPLAY\_URL': 'http://54.251.188.144:8080/job/jenkins\_file/display/redirect', 'JOB\_NAME': 'jenkins\_file', 'PWD': '/var/lib/jenkins/workspace/jenkins\_file', 'GIT\_PREVIOUS\_COMMIT': '32de38e68ab198bf44721d9a241c74dc5f92a427', 'WORKSPACE\_TMP': '/var/lib/jenkins/workspace/jenkins\_filetmp'})



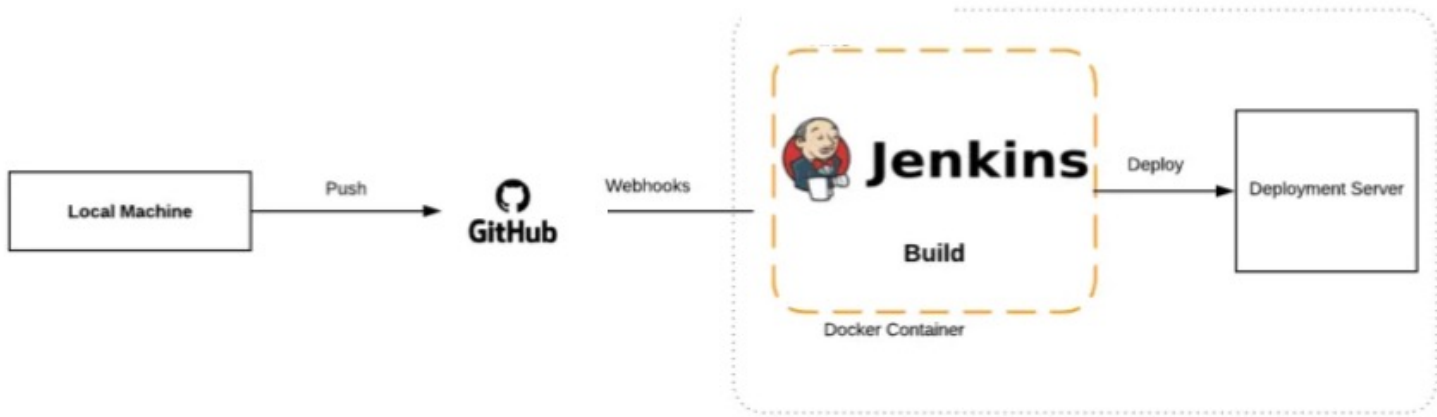
# **LAB 02 : Run Jenkinfile without SCM From Github**











Delivery (CD).













