

## ASSIGNMENT 5 DevOps

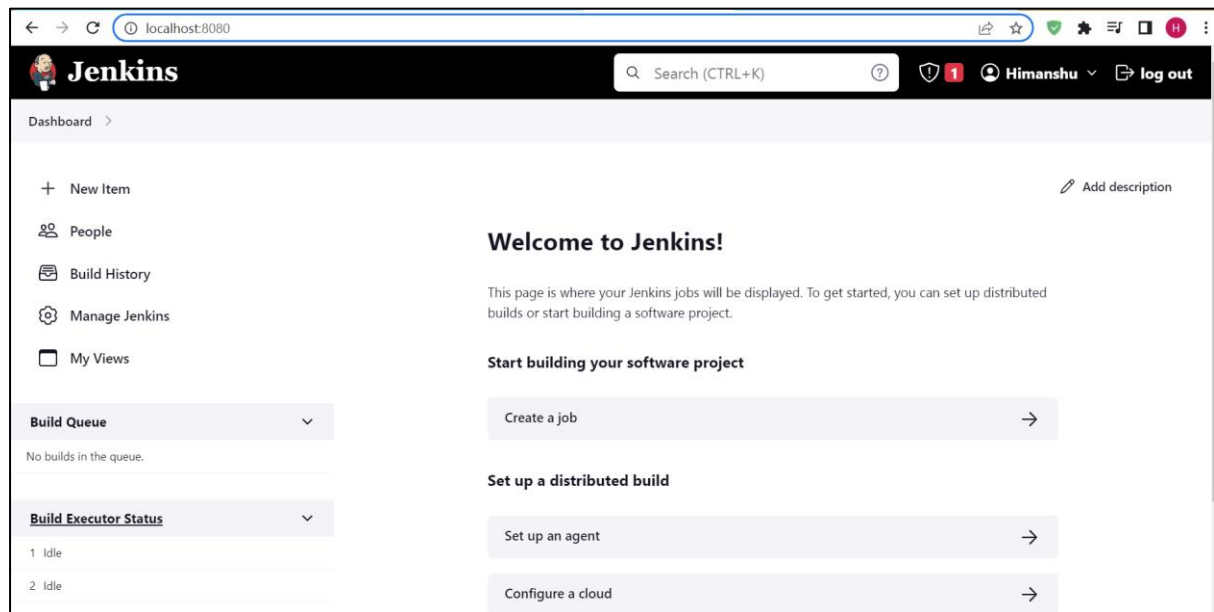
IT\_BE\_41\_Himanshu Shukla

1) Set up a Jenkins job that picks up a Java application from a GitHub repository, builds it, and runs it.

**Prerequisite:** github account, jenkins installed on system([click](#)), jdk 11/17/22(any one)

So lets create and run a job in jenkins for simple java application

1)after Installing the jenkins go to the localhost:8080

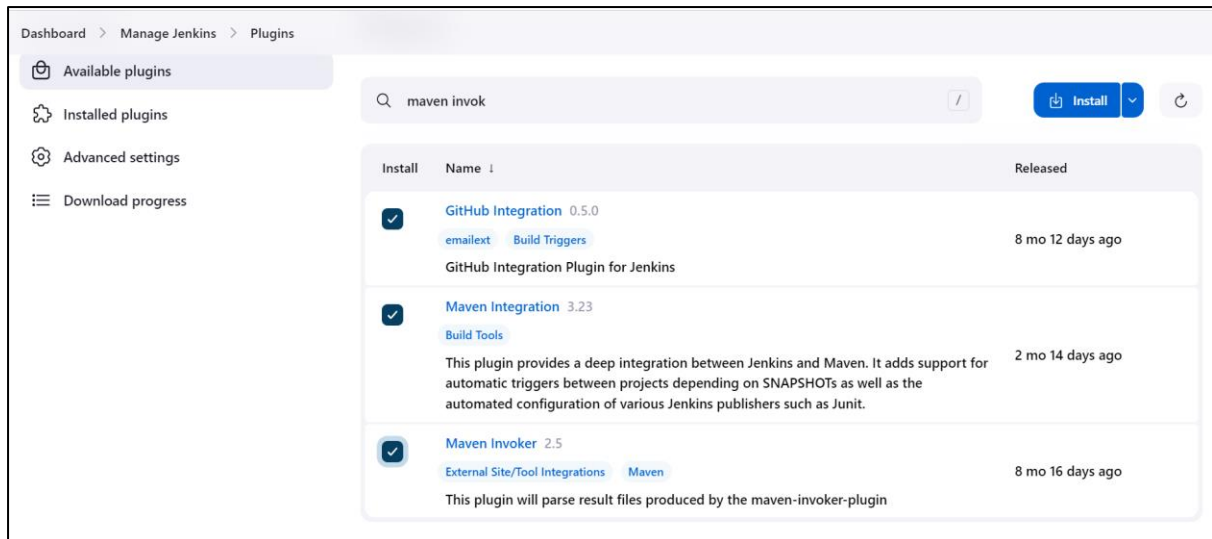


2)Now click on “**manage jenkins**” with setting icon on left side bar then go to “**plugins**” after that click on “**available plugins**” and search for three main plugins

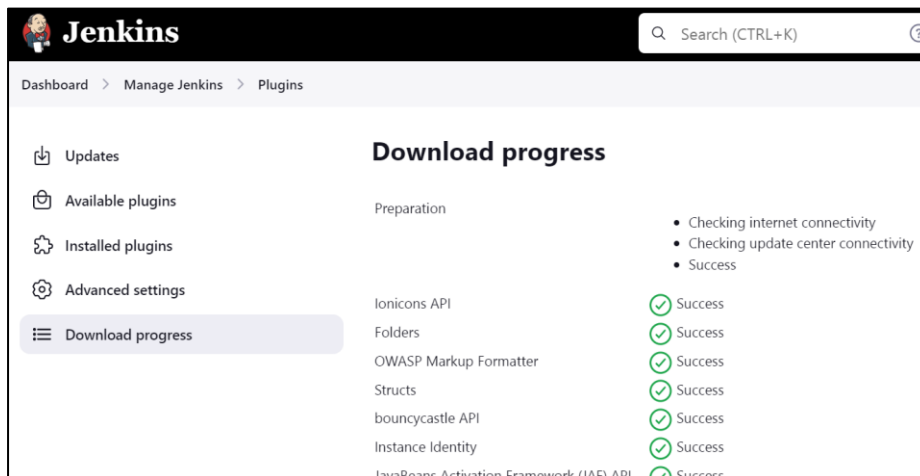
a)github integration plugins

b)maven integration

c)maven invoker,and install all this



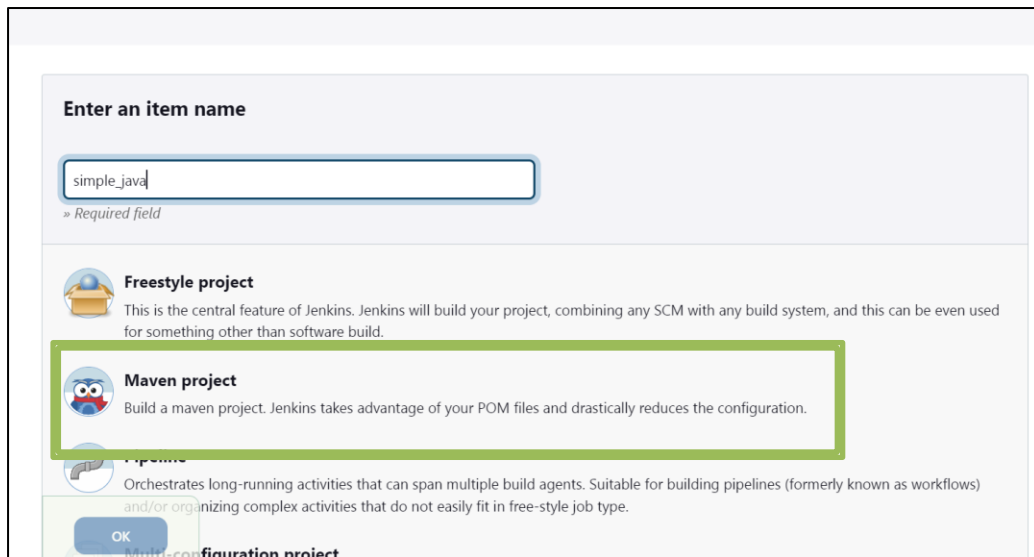
Now all has been installed



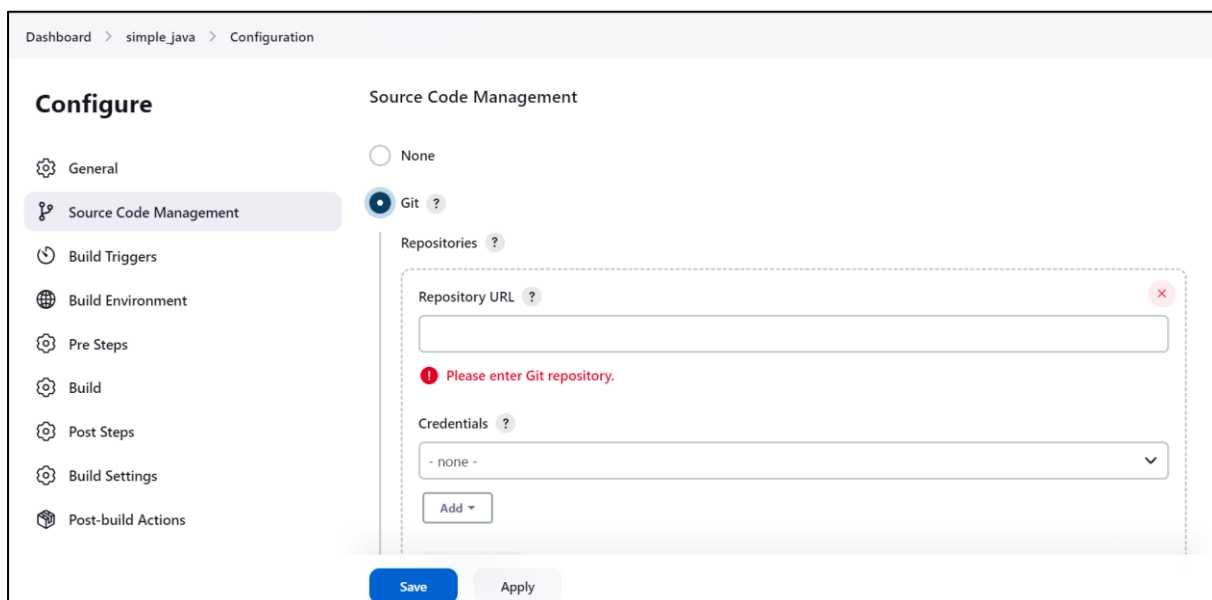
Again go to dashboard click on manage jenkins then click on “tools” and scroll to the bottom under maven installation add maven the click on save and apply



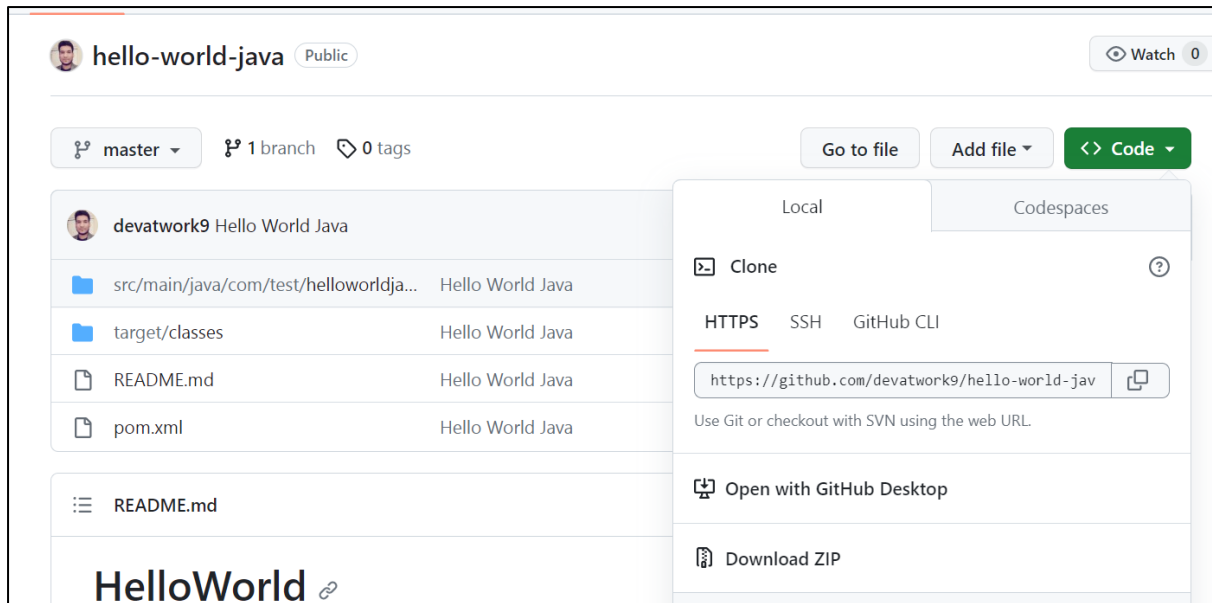
3) go to dashboard and click on new item and named the job as “simple\_java” and click on second option “**maven project**” then click ok (It is imp to click on maven project)



4) now click on source code management and click on git and paste the HTTPS URL of simple java based application from github (the chosen repo of github should be public and must contain pom.xml[maven] )



Here below I have chosen a random repo([click](#)) of someone of basic java application of hello world



Now just copy the HTTPS url and paste in repository url ,scroll down in build section under goals and action write “clean install package”

Source Code Management

☐ None

☒ Git ?

Repositories ?

Repository URL ?

Credentials ?

Build

Root POM ?

Goals and options ?

Advanced ▾

then scroll to bottom and click on save

5)after that click on “build now” from left side bar of main dashboard and below there will be the build history

Dashboard > simple\_java >

- Changes
- Workspace
- Build Now**
- Configure
- Delete Maven project
- Modules
- Rename

### Permalinks

- Last build (#3), 5 min 14 sec ago
- Last stable build (#3), 5 min 14 sec ago
- Last successful build (#3), 5 min 14 sec ago
- Last completed build (#3), 5 min 14 sec ago

**Build History** trend ▾

Filter builds...

Build	Timestamp
<b>#3</b>	19 Oct 2023, 01:40

Atom feed for all Atom feed for failures

6)Now just click on that tick and after that click on output console on left side bar

Dashboard > simple\_java > #3 > Console Output

- Status
- Changes
- Console Output**
- View as plain text
- Edit Build Information
- Delete build '#3'
- Git Build Data
- Redeploy Artifacts
- See Fingerprints

### Console Output

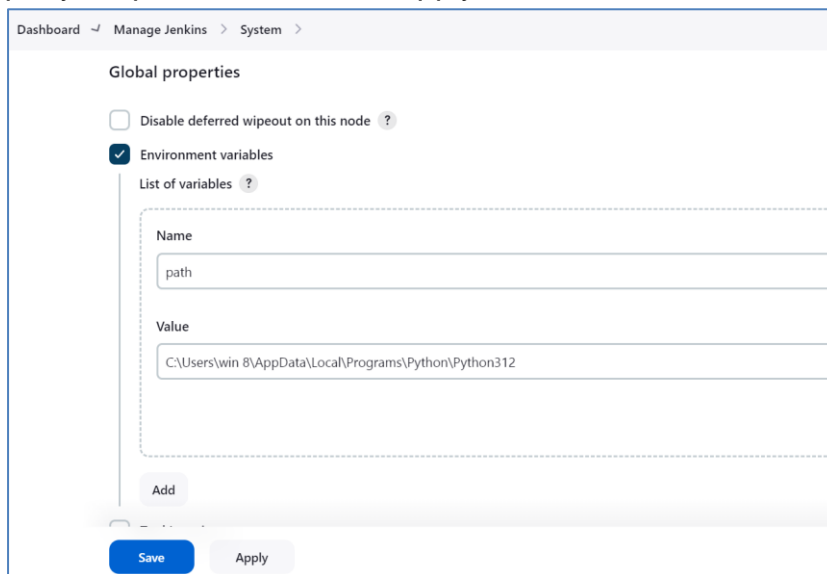
```
Started by user Himanshu
Running as SYSTEM
Building in workspace C:\ProgramData\Jenkins\jenkins\workspace\simple_java
The recommended git tool is: NONE
No credentials specified
> git.exe rev-parse --resolve-git-dir C:\ProgramData\Jenkins\jenkins\workspace\simple_java\.git # timeout=10
Fetching changes from the remote Git repository
> git.exe config remote.origin.url https://github.com/devatwork9/hello-world-java.git # timeout=10
Fetching upstream changes from https://github.com/devatwork9/hello-world-java.git
> git.exe --version # timeout=10
> git --version # 'git version 2.39.0.windows.2'
> git.exe fetch --tags --force --progress -- https://github.com/devatwork9/hello-world-java.git
+refs/heads/*:refs/remotes/origin/* # timeout=10
> git.exe rev-parse "refs/remotes/origin/master^{commit}" # timeout=10
Checking out Revision eb2db461b56382c6694b0f67213a426babf2743c (refs/remotes/origin/master)
> git.exe config core.sparsecheckout # timeout=10
> git.exe checkout -f eb2db461b56382c6694b0f67213a426babf2743c # timeout=10
Commit message: "Hello World Java"
```

Here the java application of hello world has been build and run using the jenkins job.

**b) Set up a Jenkins job that picks up a python application from a GitHub repository, builds it, and runs it.**

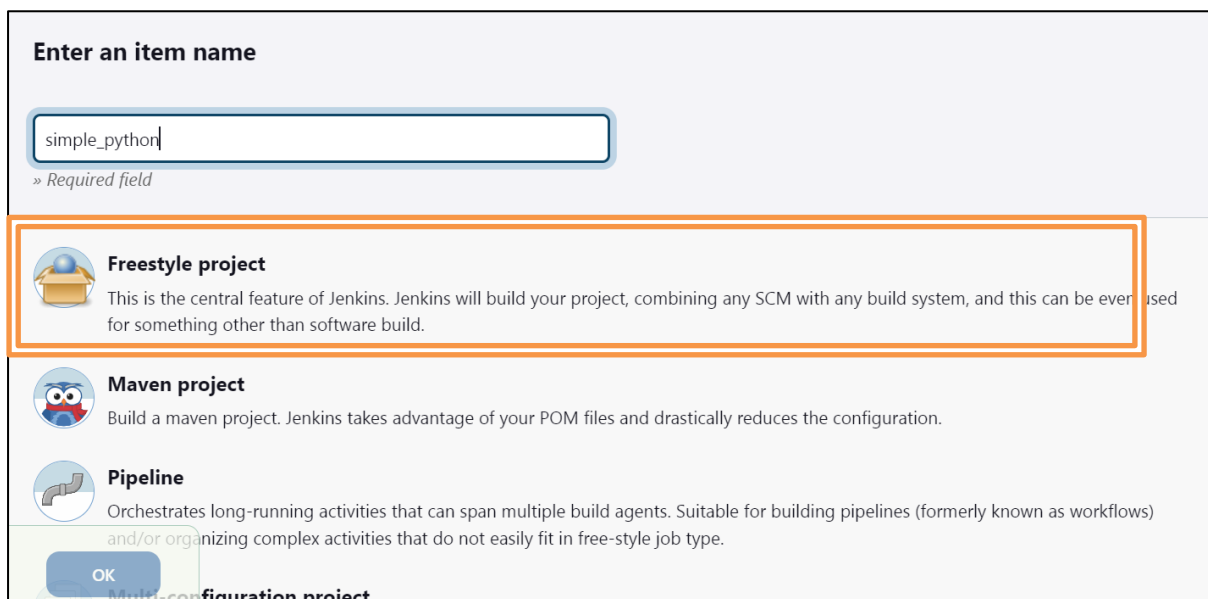
**Before this go to Manage jenkins>Plugins>Available plugins and install python (like we have install other 3 plugin previously for java )**

- prior just copy your path where python was installed and go to “manage jenkins” > click on “system” scroll upto global properties change the name:path and in value put your path then click on apply and save



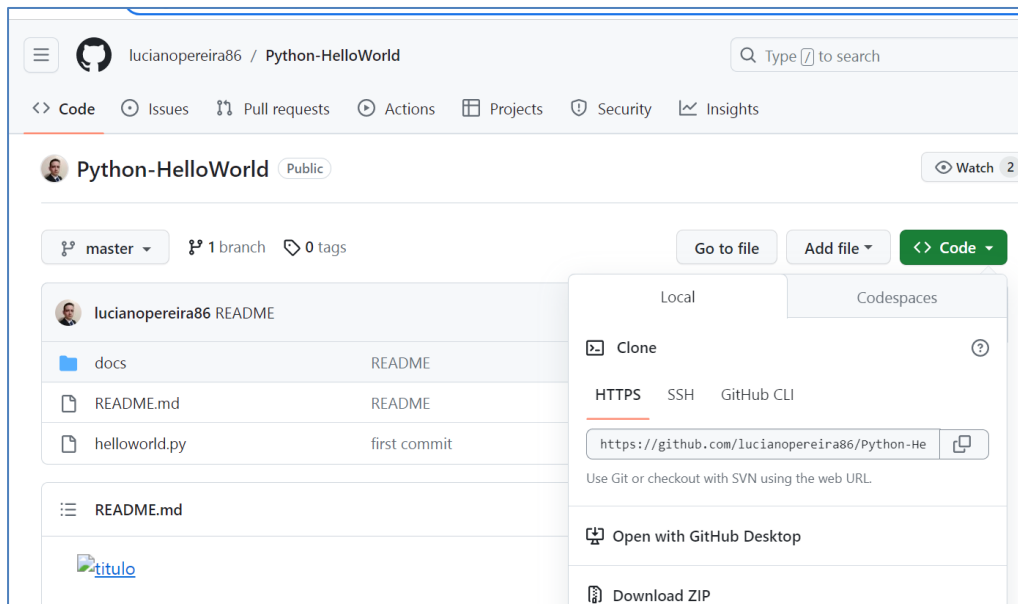
The screenshot shows the Jenkins 'System' configuration page, specifically the 'Global properties' section. The 'Environment variables' checkbox is checked. Under 'List of variables', there is a table with one entry: 'Name' is 'path' and 'Value' is 'C:\Users\win 8\AppData\Local\Programs\Python\Python312'. At the bottom, there are 'Save' and 'Apply' buttons.

1)go to dashboard create a new item named simple\_python click on **freestyle** project and click ok



The screenshot shows the 'Enter an item name' dialog in Jenkins. The input field contains 'simple\_python'. Below the input field, there is a list of project types: 'Freestyle project', 'Maven project', and 'Pipeline'. The 'Freestyle project' option is highlighted with an orange border. Below the list, there is an 'OK' button.

2)now just open a random git repo([click](#)) of simple python program, copy the HTTPS Url and paste it in repository url



### Source Code Management

☐ None

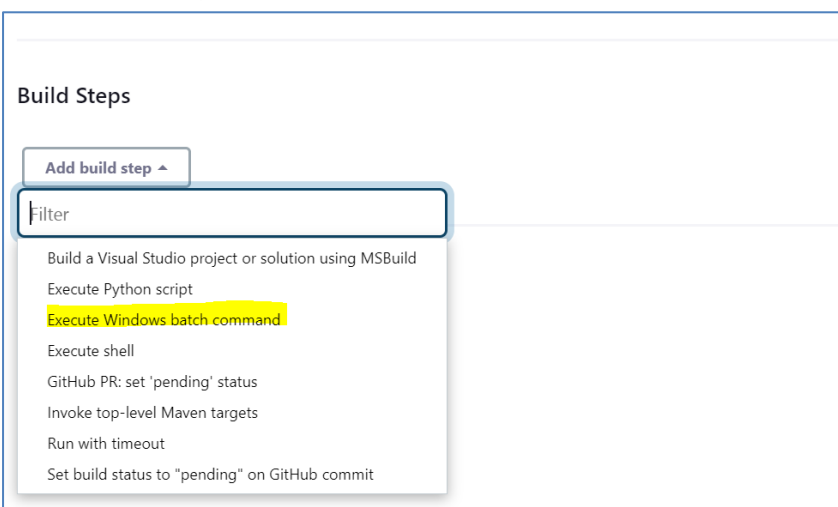
☒ Git ?

Repositories ?

Repository URL ?

`https://github.com/lucianopereira86/Python-HelloWorld.git`

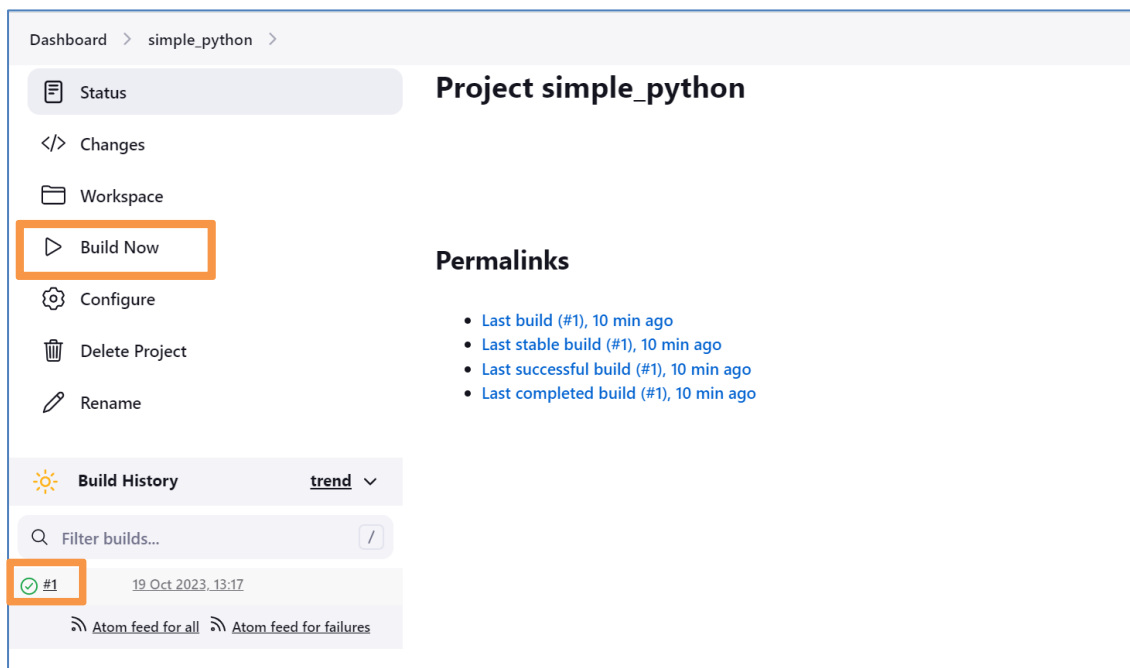
3)Scroll down under build step click on execute window batch command and write this as given





After this scroll to bottom click on apply and save

4)after this it will redirect you to your created job now just click on “build now”



Just click on green tick it will lead to output console



5) now the python application has been successfully build and runned

Dashboard > simple\_python > #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 C:\ProgramData\Jenkins\jenkins\workspace\simple_python
The recommended git tool is: NONE
No credentials specified
> git.exe rev-parse --resolve-git-dir C:\ProgramData\Jenkins\jenkins\workspace\simple_python\.git # timeout=10
Fetching changes from the remote Git repository
> git.exe config remote.origin.url https://github.com/lucianopereira86/Python-HelloWorld.git # timeout=10
Fetching upstream changes from https://github.com/lucianopereira86/Python-HelloWorld.git
> git.exe --version # timeout=10
> git --version # 'git version 2.39.0.windows.2'
> git.exe fetch --tags --force --progress -- https://github.com/lucianopereira86/Python-HelloWorld.git
+refs/heads/*:refs/remotes/origin/* # timeout=10
> git.exe rev-parse "refs/remotes/origin/master^{commit}" # timeout=10
Checking out Revision 88cd1390a0a21edc68619e783379cb16cc2c59ad (refs/remotes/origin/master)
> git.exe config core.sparsecheckout # timeout=10
> git.exe checkout -f 88cd1390a0a21edc68619e783379cb16cc2c59ad # timeout=10
Commit message: "README"
```