4. To build a Java Project (With and without parameters) using Jenkins

New Item -> Free style project -> Add build Steps -> Windows batch command -> Enter the following commands
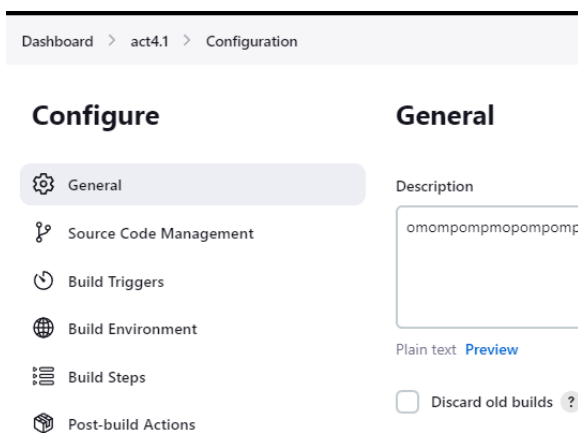

cd /d path
Javac Filename.java
Java Filename %parameter1% %parameter2%
Apply -> Save -> Build now -> Console output

5. To implement windows batch command on a project in Jenkins (with and without parameters)

New item -> Freestyle project -> Add Build Steps -> Windows Batch Command -> In the box enter (echo "Hello World") -> Build Now -> Console Output

Check This project is parameterized

Exp 6: To build anY Python project in Jenkins

New Item -> Free style project -> Add build Steps -> Python Script -> Enter some Code -> Build

Exp 7: To build a Maven and Ant project in Jenkins

Maven

New Item -> Maven Project -> Create -> (Source code management) Select Git ->
Note Maven Ant & Gradle works explicitly -> Fork a Repo on github (darkleon/HelloWorld)
-> Enter the cloning url ->
Scroll down to Build -> Goals & Options -> clean compile test -> Apply -> Save -> Build Now

Ant

New Item -> Maven Project -> Create -> (Source code management) Select Git -> Build steps
-> select Invoke Ant -> Ant Version -> Ant -> (Targets = clean compile package) -> Build now ->
Open console output -> Scroll dwn and copy the path ->
-> Open cmd -> execute: dir
C:\ProgramData\Jenkins\.jenkins\workspace\act7.2\target\roshambo.war

8. To create a pipeline script and build a pipeline of jobs in Jenkins

New Item -> Pipeline -> Create -> Enter some definition -> Scroll down to Pipeline -> Select pipeline script -> Enter script -> Build Now

```
pipeline{

   agent any

   stages{

      stage ('Plan phase'){

         steps{

            echo 'Hi. This is Shree Jaswal'

         }

      }

      stage ('code phase'){

         steps{

            input('Do you want to continue?')

         }

      }

      stage ('integrate phase'){

         when{

            not{

               branch "master"

            }

         }

         steps {

            echo 'Integration test passed'

         }

      }

      stage ('testing phase'){
```

```
        parallel{

          stage ('unit test'){

            steps{

              echo 'running unit test'

            }

          }

        }

      }

    }

}
```

9. To create a Jenkinsfile in a repository on GitHub and build a pipeline of jobs in Jenkins

New Item -> Pipeline project -> Check Github hook trigger for GITScm polling -> Pipeline ->
Pipeline script from SCM -> (SCM) GIT ->
https://github.com/chrisdias2311/jenkins-pipeline-tutorial.git -> Script path ->
hello-world/Jenkins -> Apply -> Save -> Build

10. To create a Jenkinsfile in a repository on GitHub and build a pipeline of jobs in Jenkins

First fork a repo -> https://github.com/chrismld/jenkins-pipeline-tutorial ->
New Item -> Pipeline -> Create -> Enter some description -> Scroll doen to pipeline -> Select
pipeline from SCM -> In SCM select Git -> Enter Git URL -> Apply and Save -> Build Now

Once build is successful -> Go to github -> Setting -> Left panel search for webhooks -> Add
webhook
Go to ngrok website -> Download Windows 64bit zip -> Extract .exe file ->

Go to cmd -> ngrok -> execute 'ngrok.exe http 8080' copy the forwarding link add it to the
payload_url-> Add Webhook '/github-webhook' -> Content-type (Application/JSON)

Go to Jenkins -> Click on build now

Go to GitHub -> Add a file .txt -> commit it -> Go to Jenkins -> Refresh -> Wait for 10-15 sec and it will automatically Build

Exp 11: To Implement Docker Commands

Docker commands:
Docker –version
Docker login

Next open docker -> Go to images -> Search 'Images' -> eg: Image named registry
Cmd -> docker pull <imagename> -> docker images -q ->

Docker pull ubuntu
Docker pull ubuntu:rolling

Exp 12: To build an Image for a Web Application using DockerFile
Create a index.html file -> write some code -> Keep the Docker file in the same folder ->
Docker build -t aec
Docker scout images
Docker images
Docker inspect images
Docker history aec
Docker ps

Exp 13: In Jenkins, create a slave node, connect it with master and build a project in slave node
Manage Jenkins -> Nodes -> New Node -> Name of node (Chris_Slave)
->Permanent Agent -> Create
Number of executors (2) -> Create a folder and enter its path in remote root directory -> Labels

Number of executors ?

```
2
```

Remote root directory ?

```
E:\Eng notes\SEM 5\DevOps Lab\Exp7
```

Labels ?

```
Chris_Exp7
```

Usage ?

```
Use this node as much as possible
```

Launch method ?

```
Launch agent by connecting it to the controller
```

☐ **Disable WorkDir** ?

Custom WorkDir path ?

```
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```

Internal data directory ?

```
remoting
```

☐ **Fail if workspace is missing** ?

☐ **Use WebSocket** ?

⚠ Either WebSocket mode is selected, or the TCP port for inbound agents must be enabled

Save

Custom WorkDir path ?

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Internal data directory ?

remoting

☐ Fail if workspace is missing ?

☐ Use WebSocket ?

🔴 Either WebSocket mode is selected, or the TCP port for inbound agents must be enabled

Advanced ⌄

Availability ?

Keep this agent online as much as possible

Node Properties

☐ Disable deferred wipeout on this node ?

Save

Dashboard -> Manage Jenkins -> Security -> TCP ports for inbound agents -> Random
Dashboard -> Manage Jenkins -> Nodes -> Open slave -> Copy Run from agent command line: (Windows) -> run it on command prompt
Mark Offline (Top right) -> Bring this node back Online
Left Appbar -> Disconnect
Dashboard -> New Item -> Create -> Restrict where this project can be run -> Build Steps -> echo "Hello World" -> Apply -> Save -> Build Now
Dashboard -> Manage Jenkins -> Node -> Slave -> Open your slave -> Open Project -> Configure -> Build Triggers -> Build Periodically -> Enter H/2 * * * * -> Apply -> Save

Enter H/2 * * * * This will build every 2 minutes

Exp 14: To create and run a test case on Chrome/Firefox browser with selenium IDE addon

Open Selenium -> Record a new test in a new project -> enter project name -> enter base URL -> start recording -> record some actions -> stop Recording

Open selenium -> Run current test
(Should pass all the testcases)