

1. In Jenkins, show changes in a project with the help of webhooks.
2. To execute 20 Git commands
 1. git init
 2. git clone <https://github.com/user/repo.git>
 3. git status
 4. git add filename # Adds a specific file
 5. git add . # Adds all changes
 6. git commit -m "commit message"
 7. git log
 8. git diff
 9. git branch # Lists branches
 10. git branch new-branch # Creates a new branch
 11. git checkout branch_name
 12. git merge branch_name
 13. git pull origin branch_name
 14. git push origin branch_name
 15. git fetch origin
 16. git remote -v # Lists all remotes
 17. git remote add origin url # Adds a remote repository
 18. git rebase branch_name
 19. git stash # Stashes changes
 20. git stash apply # Reapplies stashed changes
 21. git tag -a v1.0 -m "Version 1.0"
 22. git reset --soft HEAD~1 # Keeps changes staged
 23. git reset --hard HEAD~1 # Discards changes
 24. git cherry-pick commit_id
 25. git config --global user.name "Your Name"
 26. git config --global user.email "you@example.com"
3. To implement Pull, Push, fetch and merge operations between Git and GitHub.
(refer exp 3)
4. To build a Java Project using Jenkins with parameters to perform some mathematical operations

New Item

Enter an item name

sania4

Select an item type



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.



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

OK

☒ This project is parameterized ?

String Parameter ?

Name ?

num1

Default Value ?

Description ?

enter the first number:

Plain text [Preview](#)

String Parameter ?

Name ?

num2

Default Value ?

Description ?

enter second number:

Plain text [Preview](#)

☐ Trim the string ?

Build Steps

Execute Windows batch command ?

Command

[See the list of available environment variables](#)

cd C:\Sania
javac MathOperations.java
java MathOperations "%num1%" "%num2%"

Advanced ▾

Dashboard > sania4 >

- Status
- Changes
- Workspace
- Build with Parameters
- Configure
- Delete Project
- Rename

Builds

No builds

Project sania4

This build requires parameters:

num1

enter the first number:

2

num2

enter second number:

3

Build

Cancel

Dashboard > sania4 > #3 > Console Output

Status

Changes

Console Output


Edit Build Information

Delete build '#3'

Parameters

Timings

Previous Build

 **Console Output**

Started by user [Sania Correia](#)
Running as SYSTEM
Building in workspace C:\ProgramData\Jenkins\.jenkins\workspace\sania4
[sania4] \$ cmd /c call C:\Windows\TEMP\jenkins13145653838182192714.bat

C:\ProgramData\Jenkins\.jenkins\workspace\sania4>cd C:\Sania

C:\Sania>javac MathOperations.java

C:\Sania>java MathOperations "2" "3"
Addition: 5.0
Subtraction: -1.0
Multiplication: 6.0
Division: 0.6666666666666666

C:\Sania>exit 0
Finished: SUCCESS

```
public class MathOperations {  
    public static void main(String[] args) {  
        double a = Double.parseDouble(args[0]);  
        double b = Double.parseDouble(args[1]);  
  
        System.out.println("Addition: " + (a + b));  
        System.out.println("Subtraction: " + (a - b));  
        System.out.println("Multiplication: " + (a * b));  
        System.out.println("Division: " + (b != 0 ? (a / b) : "Cannot divide by  
zero"));  
    }  
}
```

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

Dashboard > sania2 > Configuration

Build Steps

Configure

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

Execute Windows batch command ?

Command

See [the list of available environment variables](#)

```
echo "Hello!This is Sania"
```

Advanced ▾

Dashboard > sania2 > #1 > Console Output

- Status
- </> Changes
- Console Output**
- View as plain text
- Edit Build Information
- Delete build '#1'

Console Output

Started by user [admin](#)
Running as SYSTEM
Building in workspace C:\ProgramData\Jenkins\jenkins\workspace\sania2
[sania2] \$ cmd /c call C:\WINDOWS\TEMP\jenkins8363247126246998353.bat

```
C:\ProgramData\Jenkins\jenkins\workspace\sania2>echo "Hello!This is Sania"
"Hello!This is Sania"

C:\ProgramData\Jenkins\jenkins\workspace\sania2>exit 0
Finished: SUCCESS
```

(with parameters)

localhost:8080/view/all/newJob

Jenkins

Search (CTRL+K)

admin ▾ log out

Dashboard > All >

Enter an item name


Sania3

» Required field





- Freestyle project**
This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build.
- 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**
Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.
- Folder**
A container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a namespace, so you can have multiple things of the same name as long as they are in different folders.

OK

← → ↻ 🌐 localhost:8080/job/Sania3/configure

 **Jenkins**

🔍 Search (CTRL+K) ?

 3  2  admin ▾  log out

Dashboard > Sania3 > Configuration

Configure

⚙️ General

🔗 Source Code Management


🕒 Build Triggers

🌐 Build Environment

📋 Build Steps

🔧 Post-build Actions

General

Enabled 

Description

Name:Sania John Correia, Roll no:13, Class:TE-IT-A (batch-1)

Plain text [Preview](#)

☐ Discard old builds ?

☐ GitHub project

☒ This project is parameterized ?

≡ String Parameter ?


Name ?

str1





Save

Apply

← → ↻ 🌐 localhost:8080/job/Sania3/configure

 **Jenkins**

🔍 Search (CTRL+K) ?

   admin ▾  log out

Dashboard > Sania3 > Configuration

Configure

⚙️ General

🔗 Source Code Management

🕒 Build Triggers

🌐 Build Environment

📋 Build Steps

🔧 Post-build Actions

General

☐ GitHub project

☒ This project is parameterized ?

≡ String Parameter ?

Name ?

str1

Default Value ?

Description ?

Enter your First name:

Plain text [Preview](#)

☐ Trim the string ?

≡ String Parameter ?

Save

Apply

localhost:8080/job/Sania3/configure

Dashboard > Sania3 > Configuration

Configure

General

Source Code Management

Build Triggers

Build Environment

Build Steps

Post-build Actions

Plain text [Preview](#)

☐ Trim the string [?](#)

String Parameter [?](#)

Name [?](#)

str2

Default Value [?](#)

Description [?](#)

Enter your Last name:

Plain text [Preview](#)

☐ Trim the string [?](#)

Boolean Parameter [?](#)

Name [?](#)

Set by Default [?](#)

☒

Description [?](#)

Choose whether you are student or not:

Plain text [Preview](#)

Save

Apply

localhost:8080/job/Sania3/configure

Dashboard > Sania3 > Configuration

Configure

General

Source Code Management

Build Triggers

Build Environment

Build Steps

Post-build Actions

Boolean Parameter [?](#)

Name [?](#)

student

Set by Default [?](#)

☒

Description [?](#)

Choose whether you are student or not:

Plain text [Preview](#)

Save

Apply

localhost:8080/job/Sania3/configure

Dashboard > Sania3 > Configuration

Configure

General

Source Code Management

Build Triggers

Build Environment

Build Steps

Post-build Actions

Choice Parameter [?](#)

Name [?](#)

cityname

Choices [?](#)

mumbai
pune
hydrabad
lucknow
banglore

Description [?](#)

Enter your City:

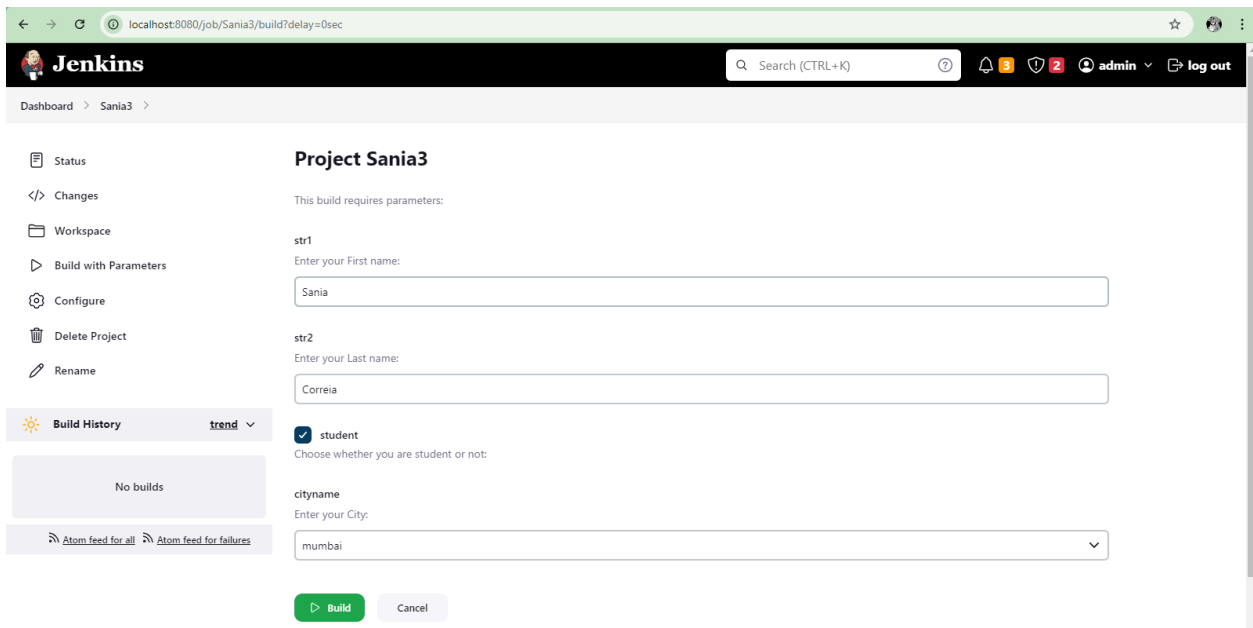
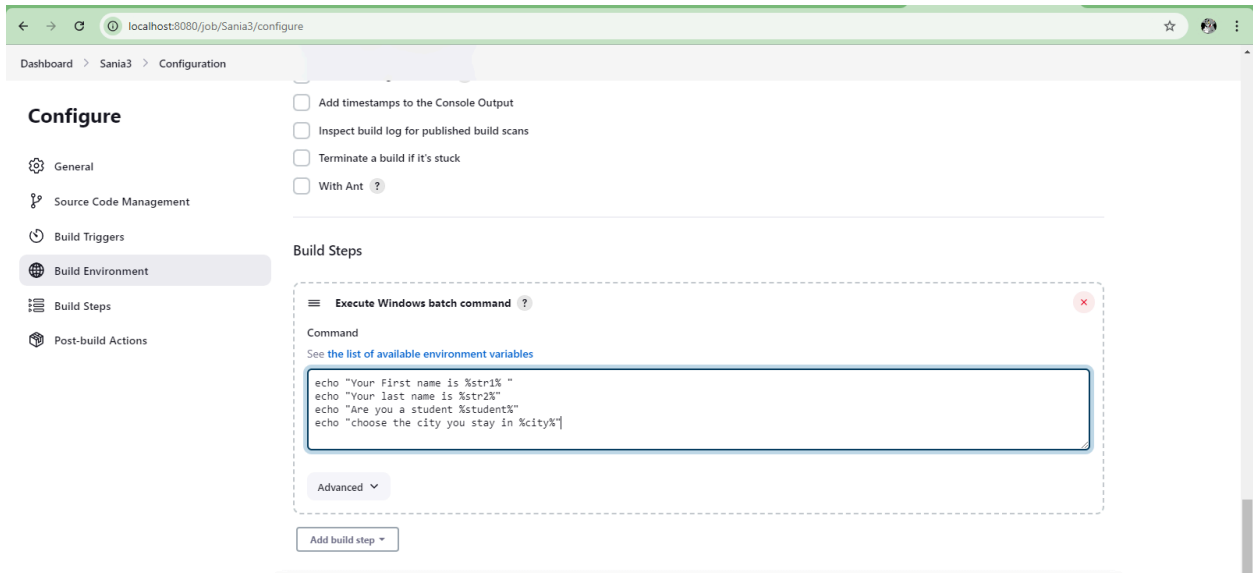
Plain text [Preview](#)

Add Parameter

☐ Throttle builds [?](#)

Save

Apply



localhost:8080/job/Sania3/2/console

Jenkins

Search (CTRL+K)

admin log out

Dashboard > Sania3 > #2 > Console Output

- Status
- Changes
- Console Output
- View as plain text
- Edit Build Information
- Delete build '#2'
- Parameters
- Previous Build

Console Output

```
Started by user admin
Running as SYSTEM
Building in workspace C:\ProgramData\Jenkins\jenkins\workspace\Sania3
[Sania3] $ cmd /c call C:\WINDOWS\TEMP\jenkins12068947907920915616.bat

C:\ProgramData\Jenkins\jenkins\workspace\Sania3>echo "Your First name is Sania "
"Your First name is Sania "

C:\ProgramData\Jenkins\jenkins\workspace\Sania3>echo "Your last name is Correia"
"Your last name is Correia"

C:\ProgramData\Jenkins\jenkins\workspace\Sania3>echo "Are you a student true"
"Are you a student true"

C:\ProgramData\Jenkins\jenkins\workspace\Sania3>echo "choose the city you stay in mumbai "
"choose the city you stay in mumbai "

C:\ProgramData\Jenkins\jenkins\workspace\Sania3>exit 0
Finished: SUCCESS
```

6. To build any python project (python file) in Jenkins (implicit)

localhost:8080/view/Sania%20John%20Correia/newJob

Jenkins

Search (CTRL+K)

admin log out

Dashboard > Sania John Correia >

Enter an item name

sania6

» Required field

- Freestyle project**
This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build.
- 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**
Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.
- Folder**
A container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a namespace, so you can have multiple things of the same name as long as they are in different folders.

OK ☒ Add to current view

Configure

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

General

Enabled

Description

Name: Sania Correia, Roll no: 13, Class: TE-IT-A/B1
This is a python project

Plain text [Preview](#)

- ☐ Discard old builds ?
- ☐ GitHub project
- ☐ This project is parameterized ?
- ☐ Throttle builds ?
- ☐ Execute concurrent builds if necessary ?

Advanced

Save Apply

Configure

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

Build Steps

Execute Python script ?

Script

See [the list of available environment variables](#)

```
num = 13
factorial = 1
if num < 0:
    print(" Factorial does not exist for negative numbers")
elif num == 0:
    print("The factorial of 0 is 1")
else:
    for i in range(1,num + 1):
        factorial = factorial*i
    print("The factorial of",num,"is",factorial)
```

Add build step

Save Apply

- Status
- Changes
- Console Output
- View as plain text
- Edit Build Information
- Delete build '#1'

Console Output

Started by user admin
Running as SYSTEM
Building in workspace C:\ProgramData\Jenkins\jenkins\workspace\sanias6
[sanias6] \$ python C:\WINDOWS\TEMP\jenkins17289080132285411052.py
The factorial of 13 is 6227020800
Finished: SUCCESS

(explicit)

The image shows a code editor window at the top with a file named 'sc' containing Python code. Below it is a web browser window displaying the Jenkins interface. The browser's address bar shows 'localhost:8080/view/Sania%20John%20Correia/newJob'. The Jenkins header includes a search bar and a user profile for 'admin'. The main content area is titled 'Enter an item name' and features a text input field with 'sania7' and a 'Required field' message. Below the input field are four project type options: 'Freestyle project', 'Maven project', 'Pipeline', and 'Multi-configuration project'. At the bottom, there is a 'Folder' option with a checkbox for 'Add to current view' which is checked.

```
num = 30

if num < 0:
    print("Enter a positive number")
else:
    sum = 0
    # use while loop to iterate un till zero
    while(num > 0):
        sum += num
        num -= 1
    print("The sum is",sum)
```

localhost:8080/view/Sania%20John%20Correia/newJob

Jenkins

Search (CTRL+K)

admin log out

Dashboard > Sania John Correia >

Enter an item name

sania7

» Required field

Freestyle project
This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build.

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

Folder
Useful for grouping things together. Unlike view, which is just a filter, a folder creates a namespace, so you can have multiple things of the same name as long as they are in different folders.

OK ☒ Add to current view

← → ↻ localhost:8080/view/Sania%20John%20Correia/job/sania7/configure

Jenkins 🔍 Search (CTRL+K) 🔔 🛡️ 2 👤 admin 🚪 log out

Dashboard > Sania John Correia > sania7 > Configuration

Configure

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

General

Enabled

Description

Name: Sania Correia, Roll no: 13, Class: TE-IT-A/B1
This is a python explicit project

Plain text [Preview](#)

☐ Discard old builds ?

☐ GitHub project

☐ This project is parameterized ?

☐ Throttle builds ?

☐ Execute concurrent builds if necessary ?

Advanced ▾

[Save](#) [Apply](#)

← → ↻ localhost:8080/view/Sania%20John%20Correia/job/sania7/configure

Dashboard > Sania John Correia > sania7 > Configuration

Configure

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

☐ Add timestamps to the Console Output

☐ Inspect build log for published build scans

☐ Terminate a build if it's stuck

☐ With Ant ?

Build Steps

Execute Windows batch command ?

Command

See [the list of available environment variables](#)

cd C:\Sania
python sc.py

Advanced ▾

[Add build step ▾](#)

[Save](#) [Apply](#)

The screenshot shows the Jenkins web interface in a browser. The address bar indicates the URL is `localhost:8080/view/Sania%20John%20Correia/job/sania7/1/console`. The Jenkins logo and name are in the top left. A search bar and user information (admin) are in the top right. The breadcrumb navigation shows: Dashboard > Sania John Correia > sania7 > #1 > Console Output. On the left sidebar, the 'Console Output' option is selected. The main content area is titled 'Console Output' with a green checkmark icon. It displays the following text:

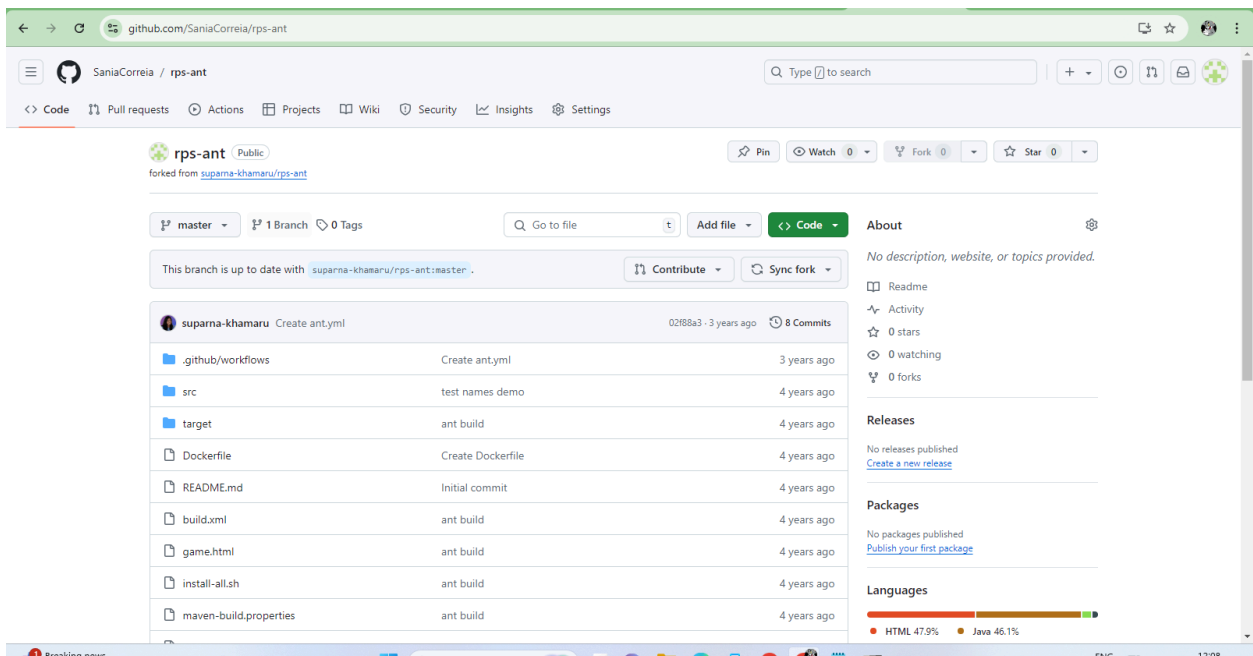
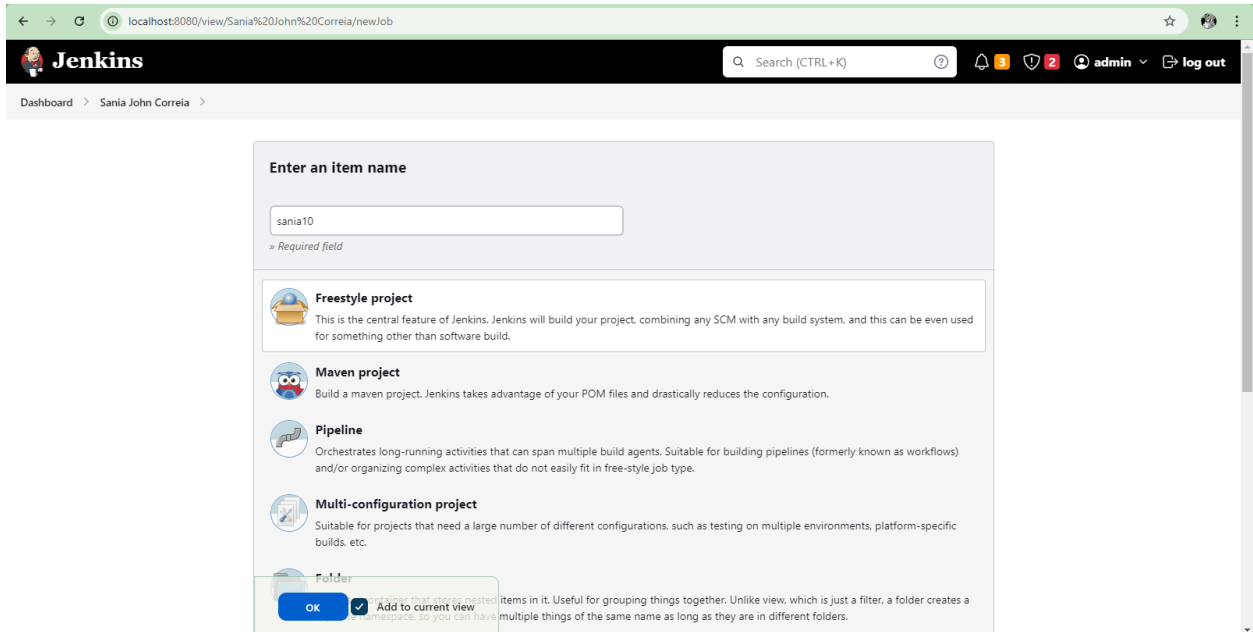
```
Started by user admin
Running as SYSTEM
Building in workspace C:\ProgramData\Jenkins\jenkins\workspace\sania7
[sania7] $ cmd /c call C:\WINDOWS\TEMP\jenkins9684646842285640020.bat

C:\ProgramData\Jenkins\jenkins\workspace\sania7>cd C:\Sania

C:\Sania>python sc.py
The sum is 465

C:\Sania>exit 0
Finished: SUCCESS
```

7. To build an Ant project in Jenkins and show how builds can be scheduled with some specific cron command



← → ↻ 📄 localhost:view/Sania%20John%20Correia/job/sania10/configure

Dashboard > Sania John Correia > sania10 > Configuration

Configure

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

☐ None

☒ **Git** ?

Repositories ?

Repository URL ?

https://github.com/SaniaCorreia/rps-ant.git

Credentials ?

- none -

Add +

Advanced ▾

Add Repository


Branches to build ?

Branch Specifier (blank for 'any') ?

*/master

Save Apply

← → ↻ 📄 localhost:view/Sania%20John%20Correia/job/sania10/configure

 **Jenkins** 🔍 Search (CTRL+K) 🔔 3 🛡️ 2 👤 admin ▾ 🚪 log out

Dashboard > Sania John Correia > sania10 > Configuration

Configure

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

General

Enabled ☒

Description

Name:Sania correia, Roll no:13, Class:TE-IT-A
This is ANT project

Plain text [Preview](#)

☐ Discard old builds ?

☐ GitHub project

☐ This project is parameterized ?

☐ Throttle builds ?

☐ Execute concurrent builds if necessary ?

Advanced ▾

Save Apply

localhost:8080/view/Sania%20John%20Correia/job/sania10/configure

Dashboard > Sania John Correia > sania10 > Configuration

Configure

General

Source Code Management

Build Triggers

Build Environment

Build Steps

Post-build Actions

Terminate a build if it's stuck

With Ant ?

Build Steps

Invoke Ant ?

Ant Version

ant

Targets ?

clean compile package

Advanced

Add build step

Post-build Actions

Add post-build action

Save

Apply

Jenkins

Search (CTRL+K)

2

2

admin

log out

Dashboard > Sania John Correia > sania10 >

Status

Changes

Workspace

Build Now

Configure

Delete Project

Rename

Build History

trend

Filter builds...

Project sania10

Name:Sania correia. Roll no:13. Class:TE-IT-A

This is ANT project

Edit description

Disable Project


Permalinks

Last build (#1), 6 days 22 hr ago


Last failed build (#1), 6 days 22 hr ago


Last unsuccessful build (#1), 6 days 22 hr ago


Last completed build (#1), 6 days 22 hr ago


 Status

</> Changes


 Console Output

 Edit Build Information


 Delete build '#2'


 Git Build Data


< Previous Build


 **Build #2 (Aug 19, 2024, 10:29:46 AM)**

Keep this build forever

 Add description Started 1 min 15 sec ago
Took **3.8 sec**

 No changes.

 Started by user [admin](#)

 **Revision:** 02f88a382dda116a84e7f5e5955f827879c04dea
Repository: <https://github.com/SaniaCorreia/rps-ant.git>

- refs/remotes/origin/master

Dashboard > Sania John Correia > sania10 > #2 > Console Output

```
[junit] kunning com.mcnz.raimnayeieiest
[junit] Testsuite: com.mcnz.FailMaybeTest
[junit] Tests run: 3, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.078 sec
[junit] Tests run: 3, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.078 sec
[junit]
[junit] Testcase: testHyTrueAssertion took 0.001 sec
[junit] Testcase: demoTest3 took 0 sec
[junit] Testcase: demoTest4 took 0 sec
[junit] Running com.mcnz.rps.GameSummaryTest
[junit] Testsuite: com.mcnz.rps.GameSummaryTest
[junit] Tests run: 6, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.064 sec
[junit] Tests run: 6, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.064 sec
[junit]
[junit] Testcase: testGetClientGesture took 0.004 sec
[junit] Testcase: testGetServerGesture took 0 sec
[junit] Testcase: testGetDate took 0 sec
[junit] Testcase: demoTest1 took 0.001 sec
[junit] Testcase: demoTest2 took 0 sec
[junit] Testcase: testGetResult took 0 sec

package:
[mkdir] Created dir: C:\ProgramData\Jenkins\jenkins\workspace\sania10\target\roshambo\WEB-INF\lib
[war] Building war: C:\ProgramData\Jenkins\jenkins\workspace\sania10\target\roshambo.war

BUILD SUCCESSFUL
Total time: 2 seconds
Finished: SUCCESS
```

```

C:\Windows\System32>dir C:\ProgramData\Jenkins\.jenkins\workspace\sania10\target\roshambo.war
Volume in drive C has no label.
Volume Serial Number is 50D5-6323

Directory of C:\ProgramData\Jenkins\.jenkins\workspace\sania10\target

19-08-2024  10:29          9,761 roshambo.war
             1 File(s)          9,761 bytes
             0 Dir(s)  71,308,378,112 bytes free

C:\Windows\System32>_

```

```

Dashboard > Sania John Correia > sania10 > #2 > Console Output

[junit] Running com.mcnz.FailMeMaybeTest
[junit] Testsuite: com.mcnz.FailMeMaybeTest
[junit] Tests run: 3, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.078 sec
[junit] Tests run: 3, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.078 sec
[junit]
[junit] Testcase: testMyTrueAssertion took 0.001 sec
[junit] Testcase: demoTest3 took 0 sec
[junit] Testcase: demoTest4 took 0 sec
[junit] Running com.mcnz.rps.GameSummaryTest
[junit] Testsuite: com.mcnz.rps.GameSummaryTest
[junit] Tests run: 6, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.064 sec
[junit] Tests run: 6, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.064 sec
[junit]
[junit] Testcase: testGetClientGesture took 0.004 sec
[junit] Testcase: testGetServerGesture took 0 sec
[junit] Testcase: testGetDate took 0 sec
[junit] Testcase: demoTest1 took 0.001 sec
[junit] Testcase: demoTest2 took 0 sec
[junit] Testcase: testGetResult took 0 sec

package:
[mkdir] Created dir: C:\ProgramData\Jenkins\.jenkins\workspace\sania10\target\roshambo\WEB-INF\lib
[war] Building war: C:\ProgramData\Jenkins\.jenkins\workspace\sania10\target\roshambo.war

BUILD SUCCESSFUL
Total time: 2 seconds
Finished: SUCCESS

```

8. To create a pipeline script (consisting of stages, parameters etc.) and build a pipeline of jobs in Jenkins
9. To fork a GitHub repository with Jenkinsfile and build a pipeline of jobs in Jenkins (same as 15)
10. In Jenkins, create a slave node, connect it with master and build a project in slave node (refer exp 6)
11. To build an image for a web application using Dockerfile

initialAdminPassword Dockerfile +

File Edit View

```
FROM ubuntu:latest
MAINTAINER "Sania Correia"
RUN apt update -y
RUN apt install nginx -y
EXPOSE 80
COPY index.html /usr/share/nginx/html/index.html
COPY index.html /var/www/html/index.html
CMD ["nginx","-g","daemon off;"]
```

initialAdminPassword Dockerfile index.html × +

File Edit View

```
<!Doctype html>
<html>
<head>
<title>Docker experiment</title>
</head>
<body>
<h1 style ="color:green;"> Sania Correia </h1>
<p style ="color:blue;"> roll no:13 </p>
</body>
</html>
```

```

C:\Sania>dir
Volume in drive C has no label.
Volume Serial Number is 50D5-6323

Directory of C:\Sania

07-10-2024  11:37      <DIR>          .
12-08-2024  10:59             924 Correia.class
12-08-2024  10:46             196 Correia.java
07-10-2024  11:36             228 Dockerfile
07-10-2024  11:36             190 index.html
19-08-2024  11:04      <DIR>          remoting
12-08-2024  10:43             416 Sania.class
12-08-2024  10:42             129 Sania.java
05-08-2024  10:41              0 sania13.docx.docx
12-08-2024  11:28             228 sc.py
19-08-2024  11:15      <DIR>          workspace
                        8 File(s)              2,311 bytes
                        3 Dir(s)  66,900,811,776 bytes free

```

```

C:\Sania>docker build -t sanianginx .
[+] Building 25.6s (10/10) FINISHED
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 267B
=> [internal] load metadata for docker.io/library/ubuntu:latest
=> CACHED [1/5] FROM docker.io/library/ubuntu:latest
=> [internal] load build context
=> => transferring context: 229B
=> [2/5] RUN apt update -y
=> [3/5] RUN apt install nginx -y
=> [4/5] COPY index.html /usr/share/nginx/html/index.html
=> [5/5] COPY index.html /var/www/html/index.html
=> exporting to image
=> => exporting layers
=> => writing image sha256:b8678c3bcd9ee188949b8e076e8b8990824f39c0f8861304427fa0c5f7b7858b
=> => naming to docker.io/library/sanianginx

```

What's Next?

View a summary of image vulnerabilities and recommendations → [docker scout quickview](#)

```
C:\Sania>docker images
```

```

C:\Sania>docker images
REPOSITORY              TAG          IMAGE ID          CREATED           SIZE
sanianginx              latest       b8678c3bcd9e     22 seconds ago   127MB
saniacorreia/images_sania 1            def90fe4e876     49 minutes ago   78.1MB
ubuntu                  devel       add12d7b7786     2 weeks ago      85MB
ubuntu                  latest      61b2756d6fa9     3 weeks ago      78.1MB
ubuntu                  rolling    b1e9cef3f297     5 weeks ago      78.1MB

```

Docker Desktop

Update to latest

Search for images, containers, volumes, extensions and more...

Ctrl+K

Containers

Images

Volumes

Dev Environments BETA

Docker Scout

Learning center

Extensions

Add Extensions

Images

Local

Hub

Artifactory

EARLY ACCESS



156.21 MB / 241.2 MB in use 5 images

Last refresh: 1 hour ago

Search

Name	Tag	Status	Created	Size	Actions
sanianginx	latest	Unused	1 second ago	127.13 MB	
saniacorrelia/images_sania	1	Unused	50 minutes ag	78.1 MB	
ubuntu	devel	Unused	19 days ago	84.98 MB	
ubuntu	latest	In use	21 days ago	78.1 MB	
ubuntu	rolling	In use	1 month ago	78.1 MB	

```
C:\Sania>docker run -it -p 8888:80 sanianginx
```

<input type="checkbox"/>	 sania	3b352c621d89	ubuntu	Exited (137)	0%	1 hour ago	
<input type="checkbox"/>	 busy_joliot	7731fe06eb	sanianginx	Running	0%	8888.80	2 minutes ago

```
C:\Users\Student>docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS                               NAMES
7731fe06eb    sanianginx "nginx -g 'daemon of..." 41 seconds ago Up 40 seconds 0.0.0.0:8888->80/tcp             busy_joliot
```

Docker Desktop

Update to latest

Search for images, containers, volumes, extensions and more...

Ctrl+K

Containers

Images

Volumes

Dev Environments BETA

Docker Scout

Learning center

Extensions

Add Extensions

Containers

Container CPU usage 0.00% / 1000% (10 cores allocated)

Container memory usage 4.38MB / 7.46GB

Show charts

Search

Only show running containers

Name	Image	Status	CPU (%)	Port(s)	Last started	Actions
objective_meitner	ubuntu	Exited	0%		4 days ago	
infallible_chaum	ubuntu	Exited	0%		4 days ago	
Clarissa	ubuntu	Exited (137)	0%		6 days ago	
romantic_shirley	ubuntu	Exited	0%		6 days ago	
palash	ubuntu	Exited (255)	0%		7 days ago	
wonderful_tu	ubuntu	Exited	0%		7 days ago	
sania	ubuntu	Exited (137)	0%		60 minutes ago	
busy_joliot	sanianginx	Running	0%	8888.80	1 minute ago	

```

C:\Users\Student>ipconfig

Windows IP Configuration

Ethernet adapter vEthernet (WSL):

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::bcc2:fb11:446d:3d48%49
    IPv4 Address. . . . . : 172.20.16.1
    Subnet Mask . . . . . : 255.255.240.0
    Default Gateway . . . . . : 

Wireless LAN adapter Wi-Fi:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . : 

Wireless LAN adapter Local Area Connection* 1:

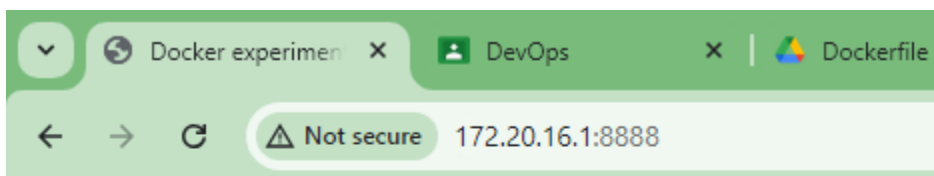
    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . : 

Wireless LAN adapter Local Area Connection* 10:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . : 

Ethernet adapter Ethernet:

```



Sania Correia

roll no:13

- 12.To create and run a test case on Chrome browser with Katalon selenium IDE addon (refer exp 8)

Katalon Recorder

WORKSPACE

Test Suites

Dynamic Test Suites

Test Data

Extension script

Profiles

Open Test Suite

Sample projects

Export

More options

Record

Play Test Case

Play Test Suite

Play All Suites

Pause Execution

Sign in

Command	Target	Value
+ Add new row (Cmd/Ctrl + I)		

Log

Screenshots

Variables

Reference

Self-healing

Dashboard

Sign in to enable automatic backup. Refresh

Katalon Recorder

WORKSPACE

Test Suites

Dynamic Test Suites

Test Data

Extension script

Profiles

Open Test Suite

Sample projects

Export

More options

Record

Play Test Case

Play Test Suite

Play All Suites

Pause Execution

Sign in

georgia 2 Test case

+ Add new tag

Command	Target	Value
open	https://www.trivago.in/en-IN/tn/hotels-mahabaleshwar-india?search=200-34507&dr-20241018-20241019-s;rc-1-3	
click	id=input-auto-complete	
type	id=input-auto-complete	Hima
click	xpath=//div[@id='suggestion-list']/ul/li/div/div	
open	https://www.trivago.in/en-IN/tn/hotels-himachal-pradesh-india?search=200-64935&dr-20241018-20241019-s;rc-1-3	
click	xpath=//div[@id='_next1']/div/main/div/div[2]/div/div[3]/div/div/fieldset/button/span[2]/span[2]	
click	xpath=//div[@id='_next1']/div/main/div/div[2]/div/div[3]/div/div[2]/div/div/div[2]/div/div[2]/button[2]/time	
click	xpath=//div[@id='_next1']/div/main/div/div[2]/div/div[3]/div/div/fieldset/button[2]/span/span/span	
open	https://www.trivago.in/en-IN/tn/hotels-himachal-pradesh-india?search=200-64935&dr-20241019-20241020;rc-1-3	

Log

Screenshots

Variables

Reference

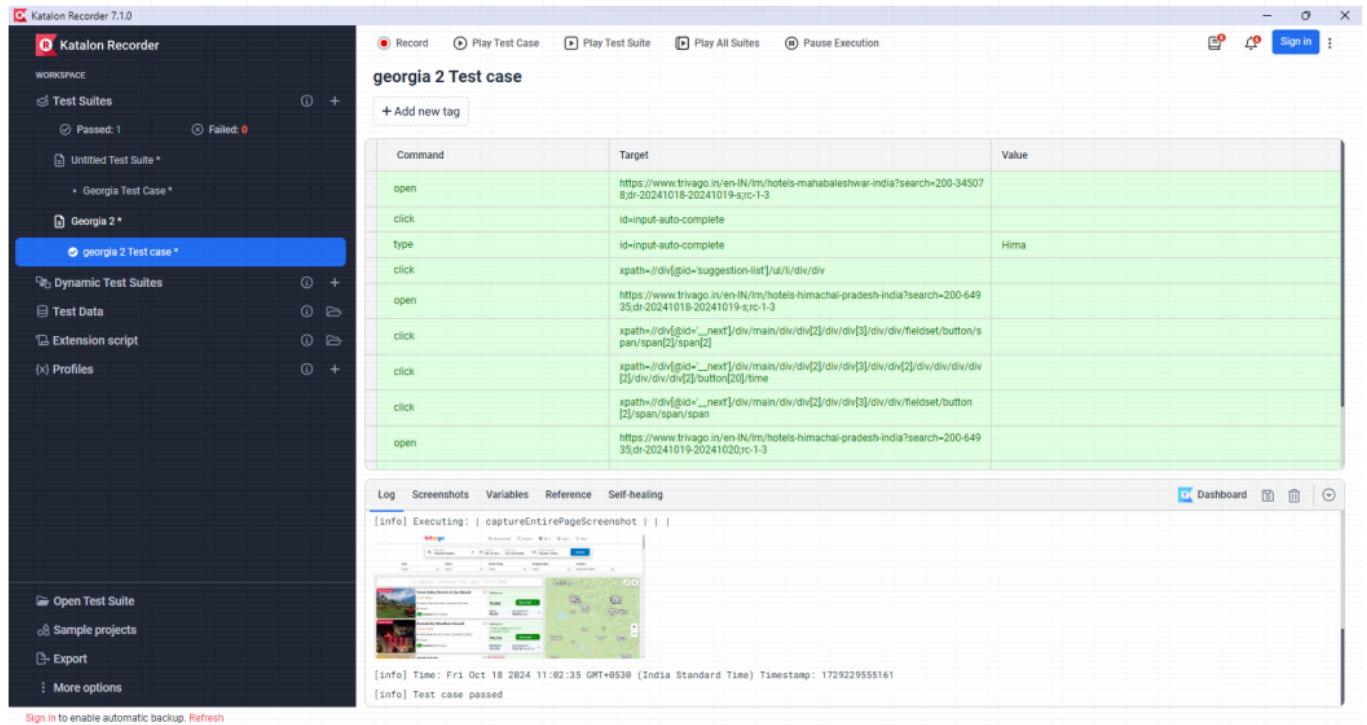
Self-healing

Dashboard

All

Test Case	Status	Broken Locator	Proposed	Approve
				Approve

Sign in to enable automatic backup. Refresh



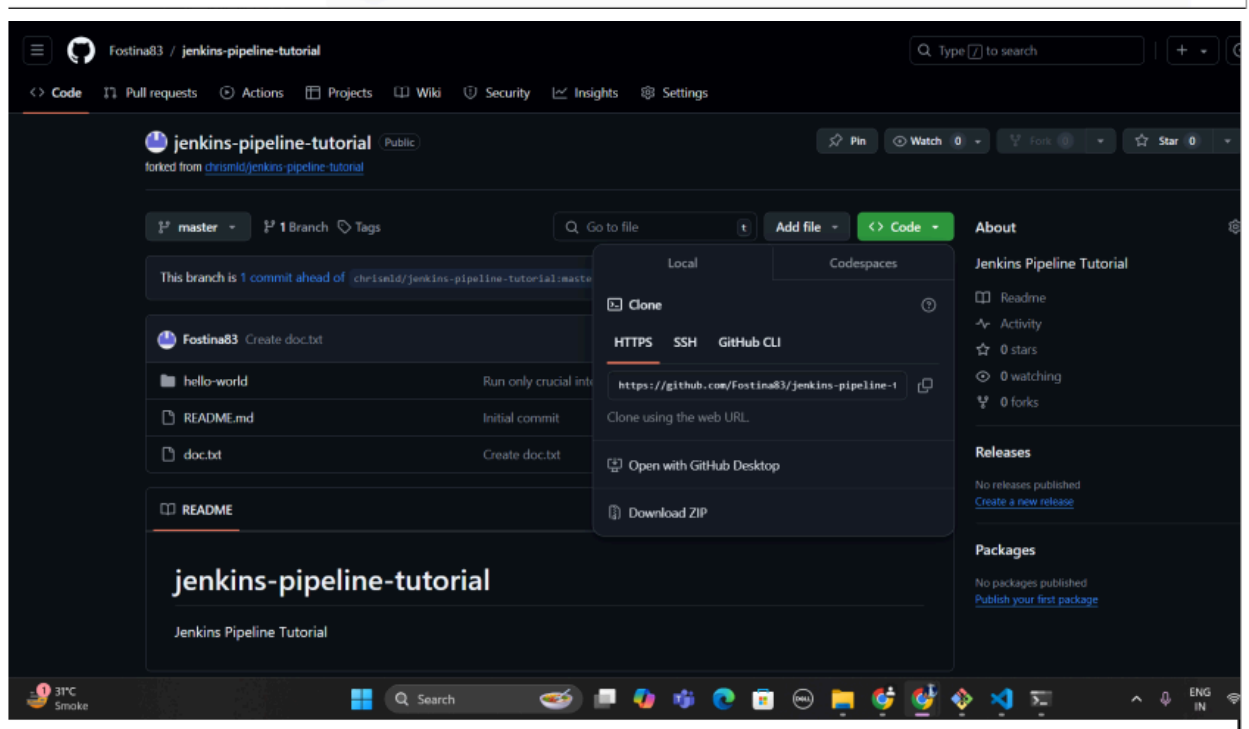
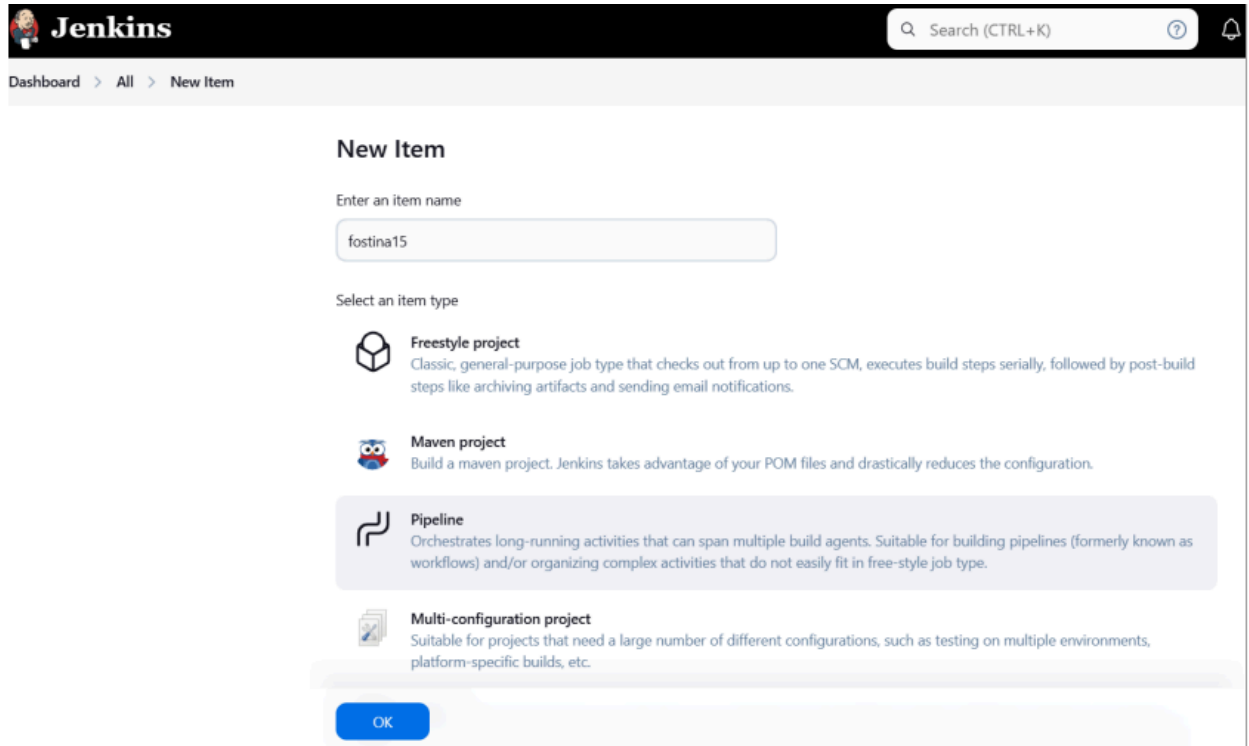
13.To execute 20 linux commands

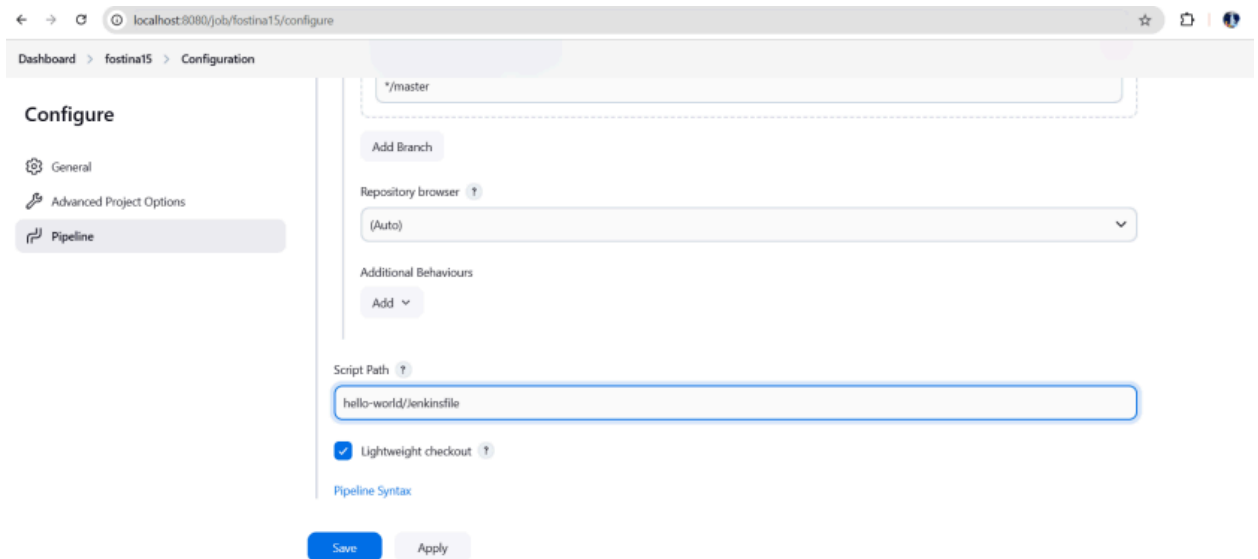
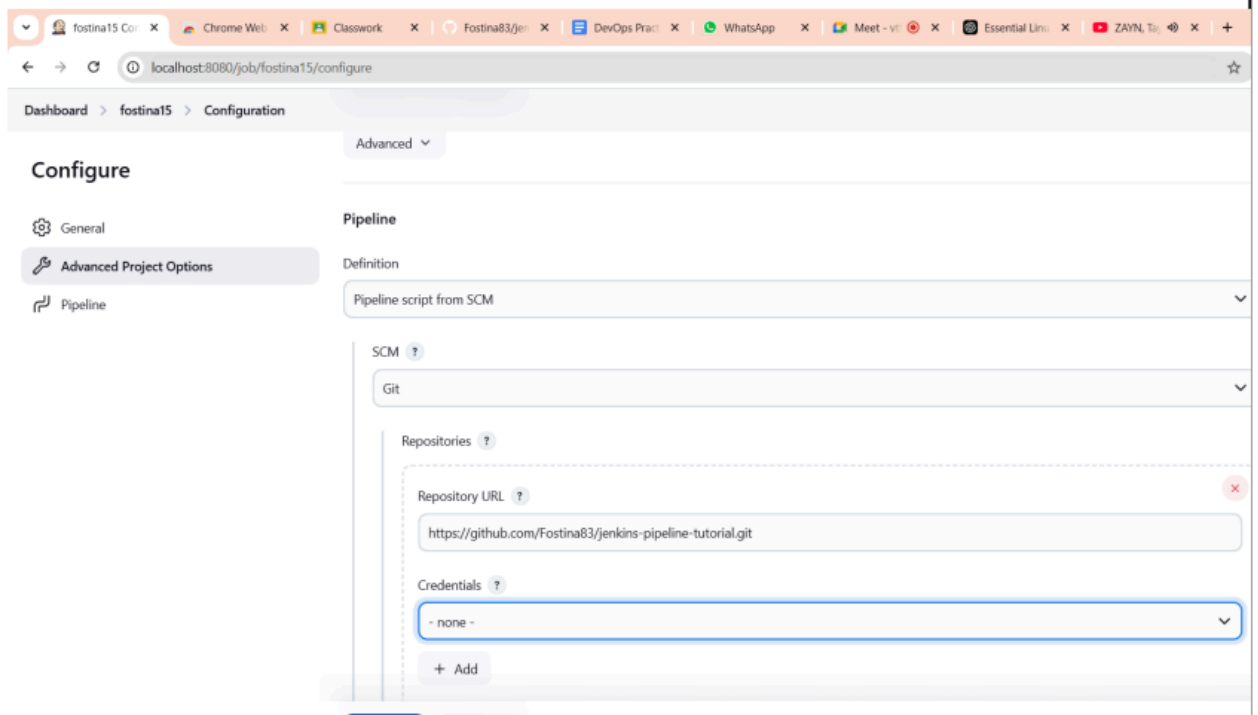
1. ls -la
2. cd /path/to/directory
3. pwd
4. mkdir new_directory
5. rm filename # Removes a file
6. rm -r directory_name # Removes a directory
7. cp source_file destination_directory
8. mv old_name new_name
9. touch filename
- 10.cat filename
- 11.nano filename or vim filename
- 12.chmod 755 filename
- 13.chown user:group filename
- 14.ps aux
- 15.kill PID
- 16.df -h
- 17.du -h /path/to/directory
- 18.top
- 19.grep "search_text" filename
- 20.find /path/to/search -name "filename"
- 21.tar -czvf archive_name.tar.gz /path/to/directory

14.To execute 20 docker commands

1. docker --version
2. docker pull image_name
3. docker images
4. docker rmi image_name
5. docker run image_name
6. docker ps
7. docker ps -a
8. docker stop container_id
9. docker start container_id
- 10.docker restart container_id
- 11.docker rm container_id
- 12.docker exec -it container_id command
- 13.docker logs container_id
- 14.docker build -t image_name /path/to/dockerfile
- 15.docker tag image_name new_image_name:tag
- 16.docker push image_name
- 17.docker inspect container_id
- 18.docker network ls
- 19.docker volume ls
- 20.docker-compose up

15.To make a GitHub repository with your own Jenkinsfile and build a pipeline of jobs in Jenkins





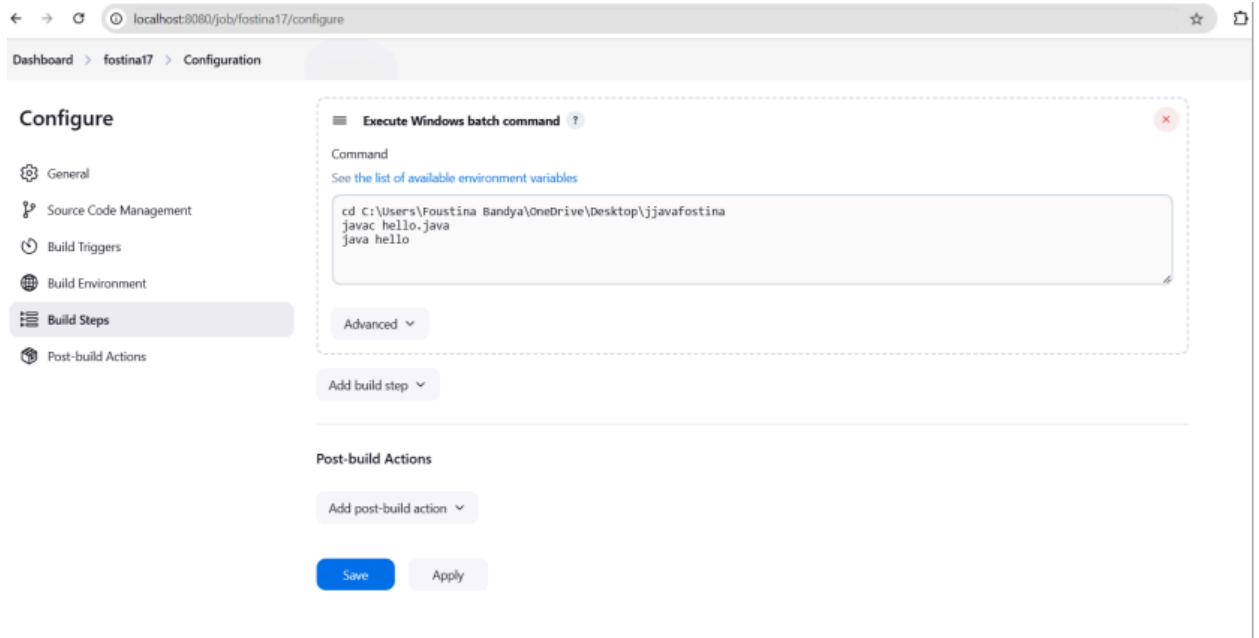
The screenshot shows the Jenkins web interface. The top navigation bar includes the Jenkins logo, a search bar, and a user profile 'admin'. The breadcrumb trail is 'Dashboard > fostina15 > #1'. On the left sidebar, the 'Console Output' tab is selected. The main area displays the console output for a pipeline run. The output shows the pipeline starting by user 'admin', obtaining a hello-world/Jenkinsfile from a GitHub repository, and then executing a series of steps including cloning the repository and fetching upstream changes. The output is as follows:

```

Started by user admin
Obtained hello-world/Jenkinsfile from git https://github.com/Fostina83/jenkins-pipeline-tutorial.git
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in C:\ProgramData\Jenkins\jenkins\workspace\fofostina15
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Declarative: Checkout SCM)
[Pipeline] checkout
Selected Git installation does not exist. Using Default
The recommended git tool is: NONE
No credentials specified
Cloning the remote Git repository
Cloning repository https://github.com/Fostina83/jenkins-pipeline-tutorial.git
> C:\Program Files\Git\bin\git.exe init C:\ProgramData\Jenkins\jenkins\workspace\fofostina15 # timeout=10
Fetching upstream changes from https://github.com/Fostina83/jenkins-pipeline-tutorial.git
> C:\Program Files\Git\bin\git.exe --version # timeout=10
> git --version # 'git version 2.44.0.windows.1'
> C:\Program Files\Git\bin\git.exe fetch --tags --force --progress -- https://github.com/Fostina83/jenkins-pipeline-tutorial.git
+refs/heads/*:refs/remotes/origin/* # timeout=10
> C:\Program Files\Git\bin\git.exe config remote.origin.url https://github.com/Fostina83/jenkins-pipeline-tutorial.git # timeout=10
> C:\Program Files\Git\bin\git.exe config --add remote.origin.fetch +refs/heads/*:refs/remotes/origin/* # timeout=10
Avoid second fetch
  
```

16.To build a Java Project without parameters and show how builds can be scheduled with some specific cron command

The screenshot shows the Jenkins Configuration page for a job named 'fostina17'. The breadcrumb trail is 'Dashboard > fostina17 > Configuration'. The 'Configure' section is active, and the 'Source Code Management' tab is selected. The 'Source Code Management' section has 'None' selected. The 'Build Triggers' section has 'Build periodically' checked. The 'Schedule' field contains the cron expression 'H/1 * * * *'. Below the schedule field, a message indicates the next build time: 'Would last have run at Tuesday, 5 November, 2024, 6:16:44pm India Standard Time; would next run at Tuesday, 5 November, 2024, 7:16:44pm India Standard Time.' At the bottom, there are 'Save' and 'Apply' buttons.



```
class hello {
    public static void main(String[] args){
        System.out.println("Hello World!!");
    }
}
```

17. To build a Maven project in Jenkins and show how builds can be scheduled with some specific cron command

github.com/Coveros-GitHub-Sandbox/helloworld/fork

Coveros-GitHub-Sandbox / helloworld

Type to search

<> Code

Issues

Pull requests 4

Actions

Projects

Security

Insights

Create a new fork

A *fork* is a copy of a repository. Forking a repository allows you to freely experiment with changes without affecting the original project. [View existing forks.](#)

Required fields are marked with an asterisk (*).

Owner *

Repository name *

SaniaCorreia

helloworld

helloworld is available.

By default, forks are named the same as their upstream repository. You can customize the name to distinguish it further.

Description (optional)

A Java Hello World application using Maven

☒ Copy the `master` branch only

Contribute back to Coveros-GitHub-Sandbox/helloworld by adding your own branch. [Learn more.](#)

☐ You are creating a fork in your personal account.

Create fork

localhost:8080/view/Sania%20John%20Correia/newJob

Jenkins

Search (CTRL+K)

admin log out

Dashboard > Sania John Correia >

Enter an item name

sania8

» Required field

Freestyle project

This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build.

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

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


Folder

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

OK

☒ Add to current view

← → ↻ 🌐 localhost:8080/view/Sania%20John%20Correia/job/sania8/configure

 **Jenkins**

🔍 Search (CTRL+K) 🔔 3 🛡️ 2 👤 admin 🚪 log out

Dashboard > Sania John Correia > sania8 > Configuration

Configure

⚙️ General

🔑 Source Code Management

🕒 Build Triggers

🌐 Build Environment

⚙️ Pre Steps


⚙️ Build

⚙️ Post Steps

⚙️ Build Settings

🔧 Post-build Actions

General

Enabled 

Description

Name:Sania Correia, Roll no:13, Class:TE-IT-A/B1
This is a Maven Project.

Plain text [Preview](#)

☐ Discard old builds ?

☐ GitHub project

☐ This project is parameterized ?

☐ Throttle builds ?

☐ Execute concurrent builds if necessary ?

Advanced ▾

Save

Apply

← → ↻ 🌐 localhost:8080/view/Sania%20John%20Correia/job/sania8/configure

Dashboard > Sania John Correia > sania8 > Configuration

• **Git** ?

Repositories ?

Repository URL ?

https://github.com/SaniaCorreia/helloworld.git

Credentials ?

- none - ▾

Add ▾

Advanced ▾

Add Repository

Branches to build ?

Branch Specifier (blank for 'any') ?

*/master

Add Branch

Save

Apply

localhost:8080/view/Sania%20John%20Correia/job/sania8/configure

Dashboard > Sania John Correia > sania8 > Configuration

Configure

General

Source Code Management

Build Triggers

Build Environment

Pre Steps

Build

Post Steps

Build Settings

Post-build Actions

pre steps

Add pre-build step

Build

Root POM ?

pom.xml

Goals and options ?

clean compile package

Advanced

Post Steps

Run only if build succeeds

Run only if build succeeds or is unstable

SaveApply

localhost:8080/job/sania9/configure

Dashboard > sania9 > Configuration

Configure

General

Source Code Management

Build Triggers

Build Environment

Build Steps

Post-build Actions

Git ?

Repositories ?

Repository URL ?

https://github.com/SaniaCorreia/helloworld.git

Credentials ?

- none -

Add

Advanced

Add Repository

Branches to build ?

Branch Specifier (blank for 'any') ?

*/master

Add Branch

SaveApply

Jenkins

Search (CTRL+K)

admin

log out

Dashboard > Sania John Correia > sania8 >

Status

Changes

Workspace

Build Now

Configure

Delete Maven project

Modules

Rename

Build History

trend

Filter builds...

#3

Aug 19, 2024, 10:25 AM

Maven project sania8

Name:Sania Correia, Roll no:13, Class:TE-IT-A/B1
This is a Maven Project.

Edit description

Disable Project

Permalinks

- Last build (#3), 2 min 38 sec ago
- Last stable build (#3), 2 min 38 sec ago
- Last successful build (#3), 2 min 38 sec ago
- Last failed build (#2), 6 days 22 hr ago
- Last unsuccessful build (#2), 6 days 22 hr ago
- Last completed build (#3), 2 min 38 sec ago

Jenkins

Search (CTRL+K)

admin

log out

Dashboard > Sania John Correia > sania8 > #3

Status

Changes

Console Output

Edit Build Information

Delete build '#3'

Git Build Data

Redeploy Artifacts

See Fingerprints

Previous Build

Build #3 (Aug 19, 2024, 10:25:25 AM)

Keep this build forever

Add description

Started 9.6 sec ago
Took 6.2 sec

No changes.

Started by user [admin](#)

git

Revision: d8db3a08419b009337efe0cd20c8c240a45308fb
Repository: <https://github.com/SaniaCorreia/helloworld.git>
refs/remotes/origin/master

Module Builds

Hello World

2.2 sec

Dashboard > Sania John Correia > sania8 > #3 > Console Output

```
[INFO] Compiling 1 source file to C:\ProgramData\Jenkins\jenkins\workspace\sania8\target\classes
[INFO]
[INFO] --- resources:3.3.1:testResources (default-testResources) @ helloworld ---
[INFO] skip non existing resourceDirectory C:\ProgramData\Jenkins\jenkins\workspace\sania8\src\test\resources
[INFO]
[INFO] --- compiler:3.0.1:testCompile (default-testCompile) @ helloworld ---
[INFO] No sources to compile
[INFO]
[INFO] --- surefire:3.1.2:test (default-test) @ helloworld ---
[INFO] No tests to run.
[JENKINS] Recording test results
[INFO]
[INFO] --- jar:3.3.0:jar (default-jar) @ helloworld ---
[INFO] Building jar: C:\ProgramData\Jenkins\jenkins\workspace\sania8\target\helloworld-1.1.jar
[WARNING] Attempt to (de-)serialize anonymous class org.jfrog.hudson.maven2.MavenDependenciesRecorder$1; see: https://jenkins.io/redirect/serialization-of-anonymous-classes/
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 2.443 s
[INFO] Finished at: 2024-08-19T10:25:31+05:30
[INFO] -----
Waiting for Jenkins to finish collecting data
[JENKINS] Archiving C:\ProgramData\Jenkins\jenkins\workspace\sania8\pom.xml to com.coveros.demo/helloworld/1.1/helloworld-1.1.pom
[JENKINS] Archiving C:\ProgramData\Jenkins\jenkins\workspace\sania8\target\helloworld-1.1.jar to com.coveros.demo/helloworld/1.1/helloworld-1.1.jar
channel stopped
Finished: SUCCESS
```

Administrator: Command Prompt

Microsoft Windows [Version 10.0.22621.3007]
(c) Microsoft Corporation. All rights reserved.

```
C:\Windows\System32>dir C:\ProgramData\Jenkins\.jenkins\workspace\sania8\target\helloworld-1.1.jar
Volume in drive C has no label.
Volume Serial Number is 50D5-6323
```

Directory of C:\ProgramData\Jenkins\.jenkins\workspace\sania8\target

```
19-08-2024  10:25          2,896 helloworld-1.1.jar
             1 File(s)          2,896 bytes
             0 Dir(s) 71,431,237,632 bytes free
```

C:\Windows\System32>

Dashboard > Sania John Correla > sania8 > #3 > Console Output

```
[INFO] Compiling 1 source file to C:\ProgramData\Jenkins\.jenkins\workspace\sania8\target\classes
[INFO]
[INFO] --- resources:3.3.1:testResources (default-testResources) @ helloworld ---
[INFO] skip non existing resourceDirectory C:\ProgramData\Jenkins\.jenkins\workspace\sania8\src\test\resources
[INFO]
[INFO] --- compiler:3.0.1:testCompile (default-testCompile) @ helloworld ---
[INFO] No sources to compile
[INFO]
[INFO] --- surefire:3.1.2:test (default-test) @ helloworld ---
[INFO] No tests to run.
[JENKINS] Recording test results
[INFO]
[INFO] --- jar:3.3.0:jar (default-jar) @ helloworld ---
[INFO] Building jar: C:\ProgramData\Jenkins\.jenkins\workspace\sania8\target\helloworld-1.1.jar
[WARNING] Attempt to (de-)serialize anonymous class org.jfrog.hudson.maven2.MavenDependenciesRecorder$1; see: https://jenkins.io/redirect/serialization-of-anonymous-classes/
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 2.443 s
[INFO] Finished at: 2024-08-19T10:25:31+05:30
[INFO] -----
Waiting for Jenkins to finish collecting data
[JENKINS] Archiving C:\ProgramData\Jenkins\.jenkins\workspace\sania8\pom.xml to com.coveros.demo/helloworld/1.1/helloworld-1.1.pom
[JENKINS] Archiving C:\ProgramData\Jenkins\.jenkins\workspace\sania8\target\helloworld-1.1.jar to com.coveros.demo/helloworld/1.1/helloworld-1.1.jar
channel stopped
Finished: SUCCESS
```

```
[INFO] Building jar: C:\ProgramData\Jenkins\.jenkins\workspace\sania8\target\helloworld-1.1.jar
[WARNING] Attempt to (de-)serialize anonymous class org.jfrog.hudson.maven2.MavenDependenciesRecorder$1; see: https://jenkins.io/redirect/serialization-of-anonymous-classes/
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 2.443 s
[INFO] Finished at: 2024-08-19T10:25:31+05:30
[INFO] -----
Waiting for Jenkins to finish collecting data
[JENKINS] Archiving C:\ProgramData\Jenkins\.jenkins\workspace\sania8\pom.xml to com.coveros.demo/helloworld/1.1/helloworld-1.1.pom
[JENKINS] Archiving C:\ProgramData\Jenkins\.jenkins\workspace\sania8\target\helloworld-1.1.jar to com.coveros.demo/helloworld/1.1/helloworld-1.1.jar
channel stopped
Finished: SUCCESS
```