

#### 4. To build any Java Project (with and without parameters) using Jenkins

- Without parameters -

### Build Steps

≡ **Execute Windows batch command** ?

Command

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

```
C:  
cd C:\Users\bello\OneDrive\Desktop\DOL Prac 4  
javac Hello.java  
java Hello
```



```
C:  
cd C:\Users\bello\OneDrive\Desktop\DOL Prac 4  
javac Hello.java  
java Hello
```

#### **Hello.java -**

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

- With parameters -

## Build Steps

 **Execute Windows batch command** 

Command

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

```
C:
cd C:\Users\bello\OneDrive\Desktop\DOL Prac 4
javac Helloparameter.java
java Helloparameter %str1% %str2%
```

Advanced...

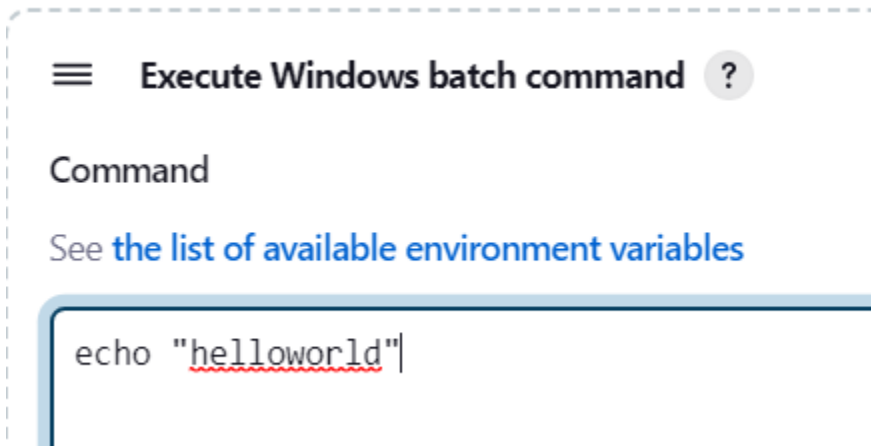
```
C:
cd C:\Users\bello\OneDrive\Desktop\DOL Prac 4
javac Helloparameter.java
java Helloparameter %str1% %str2%
```

### Helloparameter.java -

```
public class Helloparameter
{
    public static void main(String args[])
    {
        System.out.println("Your first-name is " + args[0]);
        System.out.println("Your last-name is " + args[1]);
    }
}
```

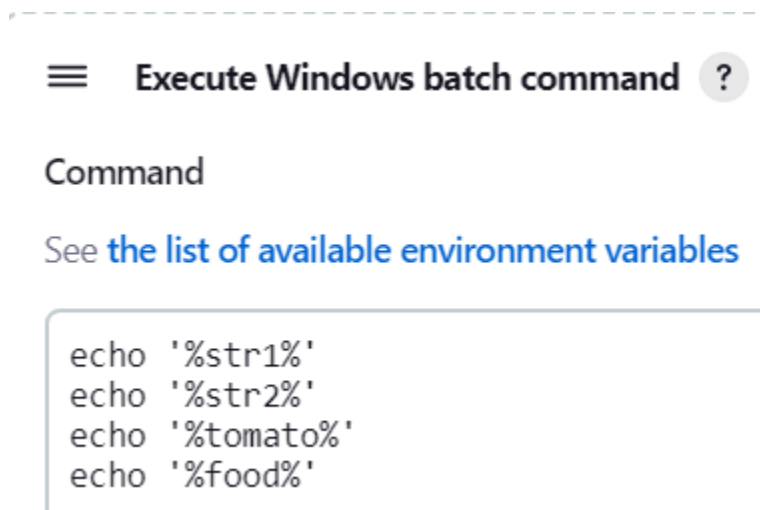
## 5. To implement windows batch command on a project in Jenkins (with and without parameters)

- WITHOUT PARAMETERS



```
echo "helloworld"
```

- WITH PARAMETERS



```
echo '%str1%'
echo '%str2%'
echo '%tomato%'
echo '%food%'
```

## 6. To build any python project (python file and script) in Jenkins

### > Just install 3 plugins of Python



0



I also had the same error. Jenkins requires the path of where your Python application has been installed on your system. To get the path, you simply type python.exe in your directory search bar. For me, it's: C:\Users"\$myusername"\AppData\Local\Programs\Python\Python310" Then navigate to Jenkins -> Manage Jenkins -> Configure System -> Global properties -> Environment variables Then add variable name=path, and path to your python directory (don't include python.exe at the end), apply and save. In case if it's not working, logout and restart Jenkins.

### Explicit



Execute Windows batch command ?

Command

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

```
C:
cd C:\Users\bello\OneDrive\Desktop\DOL Prac 4
python fact.py
```

```
C:
cd C:\Users\bello\OneDrive\Desktop\DOL Prac 4
python fact.py
```

## 7. To build a Maven and Ant project in Jenkins-

First set maven and ant in global tools configuration

**MAVEN** > maven project > git > Repo Url -

<https://github.com/be11o/maven-helloworld.git>

> build > clean compile package > apply > save > build now

Verify creation of war file -

```
C:\WINDOWS\system32>dir C:\ProgramData\Jenkins\.jenkins\workspace\maven3\webapp\target\webapp.war
Volume in drive C is Windows-SSD
Volume Serial Number is E422-6193

Directory of C:\ProgramData\Jenkins\.jenkins\workspace\maven3\webapp\target

08-11-2022  02.03 PM                2,503 webapp.war
            1 File(s)                2,503 bytes
            0 Dir(s) 10,744,815,616 bytes free
```

**ANT** > freestyle > git > Repo Url > build steps > invoke Ant > ant version - ant > Target -  
clean compile test package war > apply > save > build now

Verify creation of .war file -

Cmd as admin > paste path of roshambo.war using dir as prefix

```
C:\WINDOWS\system32>dir C:\ProgramData\Jenkins\.jenkins\workspace\ant1\target\roshambo.war
Volume in drive C is Windows-SSD
Volume Serial Number is E422-6193

Directory of C:\ProgramData\Jenkins\.jenkins\workspace\ant1\target

08-11-2022  12.12 PM                9,686 roshambo.war
            1 File(s)                9,686 bytes
            0 Dir(s) 10,793,168,896 bytes free
```

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

Hello World pipeline script -

Install all plugins beforehand related to pipeline > enter item name > select pipeline > advanced project options > Pipeline script > select Hello world from dropdown > save > apply > build now

d34e256079d7

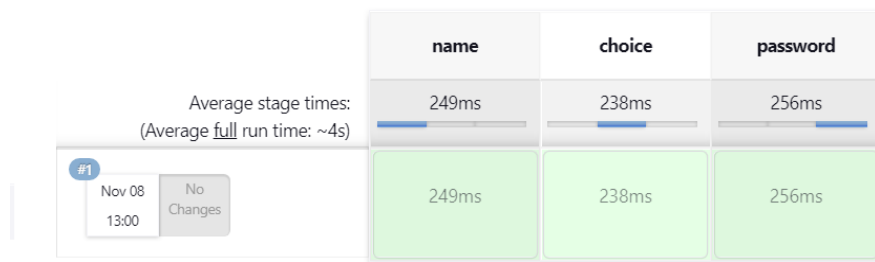
### Project with own pipeline script -

Select project is parameterized > add string, choice, password > Pipeline > pipeline script >

```
pipeline {
  agent any
  parameters {
    string(name: 'PERSON' , defaultValue: 'Chrissy', description: 'say hello')
    choice(name: 'CHOICE' , choices: ['1','2','3','4'], description: 'pick')
    password(name: 'PASSWORD' , defaultValue: '1234', description: 'enter pass')
  }
  stages {
    stage('name') {
      steps {
        echo "Hello ${params.PERSON}"
      }
    }
    stage('choice') {
      steps {
        echo "Choice ${params.CHOICE}"
      }
    }
    stage('password') {
      steps {
        echo "Password: ${params.PASSWORD}"
      }
    }
  }
}
```

Apply > save

### Stage View

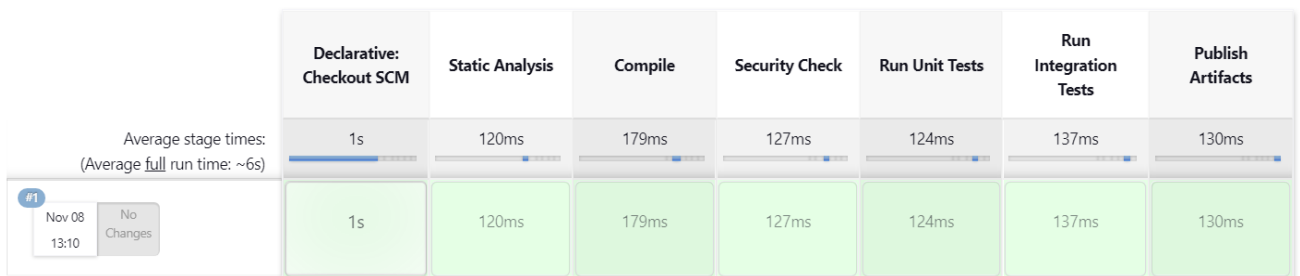


## 9. To create a Jenkinsfile and build a pipeline of jobs in Jenkins

Using Git -

enter item name > select pipeline > advanced project options > pipeline script from SCM  
> SCM > Git > repo url - <https://github.com/be11o/jenkins-pipeline-tutorial.git> > Script  
Path - hello-world/Jenkinsfile > apply > save

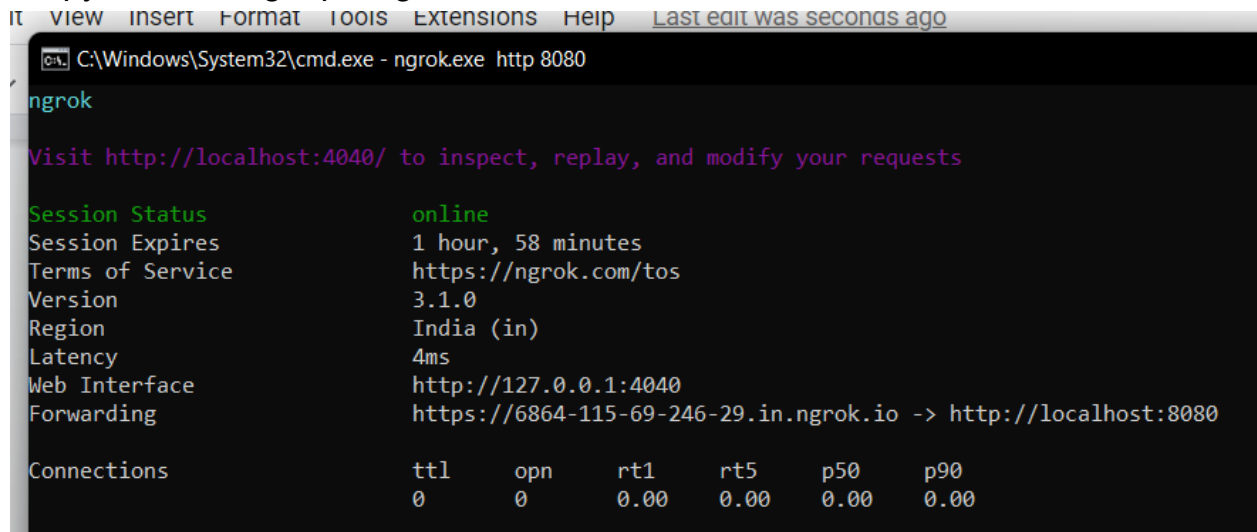
### Stage View



## 10. In Jenkins, show changes in a project with the help of webhooks. Also show how builds can be scheduled with cron commands

- > Download ngrok first
- > Go to cmd in the folder where ngrok is present
- > type the following commands  
Ngrok.exe --version  
Ngrok.exe http 8080

>copy Forwarding, upto ngrok.io



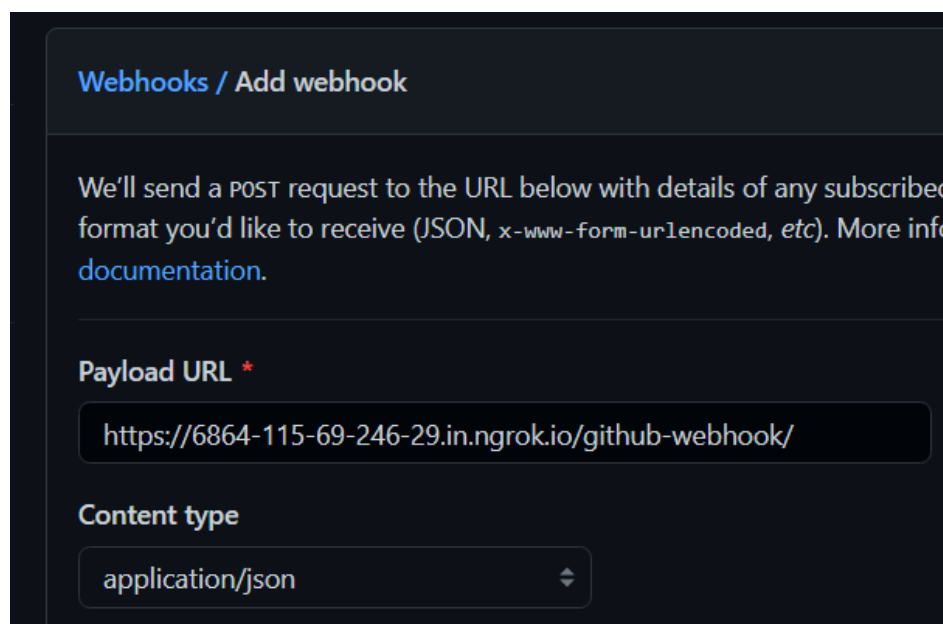
```
C:\Windows\System32\cmd.exe - ngrok.exe http 8080

ngrok

Visit http://localhost:4040/ to inspect, replay, and modify your requests

Session Status      online
Session Expires     1 hour, 58 minutes
Terms of Service     https://ngrok.com/tos
Version              3.1.0
Region               India (in)
Latency              4ms
Web Interface        http://127.0.0.1:4040
Forwarding            https://6864-115-69-246-29.in.ngrok.io -> http://localhost:8080

Connections          ttl    opn    rt1    rt5    p50    p90
                     0      0      0.00   0.00   0.00   0.00
```



**Webhooks / Add webhook**

We'll send a POST request to the URL below with details of any subscribed format you'd like to receive (JSON, x-www-form-urlencoded, etc). More info [documentation](#).

**Payload URL \***

**Content type**



> Add webhook

> new pipeline project > Build triggers > GitHub hook trigger for GITScm polling >

## Pipeline

### Definition

Pipeline script from SCM

SCM ?

Git

Repositories ?

Repository URL ?

<https://github.com/be11o/jenkins-pipeline-tutorial.git>

Script Path > hello-world/Jenkinsfile

Apply > save

Forked repository> make changes in Jenkinsfile > commit changes > build now

Add file to forked repository & build >

Commit is visible

## Using cron commands - In repository

H/5 \* \* \* \*

### Build Triggers

☐ Build after other projects are built ?

☒ Build periodically ?

Schedule ?

H/5 \* \* \* \*

> Initial Build now

> After a few minutes

### Stage View



## 12. To build an image for a web application using Dockerfile

> Download Dockerfile from classroom exp 10 reference material

> create a folder and move Dockerfile to this folder

> create index.html here

```
<html>
<head>
  <title>Welcome Chrisanne</title>
</head>

<body>
  <h1>Welcome to my website</h1>
  <h2>Main Categories:</h2>
  <p>Pages (HTML)</p>
  <p>Style Sheets</p>
  <p>Computer Code(Javascript)</p>
  <p>Live Data</p>

</body>
</html>
```

> edit Dockerfile

```
FROM ubuntu:latest
MAINTAINER "Chrisanne Rebello"
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;"]
```

> in cmd

> go to folder

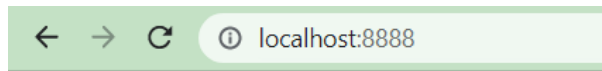
>docker --version

>docker login

> docker build -t kashyap\_image .

> docker run -it -p 8888:80 kashyap\_image

> go to browser & open localhost:8888



# Welcome to my website

## Main Categories:

Pages (HTML)



Style Sheets

Computer Code(Javascript)

Live Data

## Created image

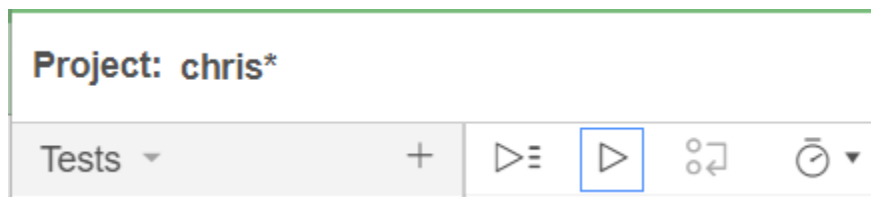
kashyap_image	IN USE	latest	4a05a7d3ca4d	about 3 hours ago	172.84 MB
---------------	--------	--------	--------------	-------------------	-----------

		NAME	IMAGE
<input type="checkbox"/>		happy_yalow a7dfb5bc07d1 	<a href="#">kashyap_image:latest</a>

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

- > search selenium IDE
- > add to chrome as extension
- > open selenium extension
- > create new project
- > set base url - <https://www.google.com>
- > start recording
- > stop recording
- > name the test
- > run test
- > **test completed successfully**

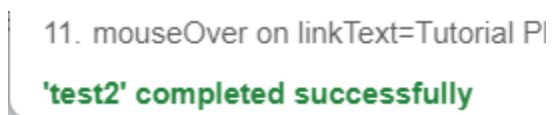
To run test

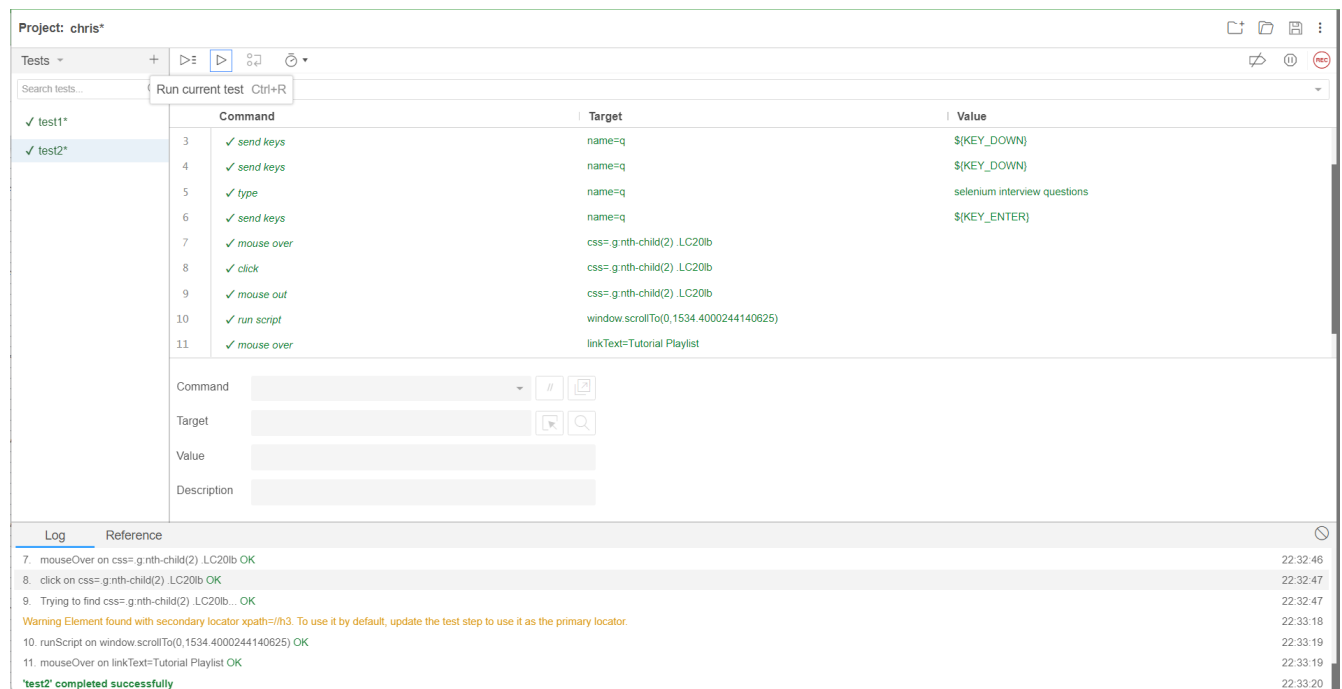


To start and stop recording



**Output successful -**





### 13. In Jenkins, create a slave node, connect it with master and build a project in slave node

- Manage Jenkins
- Configure System, Jenkins Location, Jenkins URL (<http://192.168.0.108:8080>)
- Configure Global Security, Agents Random
- Create a new node (manage jenkins)
- Name, description, No. of executors 2, Remote root directory [C:/sample1], label Slave, Custom WorkDir path [C:/sample1]
- Create a new project, freestyle, checkbox Restrict where this project can be run, label Slave
- Execute Windows batch command, echo "Hello World"
- Run the Commands in the created slave on the cmd
- cd C:\ProgramData\Jenkins\jenkins\nodes\deekha\_slave
- Run both the commands
- Build the project, check output

## The 2 commands -

```
>curl -sO http://172.27.192.1:8080/jnlpJars/agent.jar
```

```
java -jar agent.jar -jnlpUrl http://172.27.192.1:8080/computer/slave/jenkins-agent.jnlp -secret e49a034b4a9f058de02b07ff2c8f1862fd71259921bd1e6d1628fef401f59998 -workDir "C:\Slave"
```