

BUILD: means compile, test and package the application into jar or war file

Perform continuous download and build

Download: downloading the code from github to devserver

Build: convert the source code into artifact(war)

connect to aws machine with gitbash terminal

```
Enable ESM Apps to receive additional future security updates.  
See https://ubuntu.com/esm or run: sudo pro status  
  
Last login: Fri Feb 14 23:37:19 2025 from 223.238.18.219  
ubuntu@ip-172-31-7-68:~$
```

Check java is there are not if java is not exist then install java

Sudo apt-get update

Sudo apt-get install -y openjdk-21-jdk

Check jenkins is installed or not. If not install jenkins(experiment3)

If you have java and jenkins then u are good to start

Install maven in the aws machine with gitbash

Go to the root directory in gitbash

Sudo su -

```
ubuntu@ip-172-31-7-68:~$ sudo su -  
root@ip-172-31-7-68:~#
```

#Pwd

#cd /opt

```
ubuntu@ip-172-31-7-68:~$ sudo su -
root@ip-172-31-7-68:~# pwd
/root
root@ip-172-31-7-68:~# ll
total 24
drwx----- 4 root root 4096 Feb 14 23:33 ./
drwxr-xr-x 22 root root 4096 Feb 14 23:33 ../
-rw-r--r-- 1 root root 3106 Apr 22 2024 .bashrc
-rw-r--r-- 1 root root 161 Apr 22 2024 .profile
drwx----- 2 root root 4096 Feb 14 23:33 .ssh/
drwx----- 3 root root 4096 Feb 14 23:33 snap/
root@ip-172-31-7-68:~# cd /opt
root@ip-172-31-7-68:/opt# ll
total 8
drwxr-xr-x 2 root root 4096 Jan 15 08:40 ./
drwxr-xr-x 22 root root 4096 Feb 14 23:33 ../
root@ip-172-31-7-68:/opt#
```

Here download maven. Go to the browser download maven

	Link	Checksums
Binary tar.gz archive	apache-maven-3.9.9-bin.tar.gz	apache-maven-3.9.9-bin.tar.gz.sha512

Right click on the .gz file and copy the path and paste in the gitbash beside the wget command

#wget https://dlcdn.apache.org/maven/maven-3/3.9.9/binaries/apache-maven-3.9.9-bin.tar.gz

```
drwxr-xr-x 22 root root 4096 Feb 14 23:33 ../
root@ip-172-31-7-68:/opt# wget https://dlcdn.apache.org/maven/maven-3/3.9.9/binaries/apache-maven-3.9.9-bin.tar.gz
--2025-02-15 00:04:43-- https://dlcdn.apache.org/maven/maven-3/3.9.9/binaries/apache-maven-3.9.9-bin.tar.gz
Resolving dlcdn.apache.org (dlcdn.apache.org)... 151.101.2.132, 2a04:4e42::644
Connecting to dlcdn.apache.org (dlcdn.apache.org)|151.101.2.132|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 9102945 (8.7M) [application/x-gzip]
Saving to: 'apache-maven-3.9.9-bin.tar.gz'

apache-maven-3.9.9-bin.tar.gz 100%[=====] 8.68M 20.7MB/s in 0.4s
2025-02-15 00:04:44 (20.7 MB/s) - 'apache-maven-3.9.9-bin.tar.gz' saved [9102945/9102945]
root@ip-172-31-7-68:/opt#
```

#ll

```
root@ip-172-31-7-68:/opt# ll
total 8900
drwxr-xr-x 2 root root 4096 Feb 15 00:04 ./
drwxr-xr-x 22 root root 4096 Feb 14 23:33 ../
-rw-r--r-- 1 root root 9102945 Aug 17 18:44 apache-maven-3.9.9-bin.tar.gz
root@ip-172-31-7-68:/opt#
```

Now u can unzip the .gz file

#tar -xvzf apache-maven-3.9.9-bin.tar.gz

```
root@ip-172-31-7-68:/opt# tar -xvzf apache-maven-3.9.9-bin.tar.gz
apache-maven-3.9.9/README.txt
apache-maven-3.9.9/LICENSE
```

#ll

```
root@ip-172-31-7-68:/opt# ll
total 8904
drwxr-xr-x  3 root root    4096 Feb 15 00:07 ./
drwxr-xr-x 22 root root    4096 Feb 14 23:33 ../
drwxr-xr-x  6 root root    4096 Feb 15 00:07 apache-maven-3.9.9/
-rw-r--r--  1 root root 9102945 Aug 17 18:44 apache-maven-3.9.9-bin.tar.gz
root@ip-172-31-7-68:/opt#
```

rename the apache-maven-3.9.9 to maven for better usage

#mv apache-maven-3.9.9 maven

#ll

```
root@ip-172-31-7-68:/opt# mv apache-maven-3.9.9 maven
root@ip-172-31-7-68:/opt# ll
total 8904
drwxr-xr-x  3 root root    4096 Feb 15 00:10 ./
drwxr-xr-x 22 root root    4096 Feb 14 23:33 ../
-rw-r--r--  1 root root 9102945 Aug 17 18:44 apache-maven-3.9.9-bin.tar.gz
drwxr-xr-x  6 root root    4096 Feb 15 00:07 maven/
root@ip-172-31-7-68:/opt#
```

#cd maven

#pwd

#ll

```
root@ip-172-31-7-68:/opt# cd maven
root@ip-172-31-7-68:/opt/maven# pwd
/opt/maven
root@ip-172-31-7-68:/opt/maven# ll
total 56
drwxr-xr-x  6 root root    4096 Feb 15 00:07 ./
drwxr-xr-x  3 root root    4096 Feb 15 00:10 ../
-rw-r--r--  1 root root 18920 Aug 14 2024 LICENSE
-rw-r--r--  1 root root  5034 Aug 14 2024 NOTICE
-rw-r--r--  1 root root  1279 Aug 14 2024 README.txt
drwxr-xr-x  2 root root    4096 Feb 15 00:07 bin/
drwxr-xr-x  2 root root    4096 Feb 15 00:07 boot/
drwxr-xr-x  3 root root    4096 Aug 14 2024 conf/
drwxr-xr-x  4 root root    4096 Feb 15 00:07 lib/
root@ip-172-31-7-68:/opt/maven#
```

#cd bin

#pwd

#ll

```

root@ip-172-31-7-68:/opt/maven# cd bin
root@ip-172-31-7-68:/opt/maven/bin# pwd
/opt/maven/bin
root@ip-172-31-7-68:/opt/maven/bin# ll
total 40
drwxr-xr-x 2 root root 4096 Feb 15 00:07 ./
drwxr-xr-x 6 root root 4096 Feb 15 00:07 ../
-rw-r--r-- 1 root root 327 Aug 14 2024 m2.conf
-rwxr-xr-x 1 root root 5917 Aug 14 2024 mvn*
-rw-r--r-- 1 root root 6324 Aug 14 2024 mvn.cmd
-rwxr-xr-x 1 root root 1684 Aug 14 2024 mvnDebug*
-rw-r--r-- 1 root root 2169 Aug 14 2024 mvnDebug.cmd
-rwxr-xr-x 1 root root 1611 Aug 14 2024 mvnyjp*
root@ip-172-31-7-68:/opt/maven/bin#

```

Now check the maven

Mvn --version

It gives maven not found

./mvn --version

```

root@ip-172-31-7-68:/opt/maven/bin# mvn --version
Command 'mvn' not found, but can be installed with:
apt install maven
root@ip-172-31-7-68:/opt/maven/bin# ./mvn --version
Apache Maven 3.9.9 (8e8579a9e76f7d015ee5ec7bfc97d260186937)
Maven home: /opt/maven
Java version: 21.0.6, vendor: Ubuntu, runtime: /usr/lib/jvm/java-21-openjdk-amd64
Default locale: en, platform encoding: UTF-8
OS name: "linux", version: "6.8.0-1021-aws", arch: "amd64", family: "unix"
root@ip-172-31-7-68:/opt/maven/bin#

```

Cd ..

Mvn --version

Again it shows maven not found. So we need to set up environment variable

So go to the root directory

Cd ~

```

root@ip-172-31-7-68:~# ll -a
total 24
drwx----- 4 root root 4096 Feb 14 23:33 ./
drwxr-xr-x 22 root root 4096 Feb 14 23:33 ../
-rw-r--r-- 1 root root 3106 Apr 22 2024 .bashrc
-rw-r--r-- 1 root root 161 Apr 22 2024 .profile
drwx----- 2 root root 4096 Feb 14 23:33 .ssh/
drwx----- 3 root root 4096 Feb 14 23:33 snap/
root@ip-172-31-7-68:~#

```

U can see th .profile file u need to edit it

```
# ~/.profile: executed by Bourne-compatible login shells.

if [ "$BASH" ]; then
  if [ -f ~/.bashrc ]; then
    . ~/.bashrc
  fi
fi

mesg n 2> /dev/null || true

~
~
~
```

Here u need to add java_home,m2_home and m2 variable. For that u need to open one more terminal and run below command

```
ubuntu@ip-172-31-7-68:~$ sudo su -
root@ip-172-31-7-68:~# cd /opt
root@ip-172-31-7-68:/opt# cd maven
root@ip-172-31-7-68:/opt/maven# pwd
/opt/maven
root@ip-172-31-7-68:/opt/maven# cd bin
root@ip-172-31-7-68:/opt/maven/bin# pwd
/opt/maven/bin
root@ip-172-31-7-68:/opt/maven/bin#
```

```
root@ip-172-31-7-68:/# find / -name java-21*
/etc/java-21-openjdk
/usr/lib/debug/usr/lib/jvm/java-21-openjdk-amd64
/usr/lib/jvm/java-21-openjdk-amd64
/usr/share/gdb/auto-load/usr/lib/jvm/java-21-openjdk-amd64
root@ip-172-31-7-68:/#
```

```
# ~/.profile: executed by Bourne-compatible login shells.

if [ "$BASH" ]; then
  if [ -f ~/.bashrc ]; then
    . ~/.bashrc
  fi
fi

M2_HOME=/opt/maven
M2=/opt/maven/bin
JAVA_HOME=/usr/lib/jvm/java-21-openjdk-amd64
PATH=$PATH:$HOME/bin:$JAVA_HOME:$M2_HOME:$M2

mesg n 2> /dev/null || true
```

#echo \$PATH

```
root@ip-172-31-7-68:~# echo $PATH
/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin
root@ip-172-31-7-68:~#
```

It is not showing the java and maven path here
So we need to restart the terminal or run below command

```
root@ip-172-31-7-68:~# source .profile
root@ip-172-31-7-68:~# echo $PATH
/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin:/root/bin:/usr/lib/jvm/java-21-openjdk-amd64:/opt/maven:/opt/maven/bin
root@ip-172-31-7-68:~#
```

Now we check the maven version
mvn --version

```
root@ip-172-31-7-68:~# mvn --version
Apache Maven 3.9.9 (8e8579a9e76f7d015ee5ec7bfc97d260186937)
Maven home: /opt/maven
Java version: 21.0.6, vendor: Ubuntu, runtime: /usr/lib/jvm/java-21-openjdk-amd64
Default locale: en, platform encoding: UTF-8
OS name: "linux", version: "6.8.0-1021-aws", arch: "amd64", family: "unix"
root@ip-172-31-7-68:~#
```

Now start the jenkins in new terminal

Now we need to add the new plugin in jenkins(maven integration)
Without this we can't see the maven project

New Item

Enter an item name

» This field cannot be empty, please enter a valid name

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.

Select an item type



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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.


Managejenkins-->plugins--->available plugining-->select maven integration and install it

The screenshot shows the Jenkins web interface. At the top, there's a navigation bar with the Jenkins logo, a search icon, a shield icon with a red exclamation mark, a user profile icon labeled 'admin', and a 'log out' link. Below the navigation bar is a breadcrumb trail: 'Dashboard > Manage Jenkins > Plugins'. The main content area is titled 'Plugins'. On the left, there's a sidebar with links: 'Updates', 'Available plugins' (which is highlighted), 'Installed plugins', 'Advanced settings', and 'Download progress'. The main area shows a search bar with 'maven integration' entered. Below the search bar is a table of plugins. The first plugin, 'Maven Integration 3.25', is checked for installation. It is categorized as a 'Build Tools' plugin and was released '8 days 6 hr ago'. The description states: 'This plugin provides a deep integration between Jenkins and Maven. It adds support for automatic triggers between projects depending on SNAPSHOTS as well as the automated configuration of various Jenkins publishers such as Junit.' The second plugin, 'Pipeline Maven Integration 1485.v9a_5a_116d6fb_0', is not checked for installation and is categorized as a 'pipeline' and 'Maven' plugin.

Install	Name	Released
<input checked="" type="checkbox"/>	Maven Integration 3.25 Build Tools	8 days 6 hr ago
<input type="checkbox"/>	Pipeline Maven Integration 1485.v9a_5a_116d6fb_0 pipeline Maven	

Restart the jenkins or skip it if you click on restart it takes some time



 Jenkins is restarting

Your browser will reload automatically when Jenkins is ready.

Safe Restart

Builds on agents can usually continue.

Now u can see the maven project

Dashboard > New Item

New Item

Enter an item name

» This field cannot be empty, please enter a valid name

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.



Maven project

Build a maven project. Jenkins takes advantage of your POM files and drastically reduces the configuration.

And u need to add the java and maven environment variables in the jenkins

JDK installations

Add JDK


 **JDK**

Name

java-21


JAVA_HOME

/usr/lib/jvm/java-21-openjdk-amd64

☐ Install automatically 

Maven installations

Add Maven


 **Maven**

Name

maven 3.9

MAVEN_HOME

/opt/maven

☐ Install automatically 

Add Maven

Save

Apply

Click on apply and save

Now create maven project

New Item

Enter an item name

warjar

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.



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

OK

Configure

General

Source Code Management

Triggers

Environment

Pre Steps

Build

Post Steps

Build Settings

Post-build Actions

Source Code Management

Connect and manage your code repository to automatically pull the latest code for your builds.

None

Git

Repositories

Repository URL

Please enter Git repository.

Credentials

- none -

+ Add

Save

Apply

https://github.com/Mahi-Repalle/practice

Mahi-Repalle / practice

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

practice Public

Pin Unwatch 1 Fork 0 Star 0

master 1 Branch 0 Tags

Dileepdeepu1 first commit

.mvn	first commit
.settings	first commit
src/main/webapp	first commit
.classpath	first commit
.gitignore	first commit
.project	first commit
pom.xml	first commit

Go to file

Local Codespaces

Clone

HTTPS SSH GitHub CLI

https://github.com/Mahi-Repalle/practice.git

Clone using the web URL

Open with GitHub Desktop

Download ZIP

About

No description, website, or topics provided.

Activity

0 stars

1 watching

0 forks

Releases

No releases published

Create a new release

Packages

Dashboard > warjar > Configuration

Configure

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

Build

Root POM ?
pom.xml

Goals and options ?
clean install

Advanced ▾

Post Steps

☐ Run only if build succeeds

☐ Run only if build succeeds or is unstable

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

Click on build now

Dashboard > warjar >

Maven project warjar

[Add description](#)

Permalinks

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

Builds ... ↗

Today

☒ #1 1:06 AM ▾

Select Succeeded job drop down -->console output

```

utils/4.0.1/plexus-utils-4.0.1.jar (193 kB at 10 MB/s)
[INFO] Installing /home/ubuntu/.jenkins/workspace/warjar/pom.xml to
/home/ubuntu/.m2/repository/DevOpsCourse/MyDevPipeline/0.0.1-SNAPSHOT/MyDevPipeline-0.0.1-SNAPSHOT.pom
[INFO] Installing /home/ubuntu/.jenkins/workspace/warjar/target/MyDevPipeline.war to
/home/ubuntu/.m2/repository/DevOpsCourse/MyDevPipeline/0.0.1-SNAPSHOT/MyDevPipeline-0.0.1-SNAPSHOT.war
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 13.732 s
[INFO] Finished at: 2025-02-15T01:07:19Z
[INFO] -----
Waiting for Jenkins to finish collecting data
[JENKINS] Archiving /home/ubuntu/.jenkins/workspace/warjar/pom.xml to DevOpsCourse/MyDevPipeline/0.0.1-SNAPSHOT/MyDevPipeline-0.0.1-SNAPSHOT.pom
[JENKINS] Archiving /home/ubuntu/.jenkins/workspace/warjar/target/MyDevPipeline.war to
DevOpsCourse/MyDevPipeline/0.0.1-SNAPSHOT/MyDevPipeline-0.0.1-SNAPSHOT.war
channel stopped
Finished: SUCCESS

```

Now go and check in the terminal war file is generated or not

```

ubuntu@ip-172-31-7-68:~$ pwd
/home/ubuntu
ubuntu@ip-172-31-7-68:~$ cd .jenkins
ubuntu@ip-172-31-7-68:~/.jenkins$ cd workspace
ubuntu@ip-172-31-7-68:~/.jenkins/workspace$ cd warjar
ubuntu@ip-172-31-7-68:~/.jenkins/workspace/warjar$ cd target
ubuntu@ip-172-31-7-68:~/.jenkins/workspace/warjar/target$ ls
MyDevPipeline  MyDevPipeline.war  maven-archiver
ubuntu@ip-172-31-7-68:~/.jenkins/workspace/warjar/target$

```

```

ubuntu@ip-172-31-7-68:~$ pwd
/home/ubuntu
ubuntu@ip-172-31-7-68:~$ cd .jenkins
ubuntu@ip-172-31-7-68:~/.jenkins$ cd workspace
ubuntu@ip-172-31-7-68:~/.jenkins/workspace$ cd warjar
ubuntu@ip-172-31-7-68:~/.jenkins/workspace/warjar$ cd target
ubuntu@ip-172-31-7-68:~/.jenkins/workspace/warjar/target$ ls
MyDevPipeline  MyDevPipeline.war  maven-archiver
ubuntu@ip-172-31-7-68:~/.jenkins/workspace/warjar/target$ cd MyDevPipeline.war
-bash: cd: MyDevPipeline.war: Not a directory
ubuntu@ip-172-31-7-68:~/.jenkins/workspace/warjar/target$ cd MyDevPipeline
ubuntu@ip-172-31-7-68:~/.jenkins/workspace/warjar/target/MyDevPipeline$ ls
META-INF  WEB-INF  index.jsp
ubuntu@ip-172-31-7-68:~/.jenkins/workspace/warjar/target/MyDevPipeline$ cat index.jsp
<html>
<body>
<h2><%= "Hello World!" %></h2>
</body>
</html>
ubuntu@ip-172-31-7-68:~/.jenkins/workspace/warjar/target/MyDevPipeline$

```

