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

Perform continuos download and build

Download: downloading the code from github to devserver Build: convert the source code into artificat(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
_ast 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 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

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

#11

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
```

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

#mv apache-maven-3.9.9 maven #11

#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# 11
total 56
                             4096 Feb 15 00:07 ./
4096 Feb 15 00:10 ../
18920 Aug 14 2024 LICENSE
drwxr-xr-x 6 root root
drwxr-xr-x 3 root root
-rw-r--r-- 1 root root 18920 Aug 14
                                               2024 NOTICE
 -rw-r--r-- 1 root root
                              5034 Aug 14
-rw-r--r-- 1 root root
drwxr-xr-x 2 root root
drwxr-xr-x 2 root root
                                               2024 README.txt
                               1279 Aug 14
                              4096 Feb 15
                                              00:07 bin/
                              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 (8e8579a9e76f7d015ee5ec7bfcdc97d260186937)
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:~# || -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

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

#echo \$PATH

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:# source _profile
root@ip-172-31-7-68:# sech SPATH
/usr/local/sbin:/usr/scal/bin:/usr/sbin:/usr/sbin:/bin:/usr/spin:/usr/local/sbin:/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 (8e8579a9e76f7d015ee5ec7bfcdc97d260186937)

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"

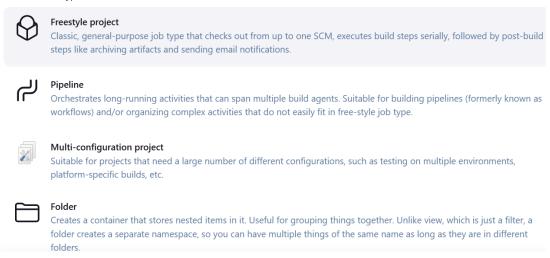
root@ip-172-31-7-68:~# |
```

Now start the jenkins in new terminal

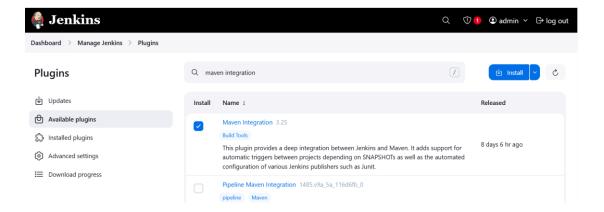
Now we need to add the new plugin in jenkins(maven integration) Without this we can't see the maven project

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-buisteps like archiving artifacts and sending email notifications. Pipeline Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known a workflows) and/or organizing complex activities that do not easily fit in free-style job type.

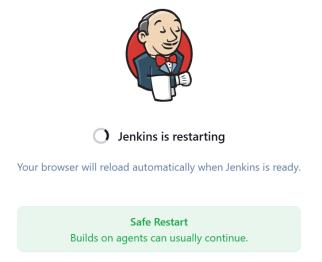
Select an item type



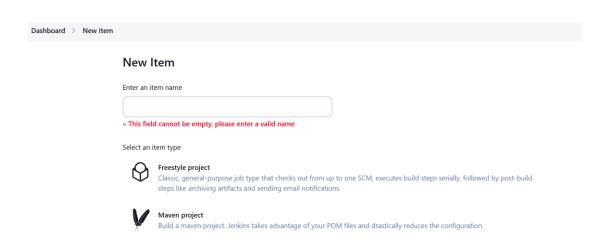
Managejenkins-->plugins--->available pluging-->select maven integration and install it



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

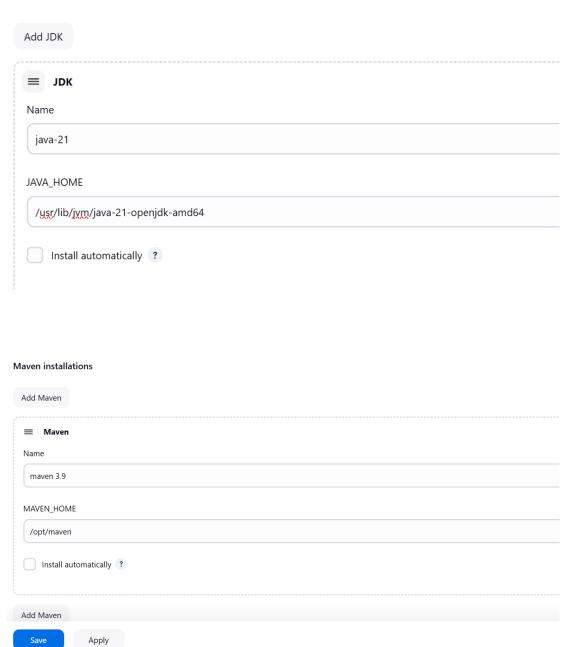


Now u can see the maven project



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

JDK installations

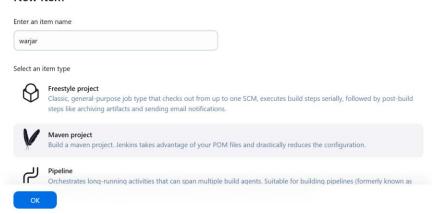


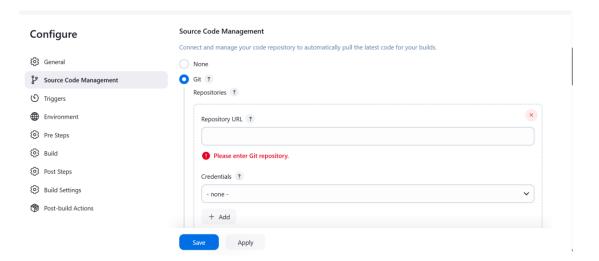
Click on apply and save

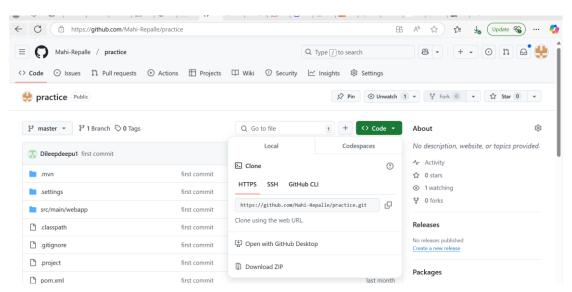
Now create maven project

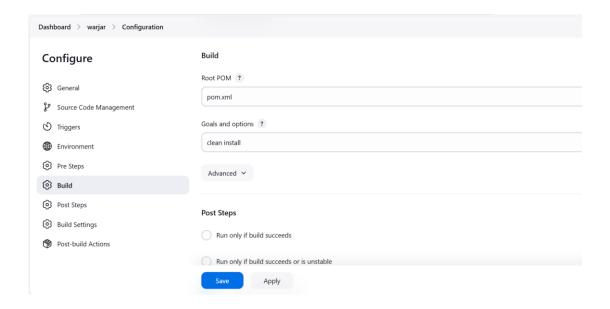
Dashboard > All > New Item

New Item

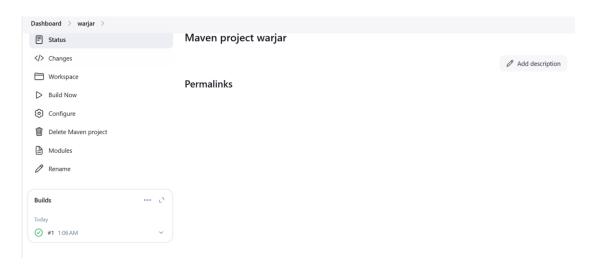








Click on build now



Select Succeeded job drop down -->console output

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

```
Jbuntu@ip-172-31-7-68:~$ pwd
/home/ubuntu
Jbuntu@ip-172-31-7-68:~$ cd .jenkins
Jbuntu@ip-172-31-7-68:~/.jenkins$ cd workspace
Jbuntu@ip-172-31-7-68:~/.jenkins/workspace$ cd warjar
Jbuntu@ip-172-31-7-68:~/.jenkins/workspace/warjar$ cd target
Jbuntu@ip-172-31-7-68:~/.jenkins/workspace/warjar/target$ ls

MyDevPipeline MyDevPipeline.war maven-archiver
Jbuntu@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 inde
x.jsp
<html>
<body>
<html>
<br/>
<br/>
</body>
</html>
ubuntu@ip-172-31-7-68:~/.jenkins/workspace/warjar/target/MyDevPipeline$ !
```

