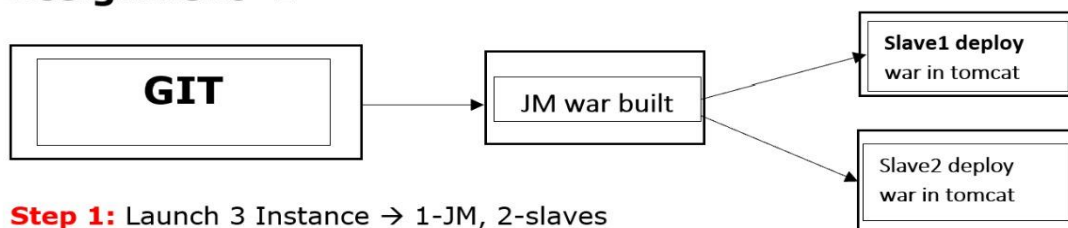


# Assignment -2

**Q. Build WAR file on JM through Git and Deploy Tomcat server on Slave-1 and Slave-2**

## Assignment -2



## Step 1.

- Launch 3 Instance 1-JM (all JM setup and configuration) and Slave-1(java, tomcat server up and running), slave-2 ((java, tomcat server up and running))
- Go to Manage Jenkins and Create node via SSH connection.

The screenshot shows the Jenkins 'Manage nodes and clouds' page. The table lists the following nodes:

S	Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
1	172.31.11.14	Linux (amd64)	In sync	6.12 GB	0 B	6.12 GB	24ms
2	172.31.35.234	Linux (amd64)	In sync	5.91 GB	0 B	5.91 GB	34ms
3	Built-In Node	Linux (amd64)	In sync	5.31 GB	0 B	5.31 GB	0ms

Below the table, the 'Data obtained' row shows the following values: 1 min 11 sec, 1 min 11 sec, 1 min 12 sec, 1 min 11 sec, 1 min 11 sec, 1 min 12 sec.

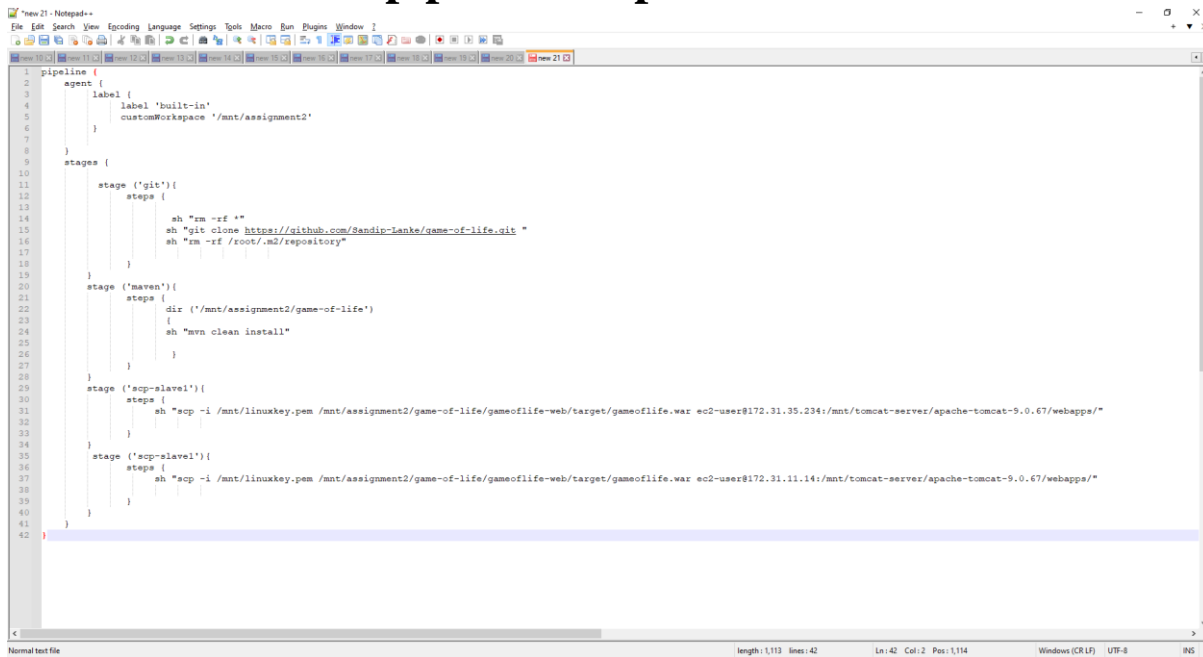
- **chmod -R 777 /mnt to slave-1 and slave-2**
- **Create linuxkey.pem**
- **Give permission chmod -R 400 linuxkey.pem**
- **Set up maven tool configuration**

The screenshot shows the Jenkins 'Global Tool Configuration' page for Maven. The page has a header with 'Dashboard' and 'Global Tool Configuration'. Below this is a section titled 'Maven' with a sub-header 'Maven installations' and a description 'List of Maven installations on this system'. There is an 'Add Maven' button. A dashed box contains a form for adding a new Maven installation. The form has two text input fields: 'Name' with the value 'maven 3.8.6' and 'MAVEN\_HOME' with the value '/mnt/build-tools/apache-maven-3.8.6'. There is also a checkbox for 'Install automatically' which is unchecked. Below the dashed box is another 'Add Maven' button. At the bottom of the page are 'Save' and 'Apply' buttons. The Jenkins version 'Jenkins 2.346.3' is visible in the bottom right corner.

## Step 2. Create pipeline job

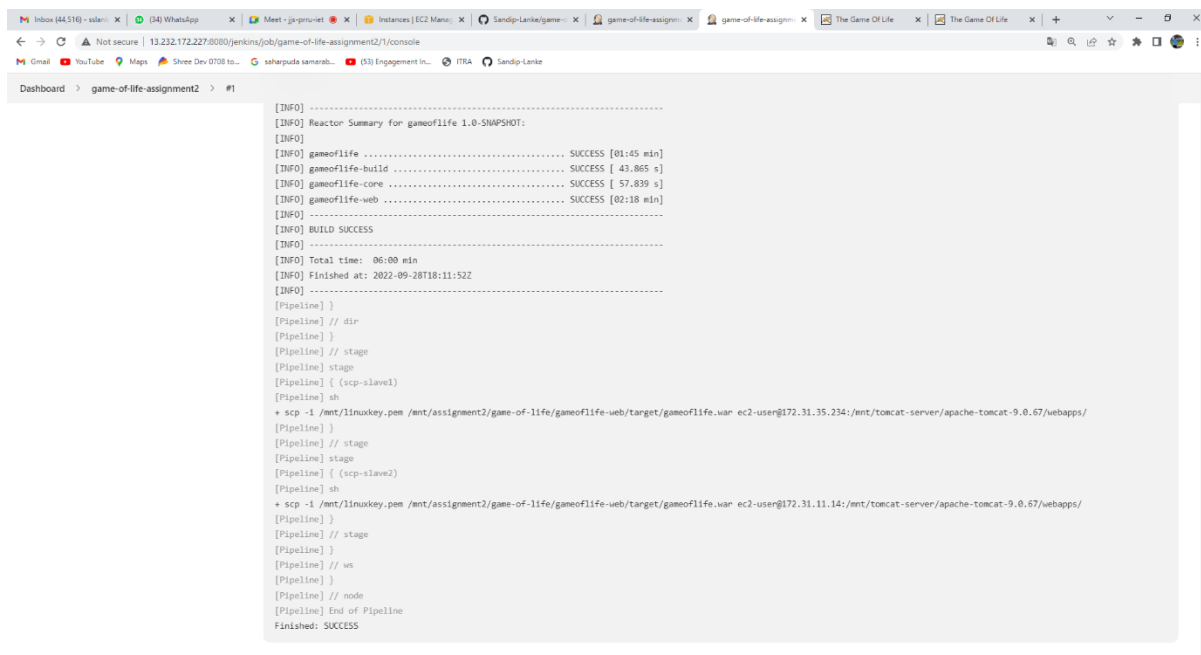
The screenshot shows the Jenkins 'Pipeline' configuration page for a job named 'game-of-life-assignment2'. The page has a header with 'Dashboard' and 'pipeline > game-of-life-assignment2'. Below this is a section titled 'General' with a sub-header 'Build Triggers' and a description 'game-of-life-assignment2'. There is a 'Discard old builds' checkbox which is checked. Below this is a 'Strategy' section with a dropdown menu set to 'Log Rotation'. There are two text input fields: 'Days to keep builds' with the value '5' and 'Max # of builds to keep' with the value '5'. There is an 'Advanced...' button. At the bottom of the page are 'Save' and 'Apply' buttons. The Jenkins version 'Jenkins 2.346.3' is visible in the bottom right corner.

## • Create pipeline script



```
1 pipeline {
2   agent {
3     label 'built-in'
4     customWorkspace '/mnt/assignment2'
5   }
6
7   stages {
8     stage ('git'){
9       steps {
10         sh "rm -rf *"
11         sh "git clone https://github.com/Sandip-Lanke/game-of-life.git"
12         sh "rm -rf /root/.m2/repository"
13       }
14     }
15     stage ('maven'){
16       steps {
17         dir ('/mnt/assignment2/game-of-life')
18         {
19           sh "mvn clean install"
20         }
21       }
22     }
23     stage ('scp-slave1'){
24       steps {
25         sh "scp -i /mnt/linuxkey.pem /mnt/assignment2/game-of-life/gameoflife-web/target/gameoflife.war ec2-user@172.31.35.234:/mnt/tomcat-server/apache-tomcat-9.0.67/webapps/"
26       }
27     }
28     stage ('scp-slave2'){
29       steps {
30         sh "scp -i /mnt/linuxkey.pem /mnt/assignment2/game-of-life/gameoflife-web/target/gameoflife.war ec2-user@172.31.11.14:/mnt/tomcat-server/apache-tomcat-9.0.67/webapps/"
31       }
32     }
33   }
34 }
35
36
37
38
39
40
41
42 }
```

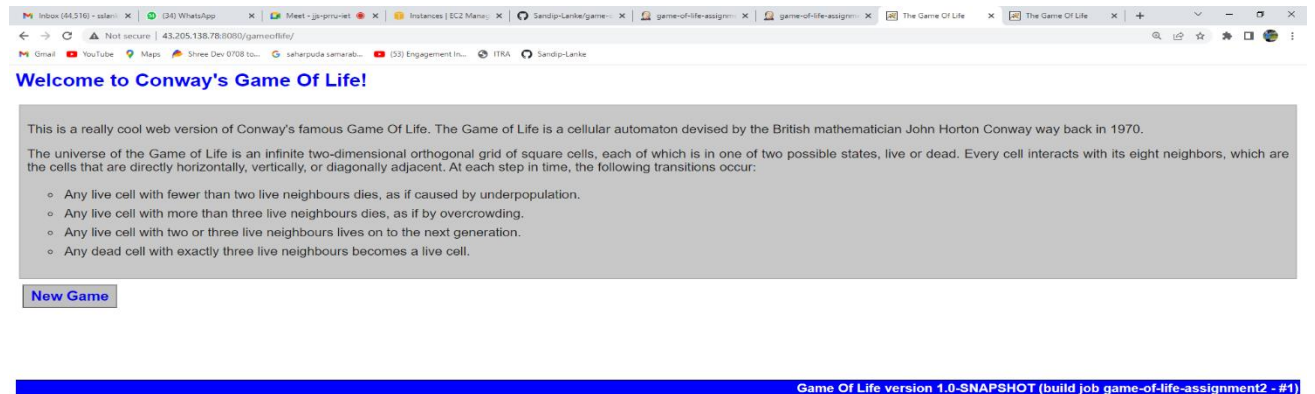
## • Build the pipeline job and Check the Console Output



```
[INFO] .....
[INFO] Reactor Summary for gameoflife 1.0-SNAPSHOT:
[INFO]
[INFO] gameoflife ..... SUCCESS [01:45 min]
[INFO] gameoflife-build ..... SUCCESS [ 43.865 s]
[INFO] gameoflife-core ..... SUCCESS [ 57.839 s]
[INFO] gameoflife-web ..... SUCCESS [02:18 min]
[INFO] .....
[INFO] BUILD SUCCESS
[INFO] .....
[INFO] Total time: 06:00 min
[INFO] Finished at: 2022-09-28T18:11:52Z
[INFO] .....
[Pipeline] }
[Pipeline] // dir
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (scp-slave1)
[Pipeline] sh
+ scp -i /mnt/linuxkey.pem /mnt/assignment2/game-of-life/gameoflife-web/target/gameoflife.war ec2-user@172.31.35.234:/mnt/tomcat-server/apache-tomcat-9.0.67/webapps/
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (scp-slave2)
[Pipeline] sh
+ scp -i /mnt/linuxkey.pem /mnt/assignment2/game-of-life/gameoflife-web/target/gameoflife.war ec2-user@172.31.11.14:/mnt/tomcat-server/apache-tomcat-9.0.67/webapps/
[Pipeline] }
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // vs
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

**Step 3. To check our Game-of-life WAR file deploy on each slave of tomcat server.**

# Slave-1 Output



# Slave-2 Output

