Certification Project – Insure Me

Insurance Domain

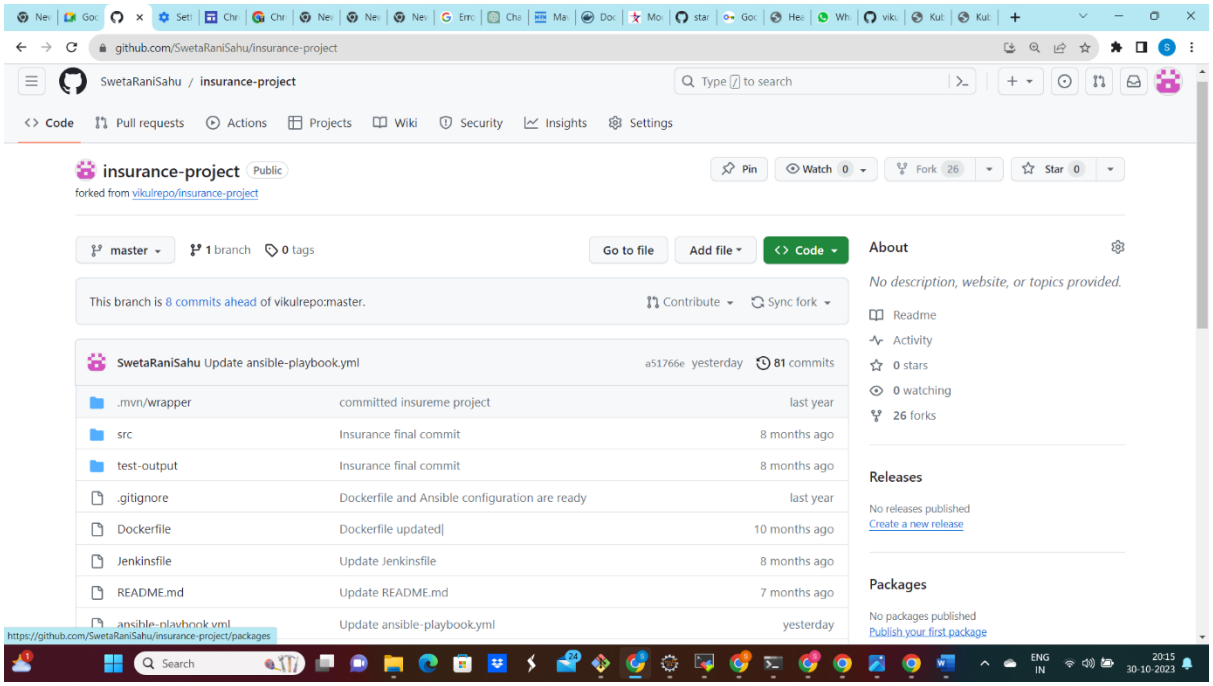
Name: -Sweta Rani Sahu

Date of Submission: -30.10.2023

For this project I used following: -

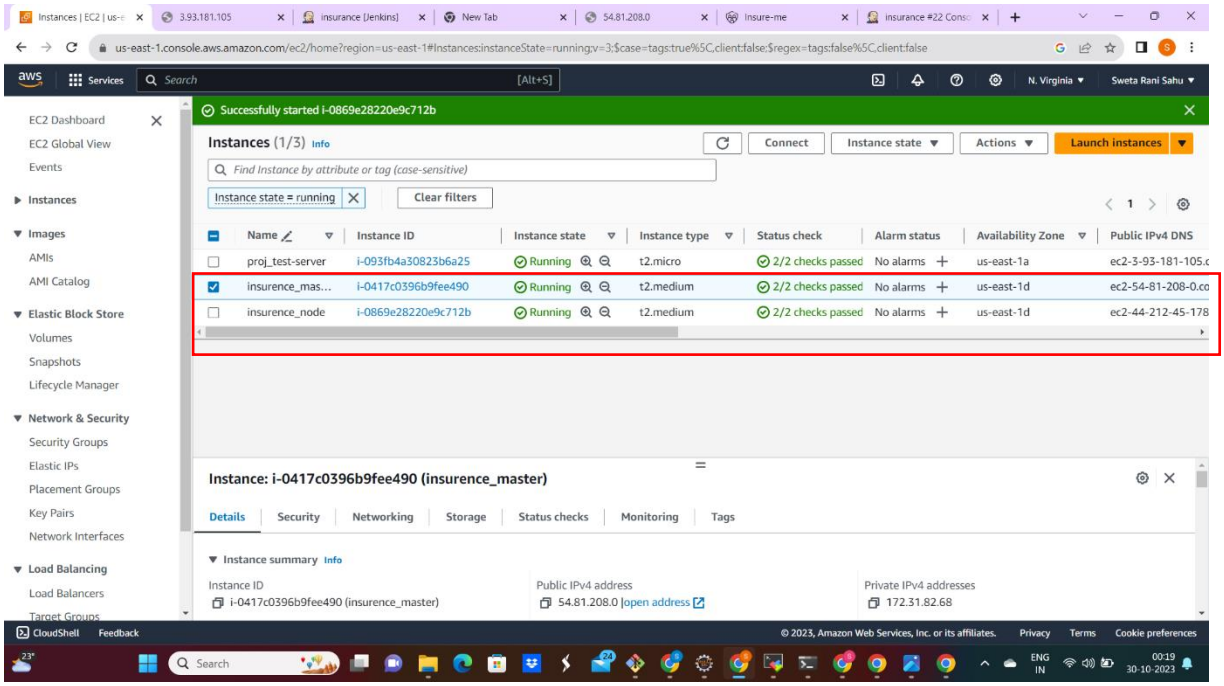
✓ Git - For version control for tracking changes in the code files
✓ Jenkins - For continuous integration and continuous deployment
✓ Docker - For deploying containerized applications
✓ Ansible - Configuration management tools
✓ Selenium - For automating tests on the deployed web application
✓ AWS: For creating ec2 machines as servers and deploy the web application.

I have used git for version controlling:-

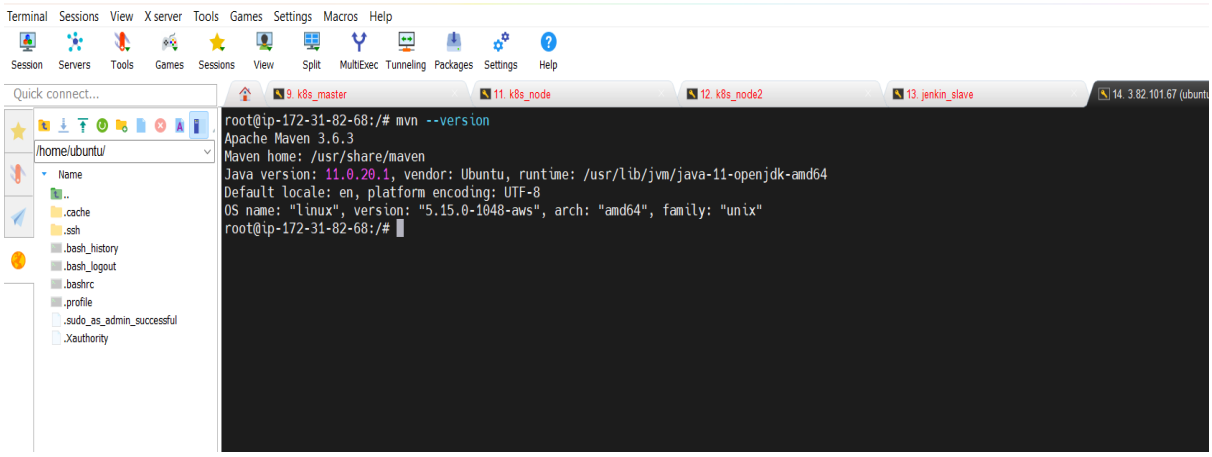


I have used Jenkins - For continuous integration and continuous deployment

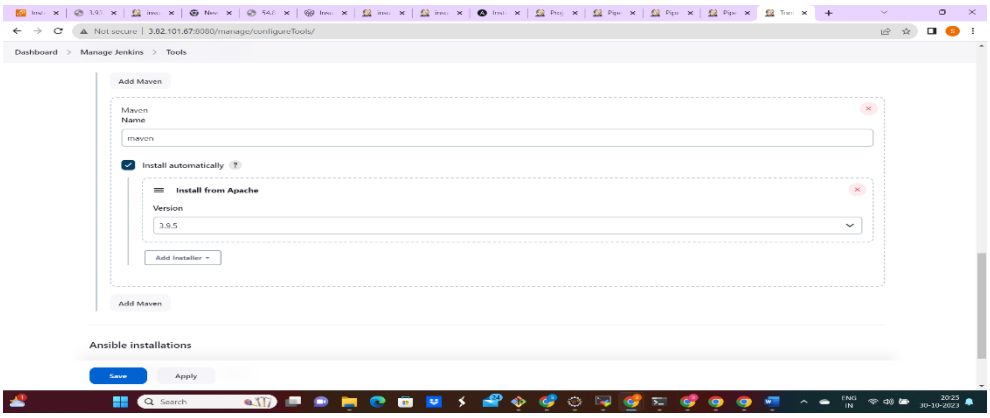
Configured Jenkins Master and Jenkins Slave node. Created 2 EC2 instances. Jenkins Master and Jenkins Slave. Installed required software on Jenkins Master and Slave.



Installed Maven in master Jenkins



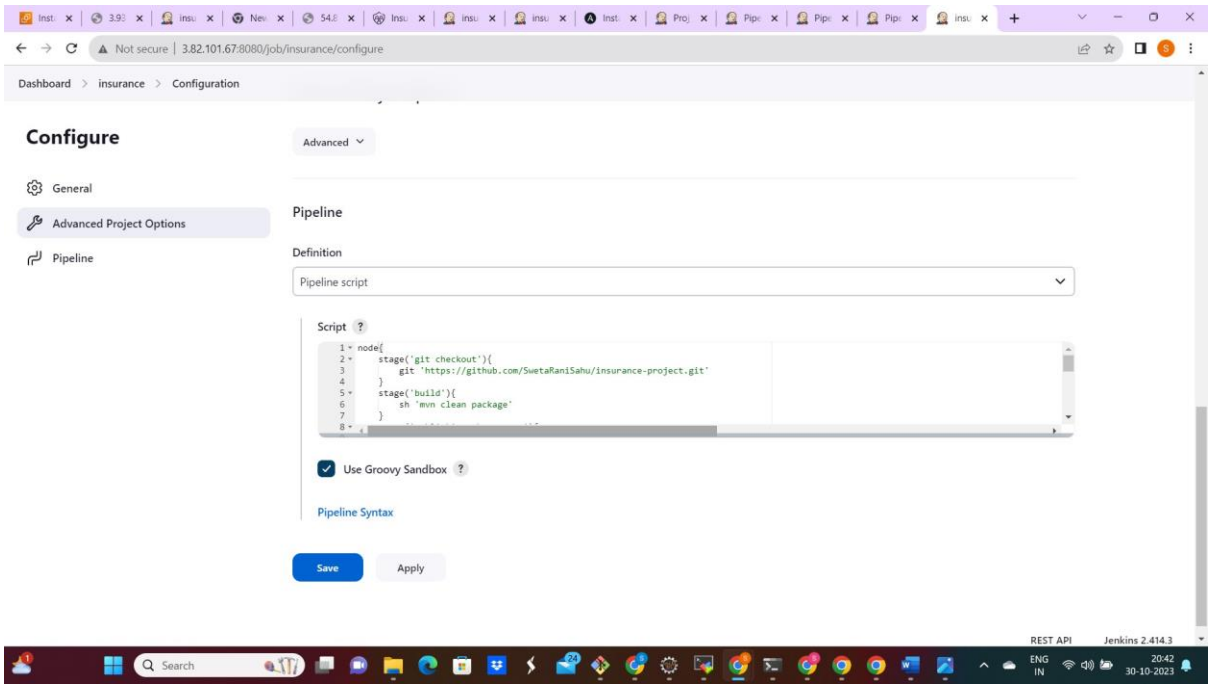
Add the maven plugin in Jenkins Master and configure the maven tool under tools in Jenkins master to point the maven application path.



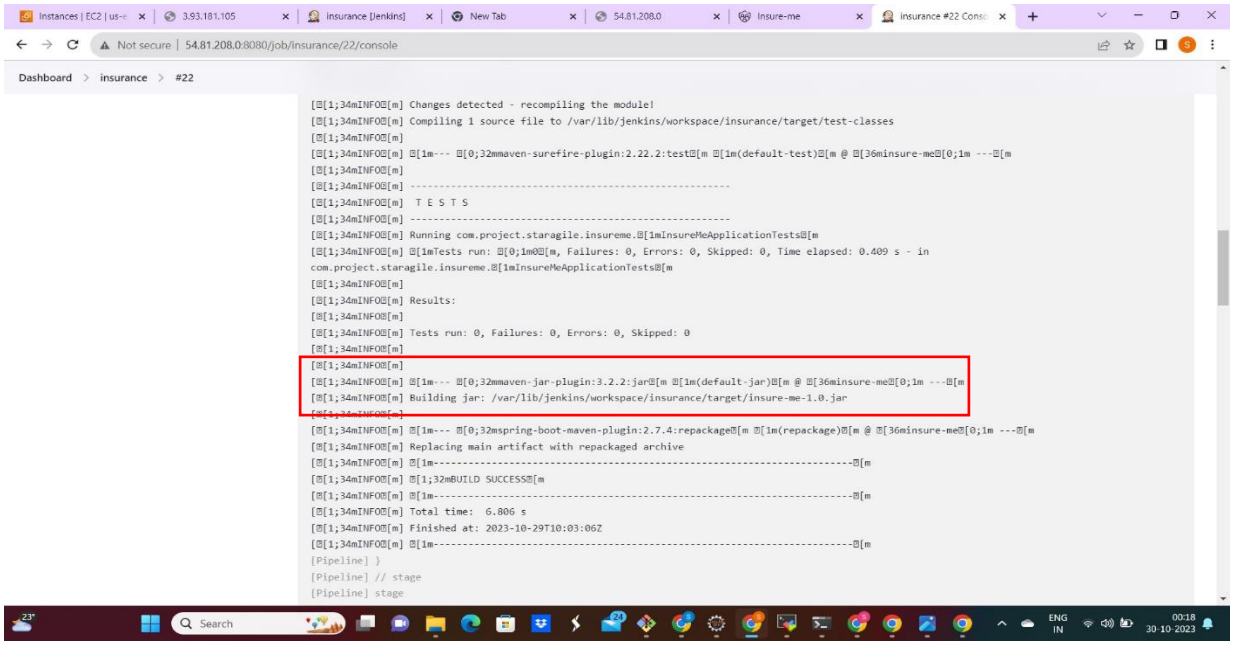
Wrote the Pipeline script to build the application.

1. Stage 1: SCM checkout where we get the code from GitHub repository.

2. Stage 2: Building package where we use maven clean and package to build the application artifacts.

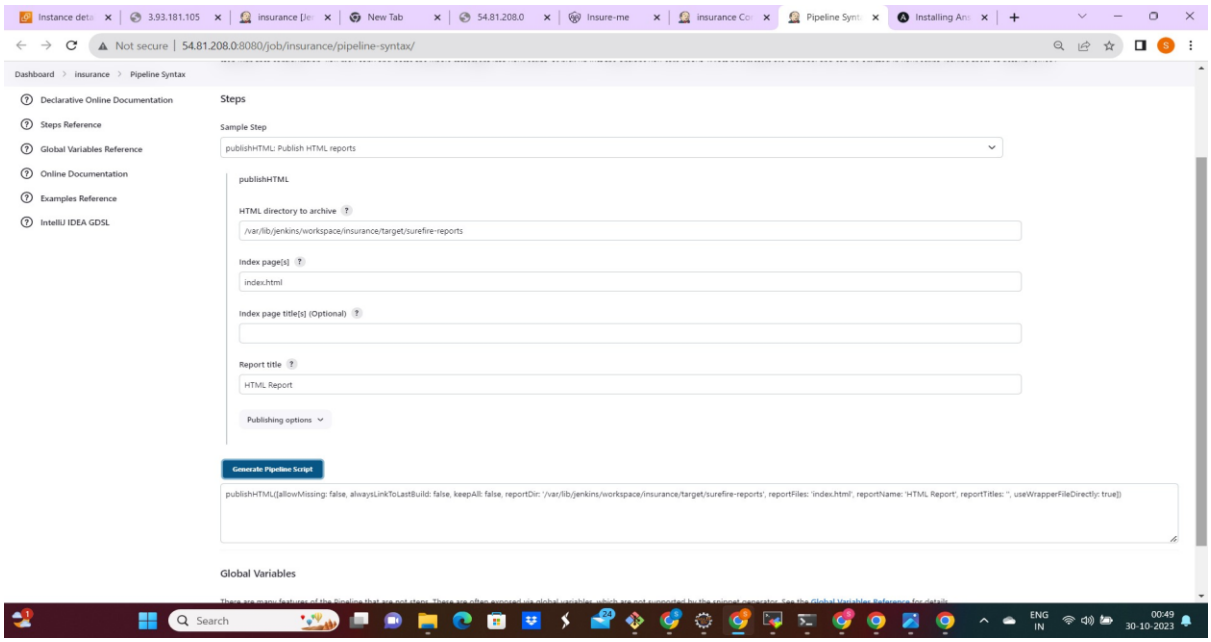


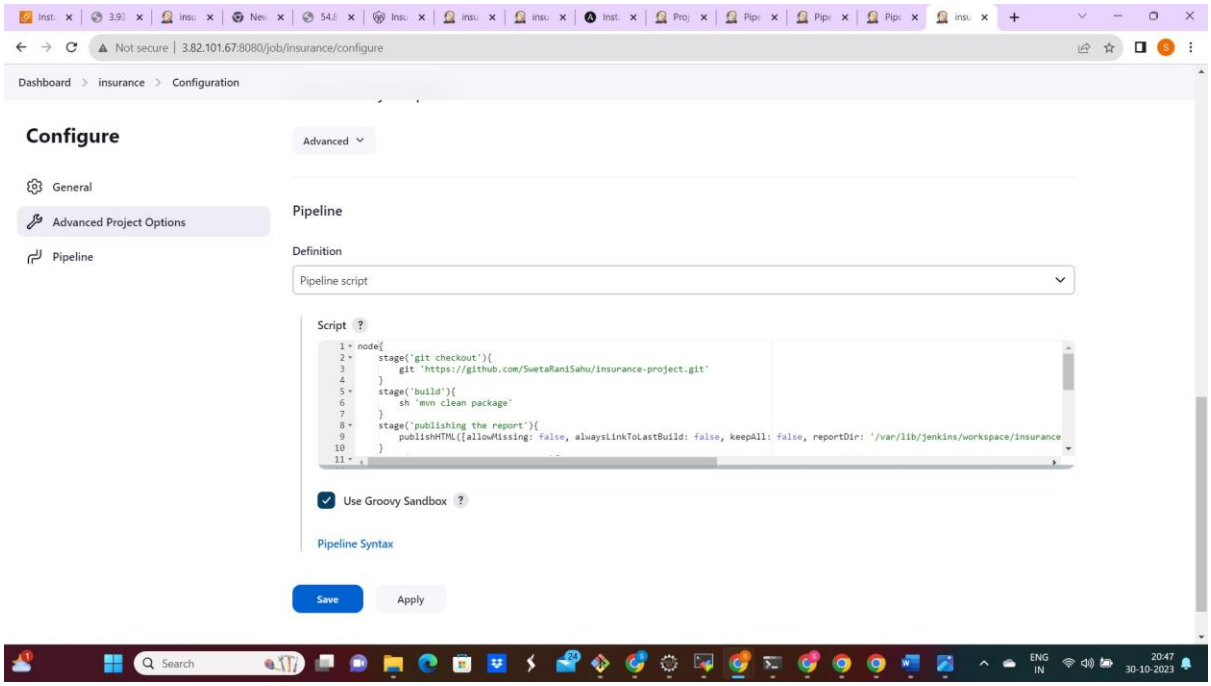
Jar/Artifacts build successfully.



3. Stage 3: Publish HTML reports.

Install HTML publisher. Add a stage publish HTML reports. Use syntax generator.

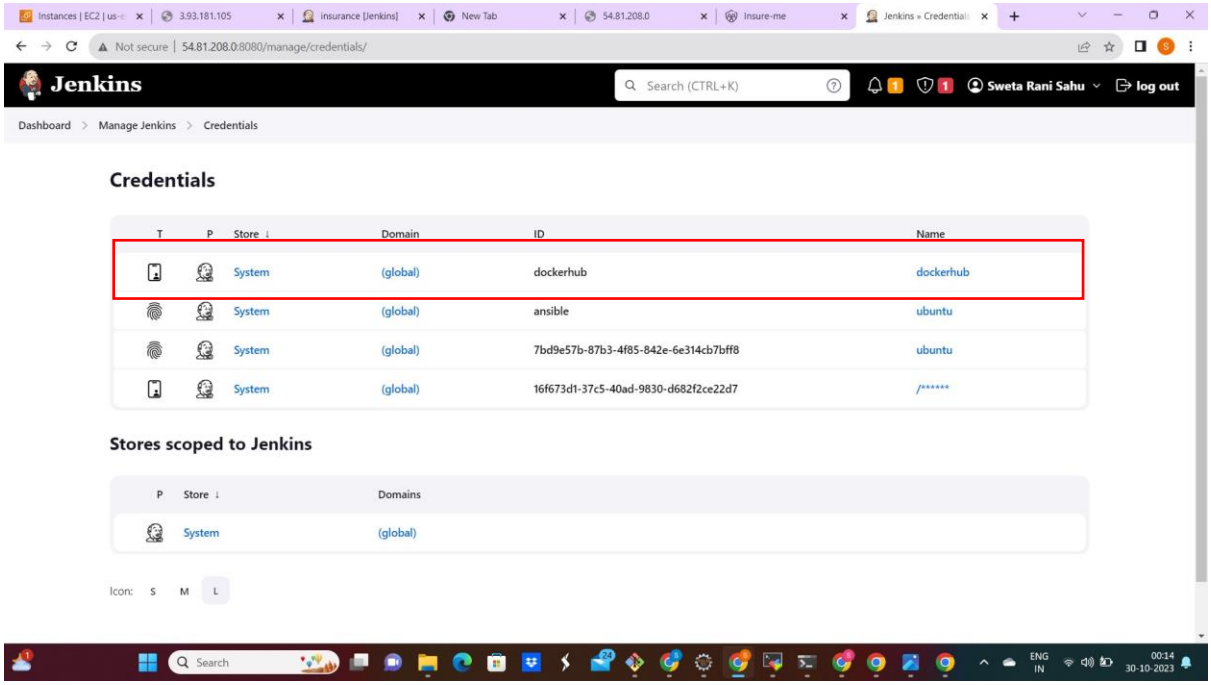


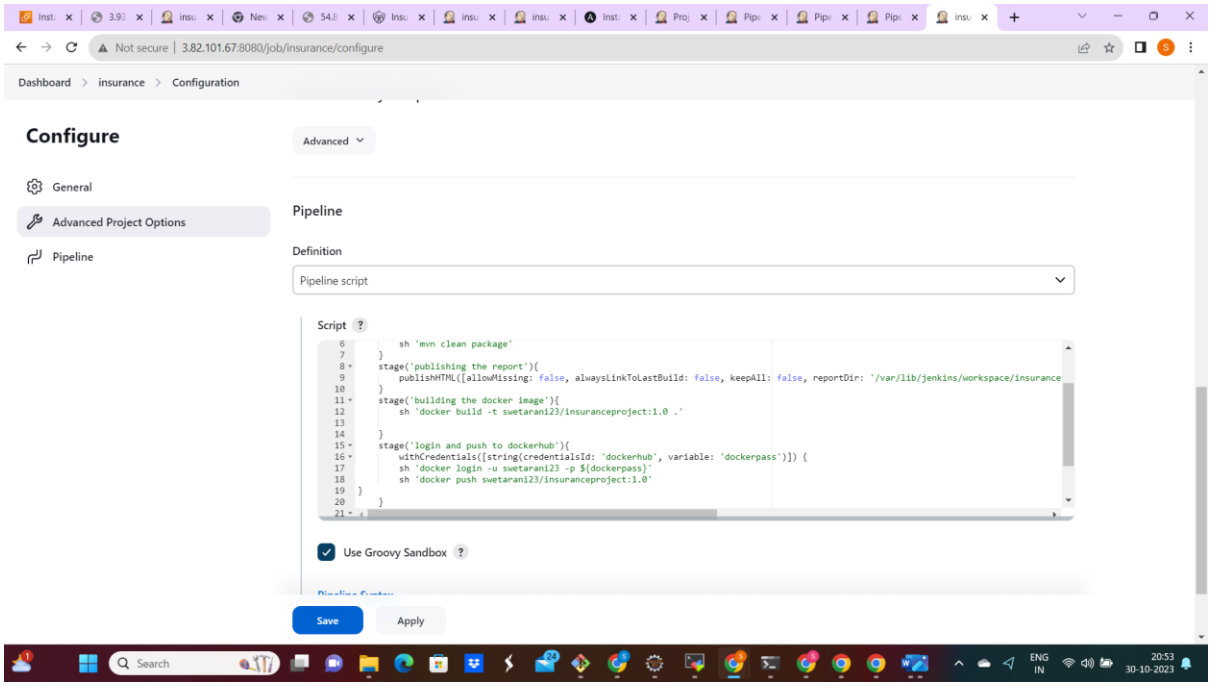


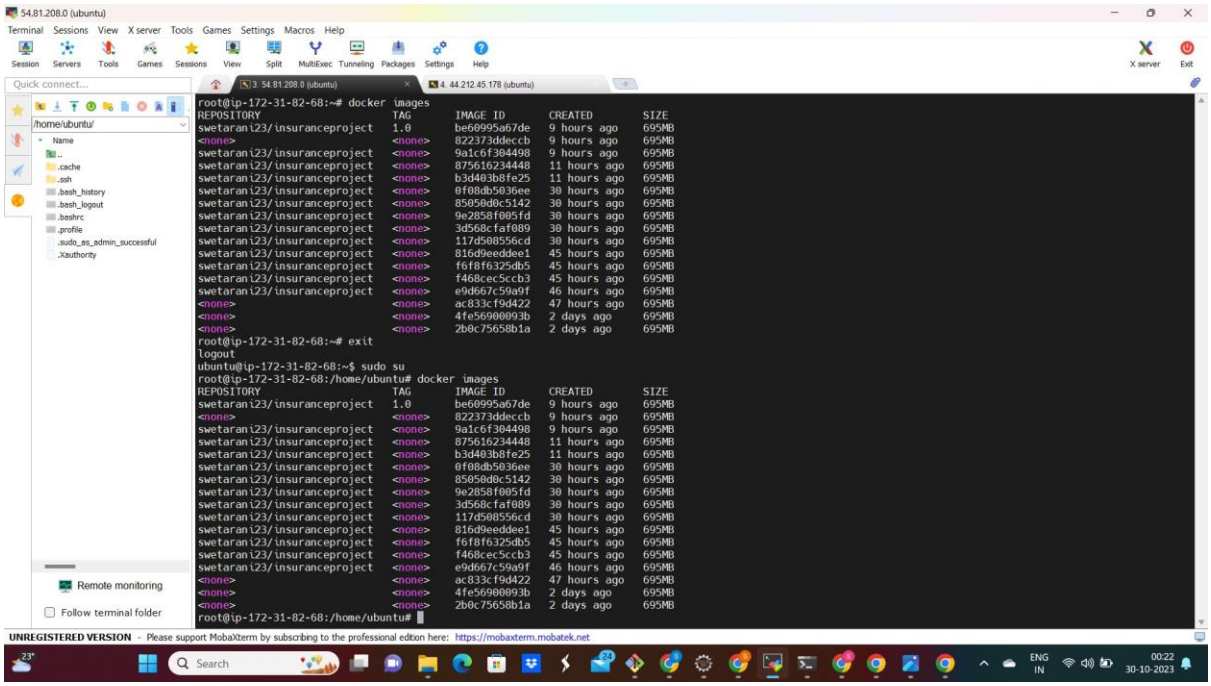
Docker - For deploying containerized applications

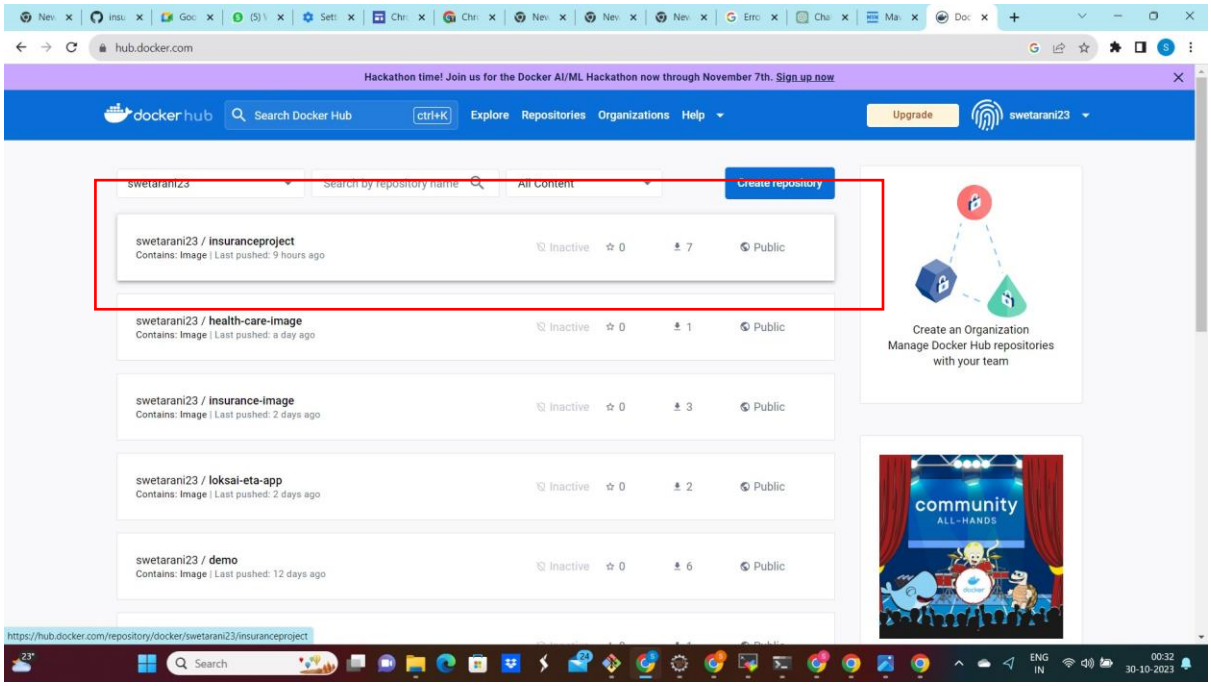
Create Docker Hub account. Create docker hub account token. Add docker hub account details and token

4. Stage 4: Build docker image, login and publish image to Docker Hub.




Not secure | 3.82.101.67:8080/job/insurance/configure
Dashboard > insurance > Configuration
Configure
General
Advanced Project Options
Pipeline
Advanced
Pipeline
Definition
Pipeline script
Script
sh 'mvn clean package'
}
stage('publishing the report'){
publishHTML([allowMissing: false, alwaysLinkToLastBuild: false, keepAll: false, reportDir: '/var/lib/jenkins/workspace/insurance
}
stage('building the docker image'){
sh 'docker build -t swetarani23/insuranceproject:1.0 .'
}
stage('login and push to dockerhub'){
withCredentials([string(credentialsId: 'dockerhub', variable: 'dockerpass')]) {
sh 'docker login -u swetarani23 -p ${dockerpass}'
sh 'docker push swetarani23/insuranceproject:1.0'
}
}
Use Groovy Sandbox
Save
Apply

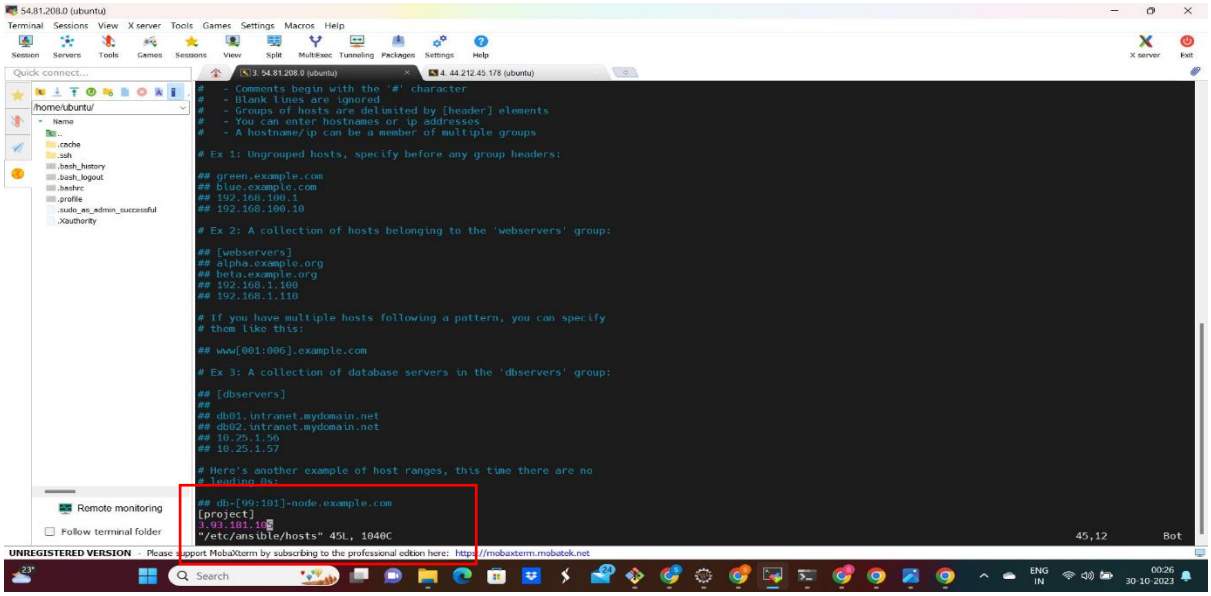

54.81.208.0 (ubuntu)
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help
X server Exit
Quick connect...
/home/ubuntu/
Name
.cache
.ssh
.bash_history
.bash_logout
.bashrc
.profile
.sudo_as_admin_successful
.Xauthority
Remote monitoring
Follow terminal folder
root@ip-172-31-82-68:~# docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
swetarani23/insuranceproject 1.0 be60995a67de 9 hours ago 695MB
<none> <none> 822373ddeccb 9 hours ago 695MB
swetarani23/insuranceproject <none> 9a1c6f304498 9 hours ago 695MB
swetarani23/insuranceproject <none> 875616234448 11 hours ago 695MB
swetarani23/insuranceproject <none> b3d403b8fe25 11 hours ago 695MB
swetarani23/insuranceproject <none> 0f08db5036ee 30 hours ago 695MB
swetarani23/insuranceproject <none> 85050d0c5142 30 hours ago 695MB
swetarani23/insuranceproject <none> 9e2858f005fd 30 hours ago 695MB
swetarani23/insuranceproject <none> 3d568cfaf089 30 hours ago 695MB
swetarani23/insuranceproject <none> 117d508556cd 30 hours ago 695MB
swetarani23/insuranceproject <none> 816d9eeddee1 45 hours ago 695MB
swetarani23/insuranceproject <none> f6f8f6325db5 45 hours ago 695MB
swetarani23/insuranceproject <none> f468cec5ccb3 45 hours ago 695MB
swetarani23/insuranceproject <none> e9d667c59a9f 46 hours ago 695MB
<none> <none> ac833cf9d422 47 hours ago 695MB
<none> <none> 4fe56900093b 2 days ago 695MB
<none> <none> 2b0c75658b1a 2 days ago 695MB
root@ip-172-31-82-68:~# exit
logout
ubuntu@ip-172-31-82-68:~$ sudo su
root@ip-172-31-82-68:/home/ubuntu# docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
swetarani23/insuranceproject 1.0 be60995a67de 9 hours ago 695MB
<none> <none> 822373ddeccb 9 hours ago 695MB
swetarani23/insuranceproject <none> 9a1c6f304498 9 hours ago 695MB
swetarani23/insuranceproject <none> 875616234448 11 hours ago 695MB
swetarani23/insuranceproject <none> b3d403b8fe25 11 hours ago 695MB
swetarani23/insuranceproject <none> 0f08db5036ee 30 hours ago 695MB
swetarani23/insuranceproject <none> 85050d0c5142 30 hours ago 695MB
swetarani23/insuranceproject <none> 9e2858f005fd 30 hours ago 695MB
swetarani23/insuranceproject <none> 3d568cfaf089 30 hours ago 695MB
swetarani23/insuranceproject <none> 117d508556cd 30 hours ago 695MB
swetarani23/insuranceproject <none> 816d9eeddee1 45 hours ago 695MB
swetarani23/insuranceproject <none> f6f8f6325db5 45 hours ago 695MB
swetarani23/insuranceproject <none> f468cec5ccb3 45 hours ago 695MB
swetarani23/insuranceproject <none> e9d667c59a9f 46 hours ago 695MB
<none> <none> ac833cf9d422 47 hours ago 695MB
<none> <none> 4fe56900093b 2 days ago 695MB
<none> <none> 2b0c75658b1a 2 days ago 695MB
root@ip-172-31-82-68:/home/ubuntu#
UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: https://mobaxterm.mobatek.net

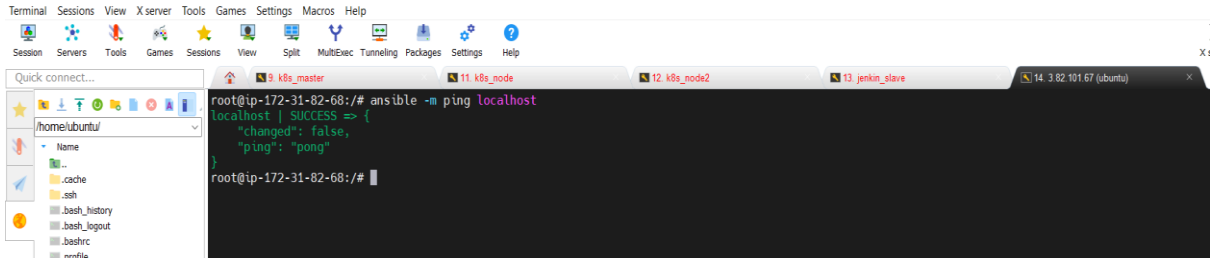


Ansible - Configuration management tools

Installed Ansible inside master Jenkins. And created another Ec2 instance as Test-server for deployment.

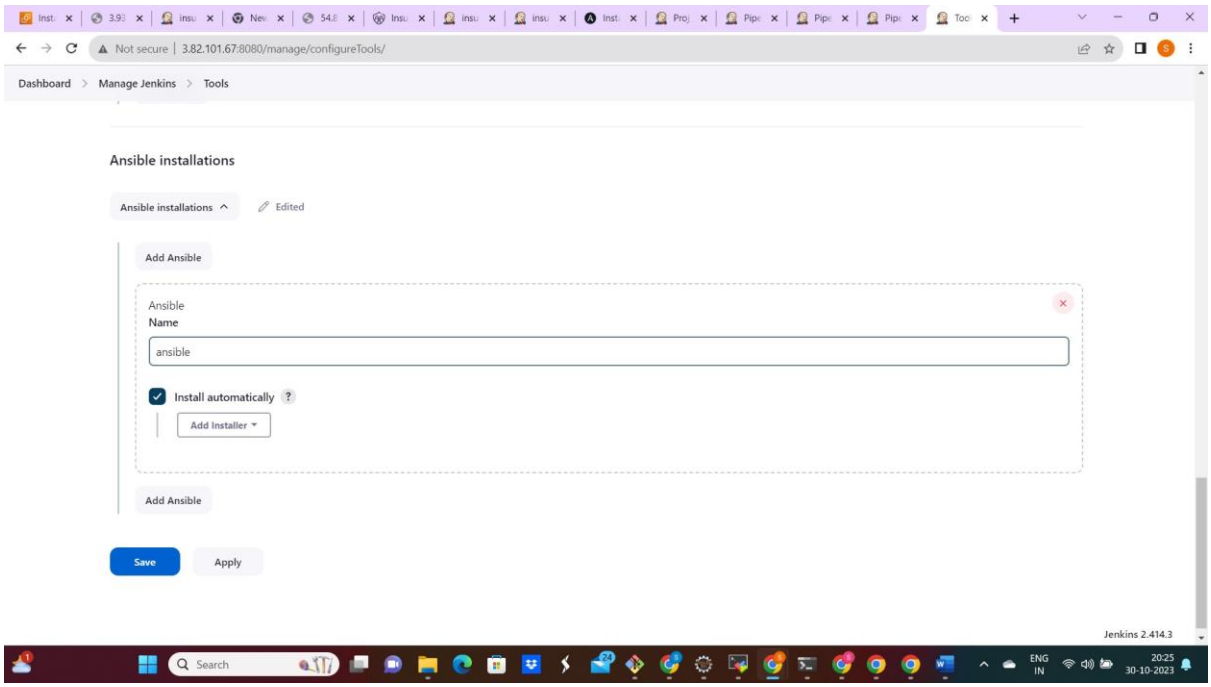
Added the public ip of test- server in /etc/Ansible/hosts in Ansible. check the connection is working by using the ping command from Ansible



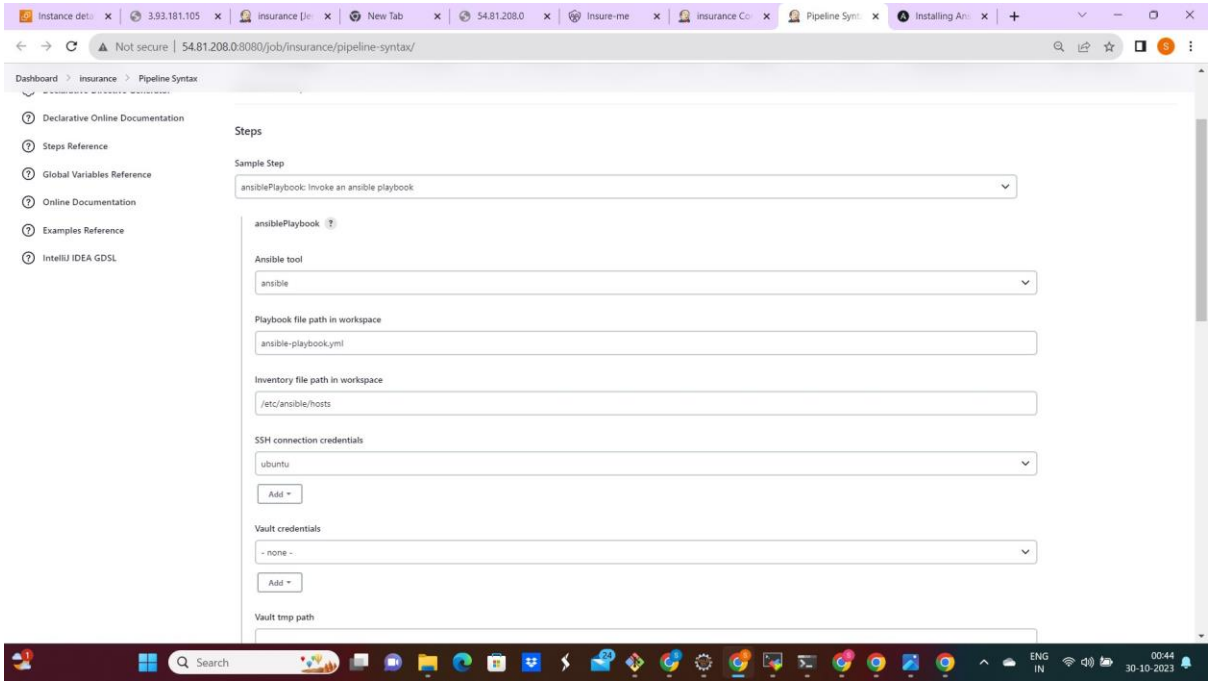


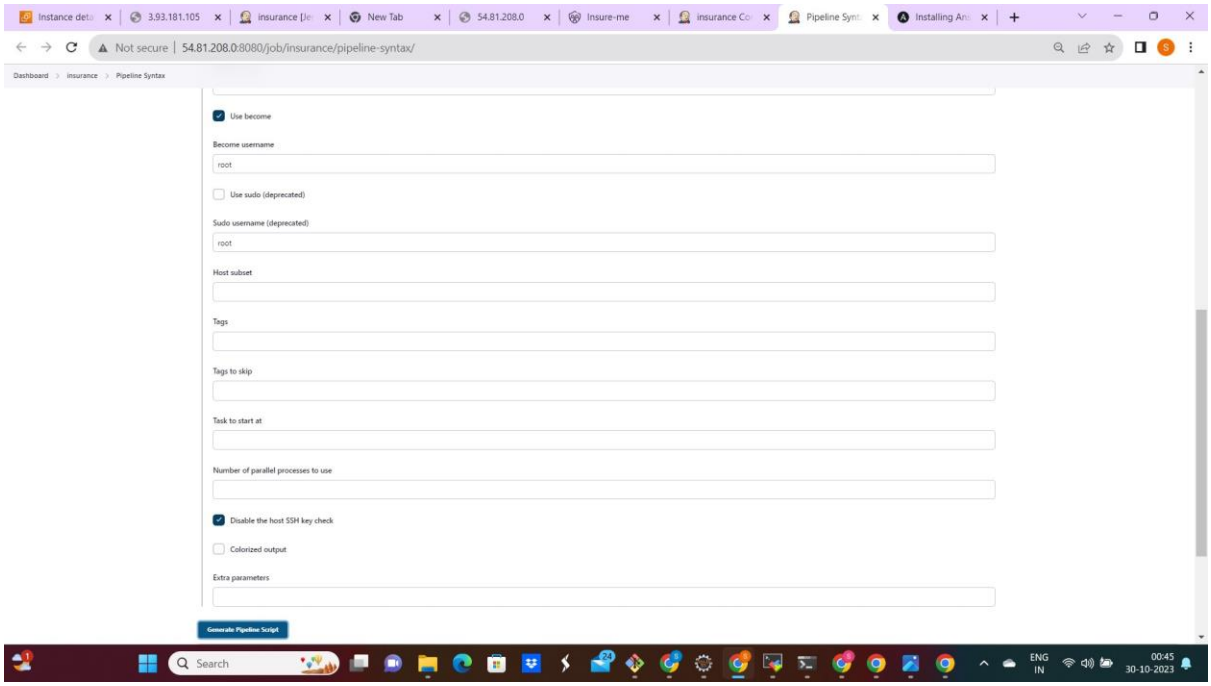
Once the connection setup is done add the Ansible plugin in Jenkins Master. Go to tools and configure

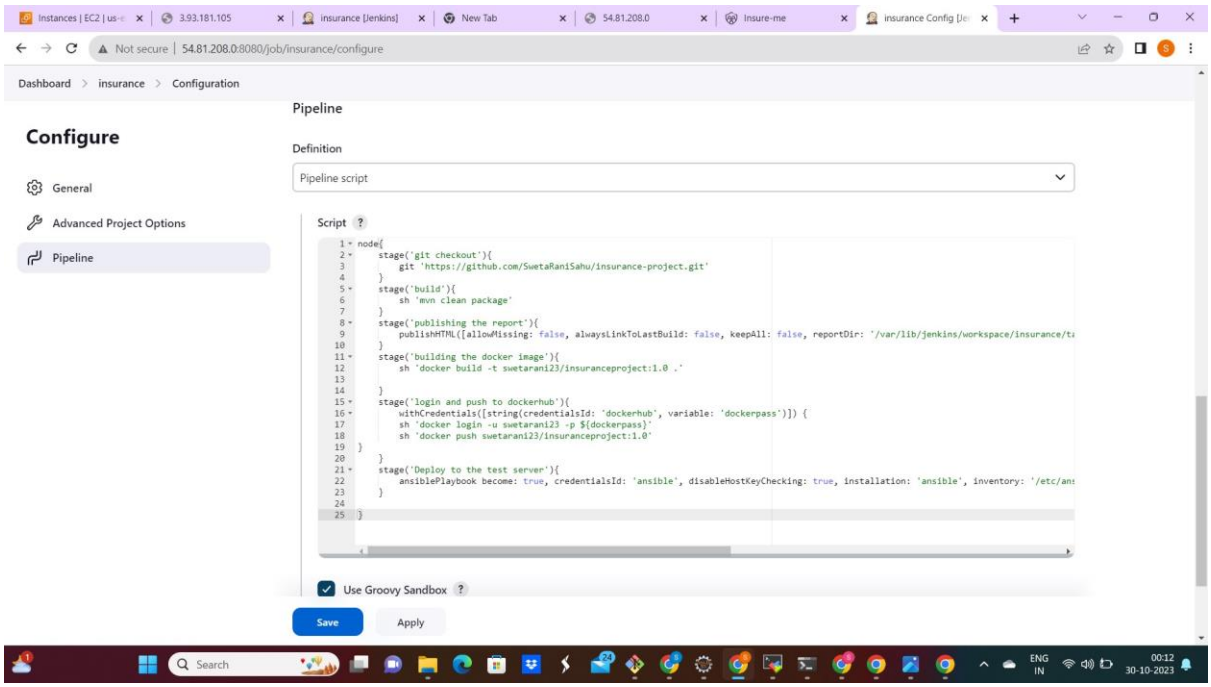
Ansible tool in Jenkins Master.



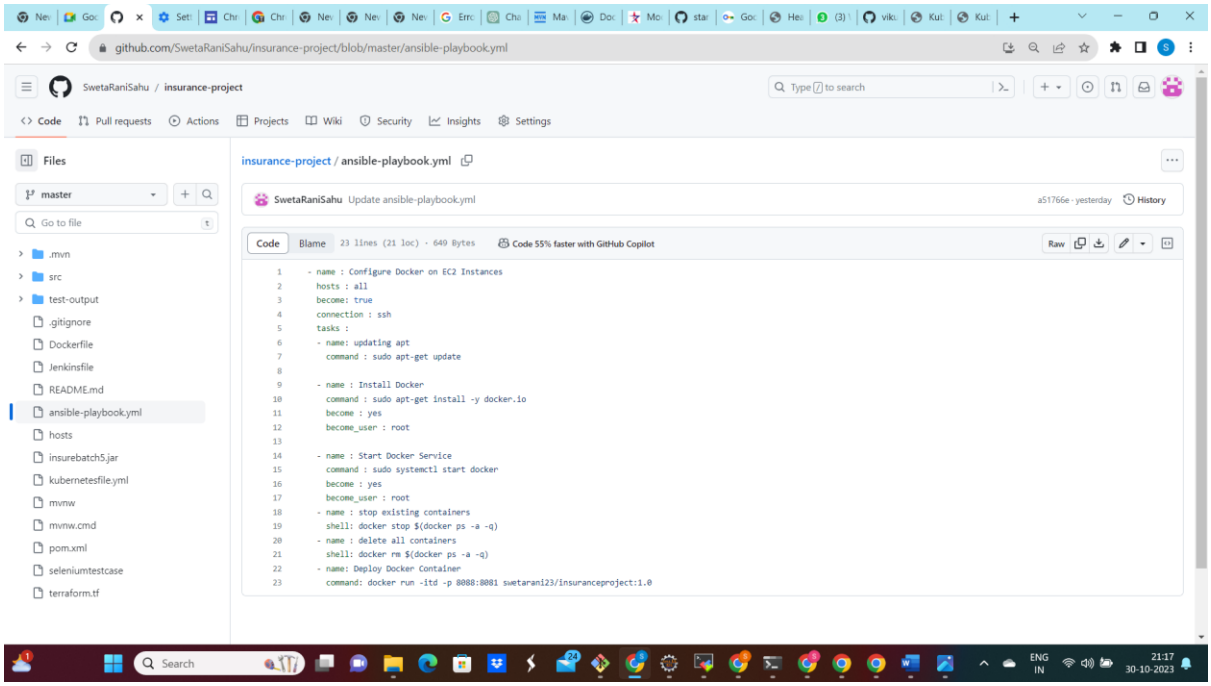
Create the syntax pipeline for Ansible.



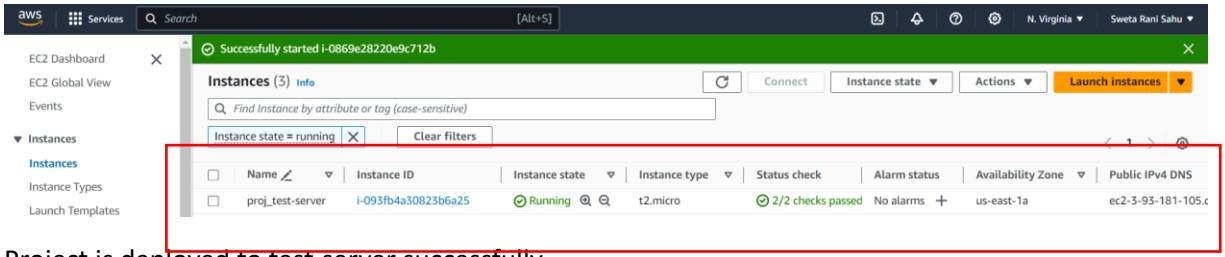

Not secure | 54.81.208.0:8080/job/insurance/pipeline-syntax/
Dashboard > insurance > Pipeline Syntax
Use become
Become username
root
Use sudo (deprecated)
Sudo username (deprecated)
root
Host subset
Tags
Tags to skip
Task to start at
Number of parallel processes to use
Disable the host SSH key check
Colorized output
Extra parameters
Generate Pipeline Script


Not secure | 54.81.208.0:8080/job/insurance/configure
Dashboard > insurance > Configuration
Configure
General
Advanced Project Options
Pipeline
Pipeline
Definition
Pipeline script
Script
node{
stage('git checkout'){
git 'https://github.com/SwetaRaniSahu/insurance-project.git'
}
stage('build'){
sh 'mvn clean package'
}
stage('publishing the report'){
publishHTML([allowMissing: false, alwaysLinkToLastBuild: false, keepAll: false, reportDir: '/var/lib/jenkins/workspace/insurance/t
}
stage('building the docker image'){
sh 'docker build -t swetarani23/insuranceproject:1.0 .'
}
stage('login and push to dockerhub'){
withCredentials([string(credentialsId: 'dockerhub', variable: 'dockerpass')]) {
sh 'docker login -u swetarani23 -p ${dockerpass}'
sh 'docker push swetarani23/insuranceproject:1.0'
}
}
stage('Deploy to the test server'){
ansiblePlaybook become: true, credentialsId: 'ansible', disableHostKeyChecking: true, installation: 'ansible', inventory: '/etc/an
}
}
Use Groovy Sandbox
Save
Apply

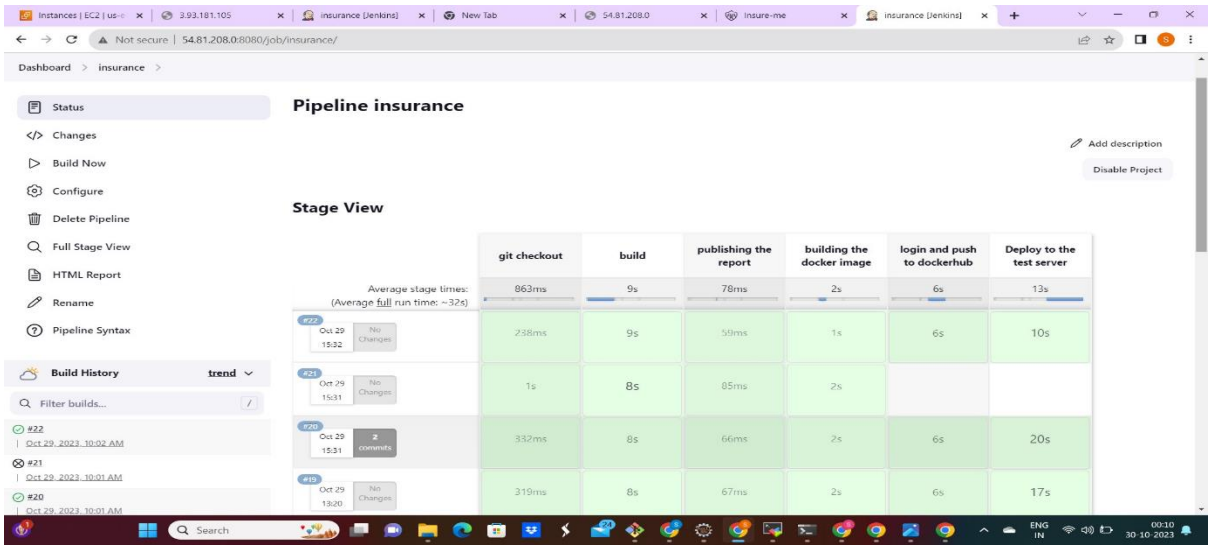
The ansible playbook file ansible-playbook.yml is: -

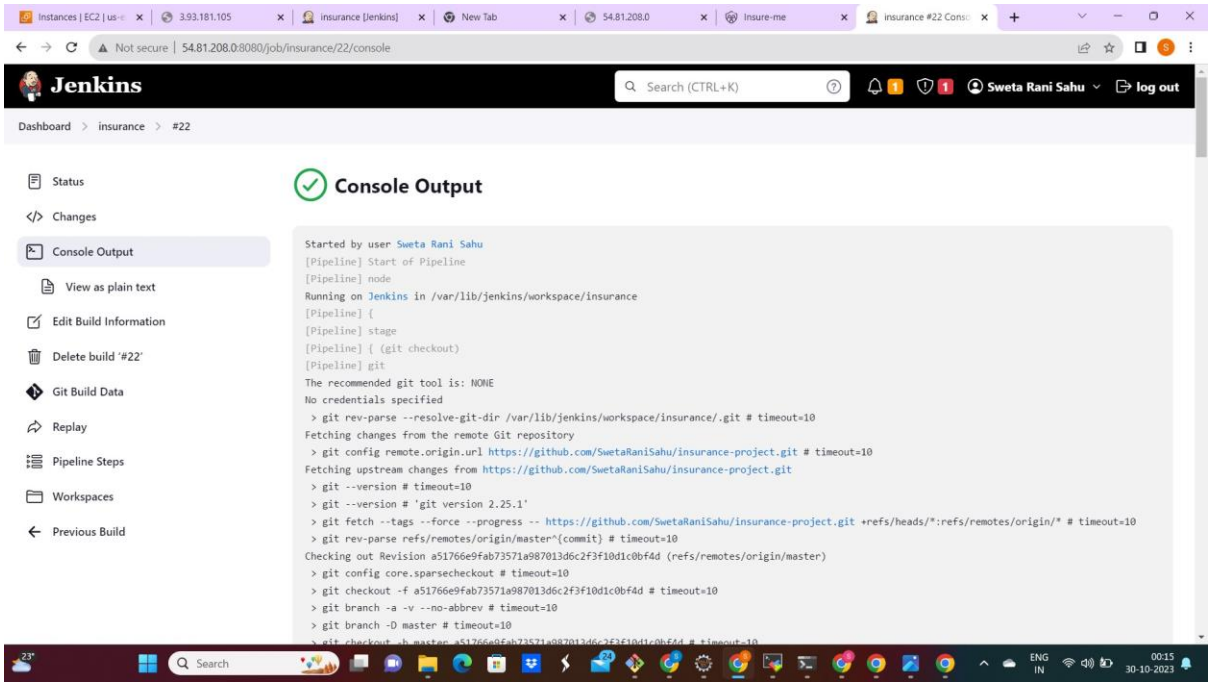


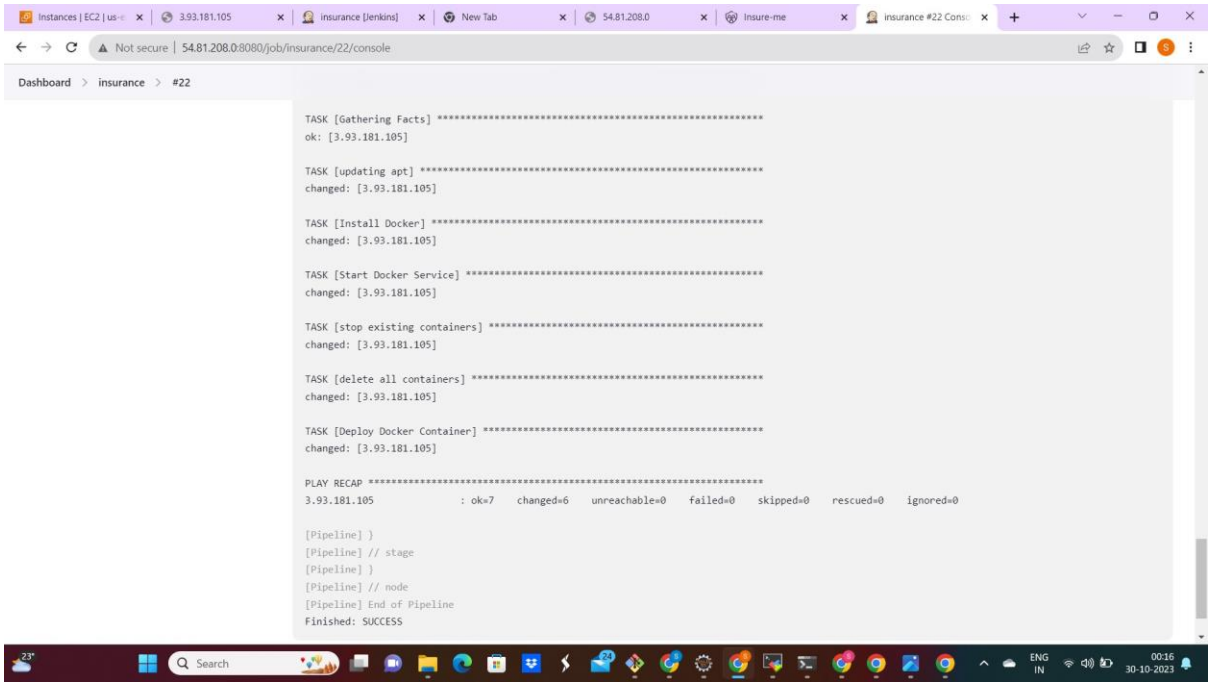
I deployed my application to this test-server.



Project is deployed to test-server successfully

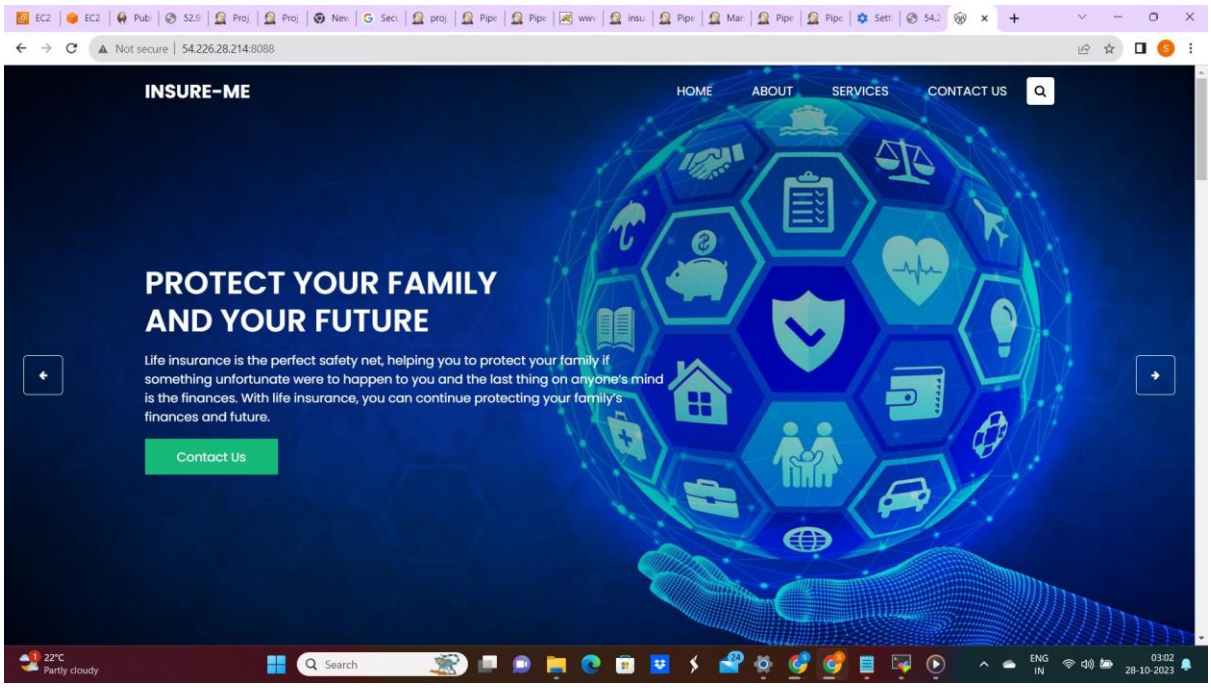


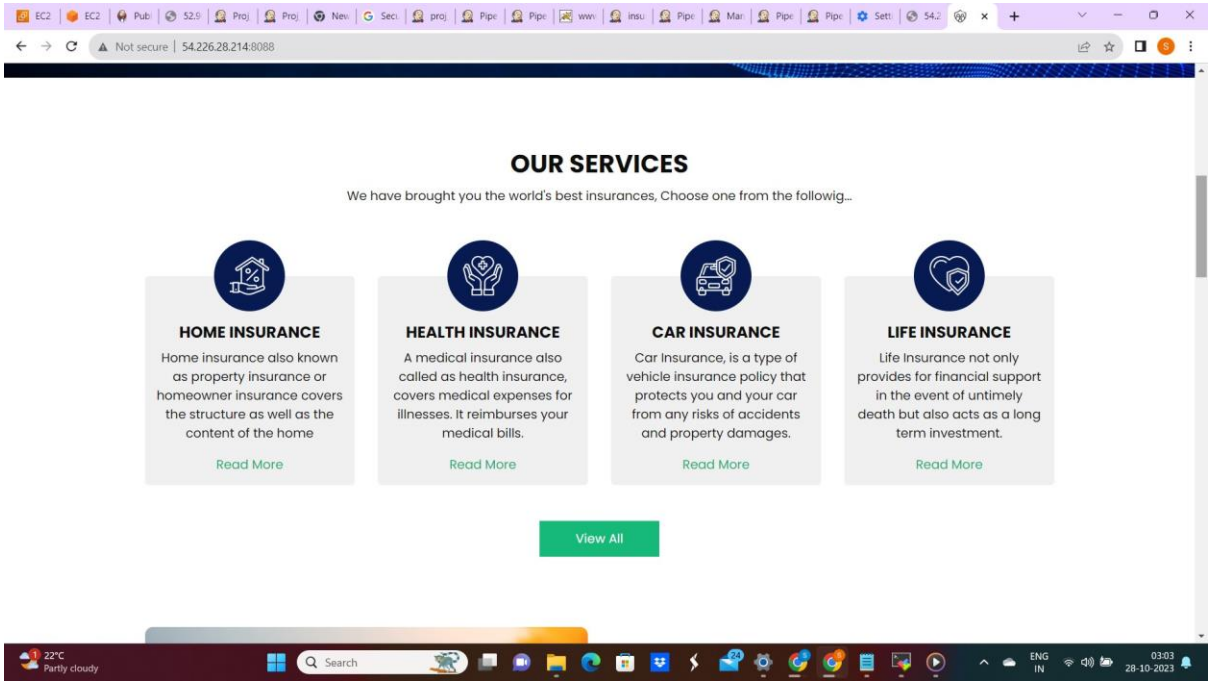

Jenkins
Search (CTRL+K)
Sweta Rani Sahu
log out
Dashboard > insurance > #22
Status
Changes
Console Output
View as plain text
Edit Build Information
Delete build '#22'
Git Build Data
Replay
Pipeline Steps
Workspaces
Previous Build
Console Output
Started by user Sweta Rani Sahu
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/lib/jenkins/workspace/insurance
[Pipeline] {
[Pipeline] stage
[Pipeline] { (git checkout)
[Pipeline] git
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/insurance/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/SwetaRaniSahu/insurance-project.git # timeout=10
Fetching upstream changes from https://github.com/SwetaRaniSahu/insurance-project.git
> git --version # timeout=10
> git --version # 'git version 2.25.1'
> git fetch --tags --force --progress -- https://github.com/SwetaRaniSahu/insurance-project.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/master^{commit} # timeout=10
Checking out Revision a51766e9fab73571a987013d6c2f3f10d1c0bf4d (refs/remotes/origin/master)
> git config core.sparsecheckout # timeout=10
> git checkout -f a51766e9fab73571a987013d6c2f3f10d1c0bf4d # timeout=10
> git branch -a -v --no-abbrev # timeout=10
> git branch -D master # timeout=10

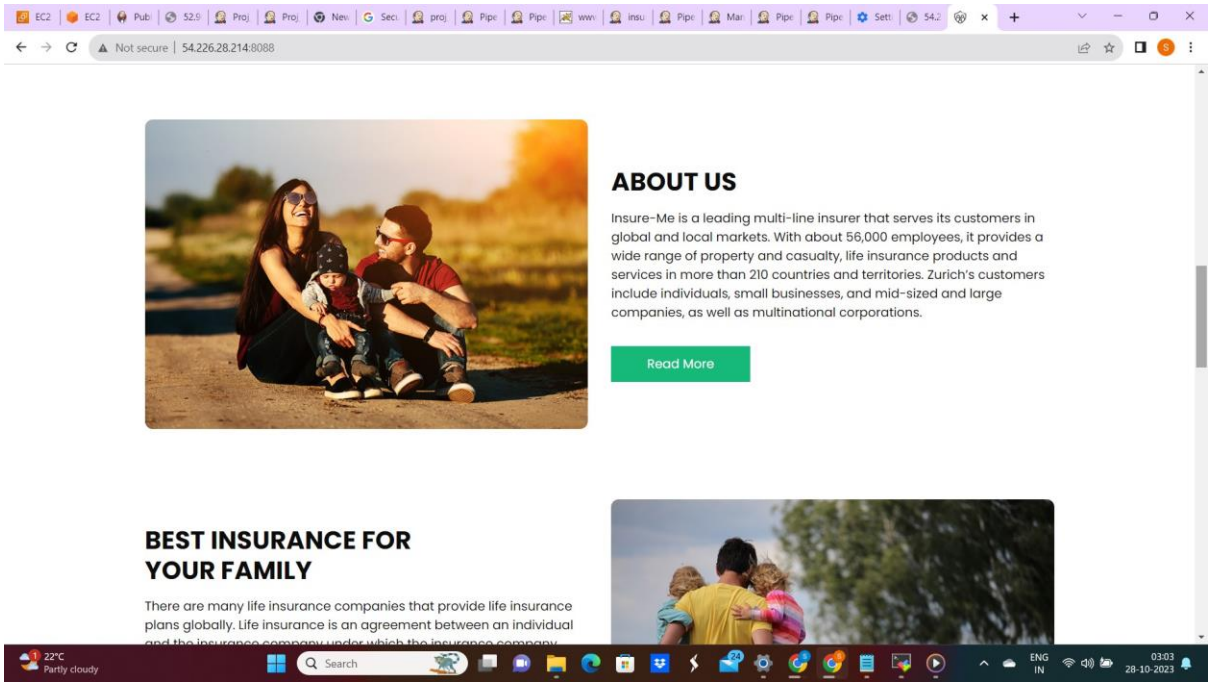

Dashboard > insurance > #22
TASK [Gathering Facts] ********
ok: [3.93.181.105]
TASK [updating apt] ********
changed: [3.93.181.105]
TASK [Install Docker] ********
changed: [3.93.181.105]
TASK [Start Docker Service] ********
changed: [3.93.181.105]
TASK [stop existing containers] ********
changed: [3.93.181.105]
TASK [delete all containers] ********
changed: [3.93.181.105]
TASK [Deploy Docker Container] ********
changed: [3.93.181.105]
PLAY RECAP ********
3.93.181.105 : ok=7 changed=6 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS

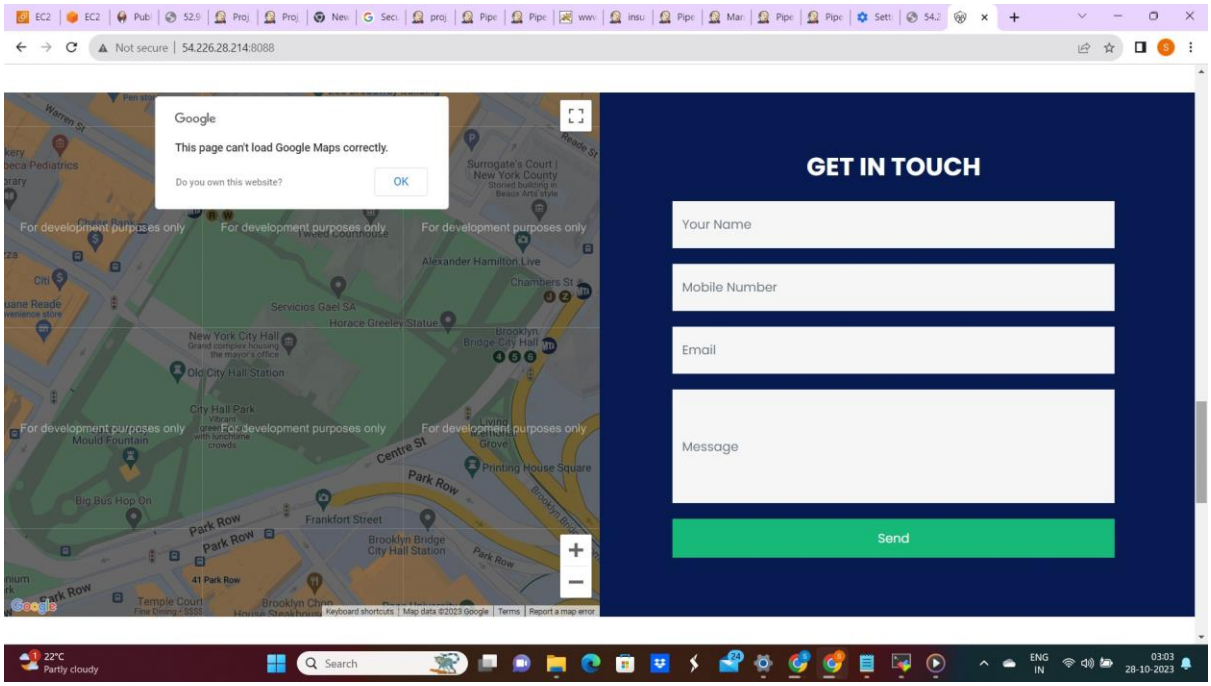
Insurance project web page is:-

To run this page I used public ip of test-server:port no

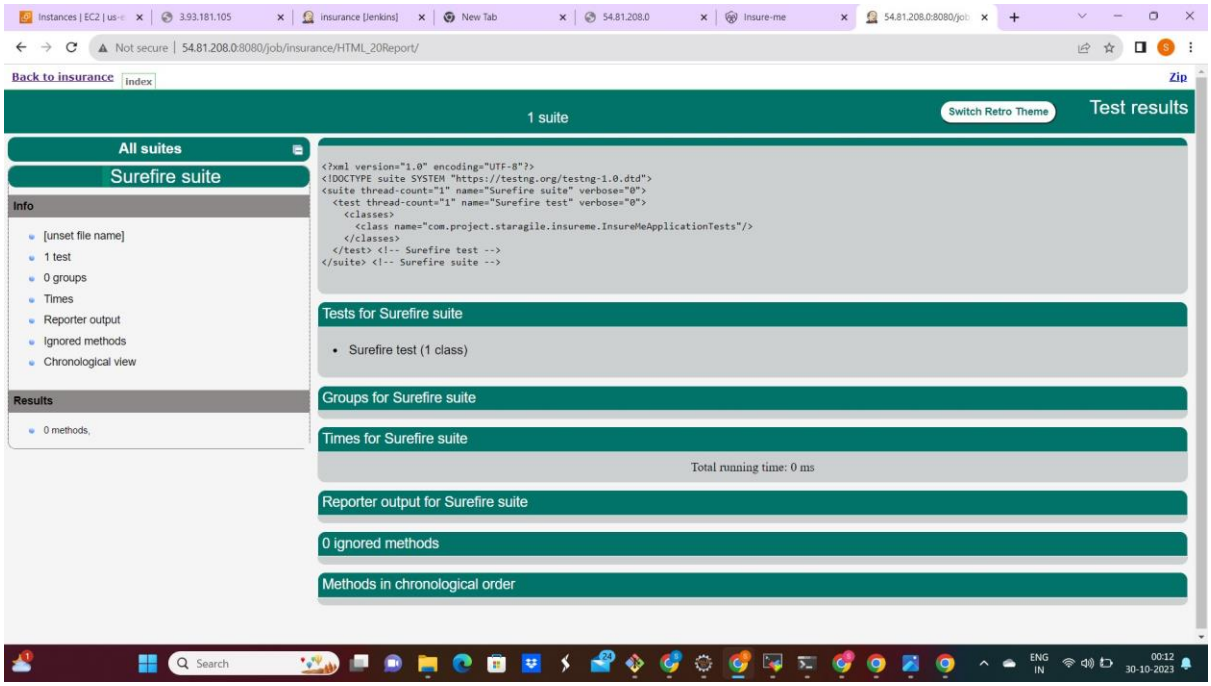





Not secure | 54.226.28.214:8088
ABOUT US
Insure-Me is a leading multi-line insurer that serves its customers in global and local markets. With about 56,000 employees, it provides a wide range of property and casualty, life insurance products and services in more than 210 countries and territories. Zurich's customers include individuals, small businesses, and mid-sized and large companies, as well as multinational corporations.
Read More
BEST INSURANCE FOR YOUR FAMILY
There are many life insurance companies that provide life insurance plans globally. Life insurance is an agreement between an individual
22°C
Partly cloudy
Search
ENG
IN
03:03
28-10-2023

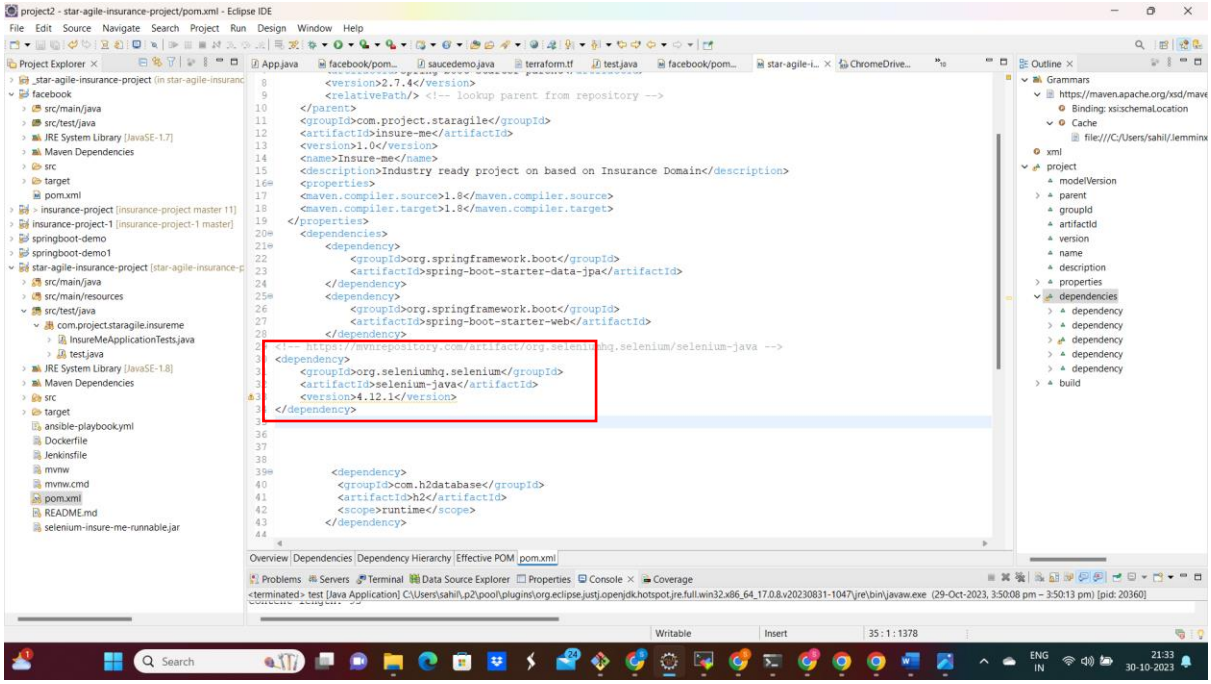

Not secure | 54.226.28.214:8088
Google
This page can't load Google Maps correctly.
Do you own this website?
OK
For development purposes only
Alexander Hamilton Live
Servicios Gael SA
Horace Greeley Statue
New York City Hall
Old City Hall Station
City Hall Park
Mould Fountain
Centre St
Printing House Square
Park Row
Big Bus Hop On
Frankfort Street
Brooklyn Bridge City Hall Station
41 Park Row
Temple Court
GET IN TOUCH
Your Name
Mobile Number
Email
Message
Send
22°C
Partly cloudy
Search
ENG
IN
03:03
28-10-2023

Generate HTML Report using TestNg

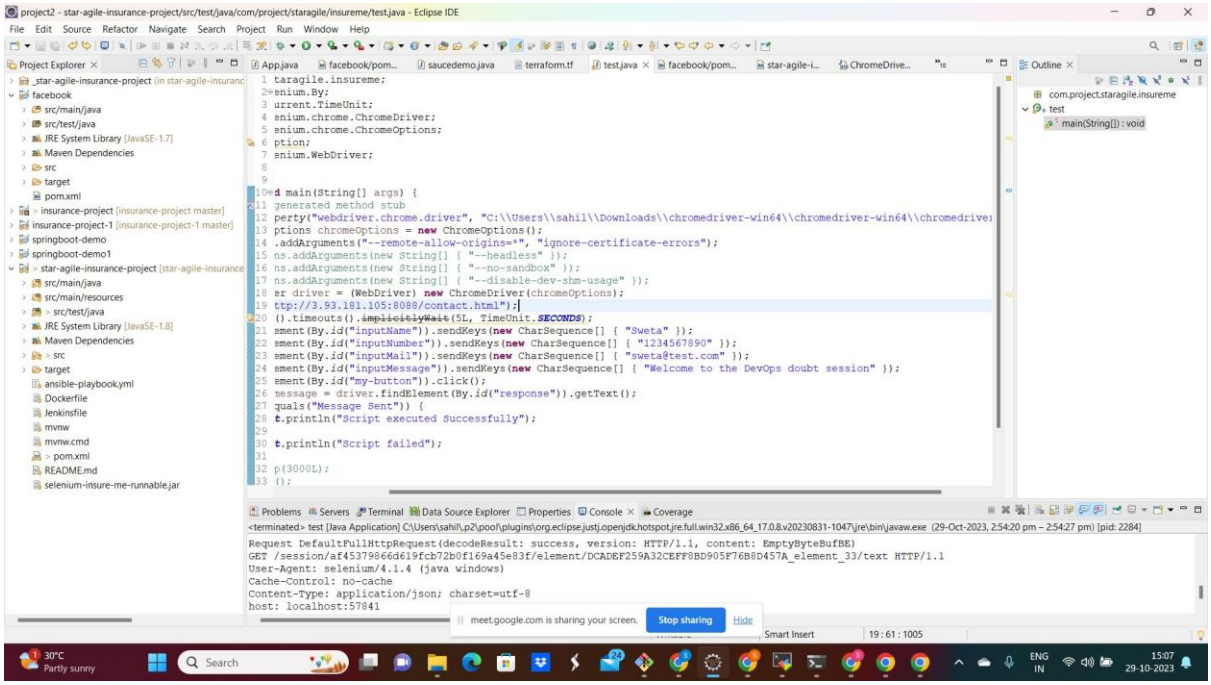


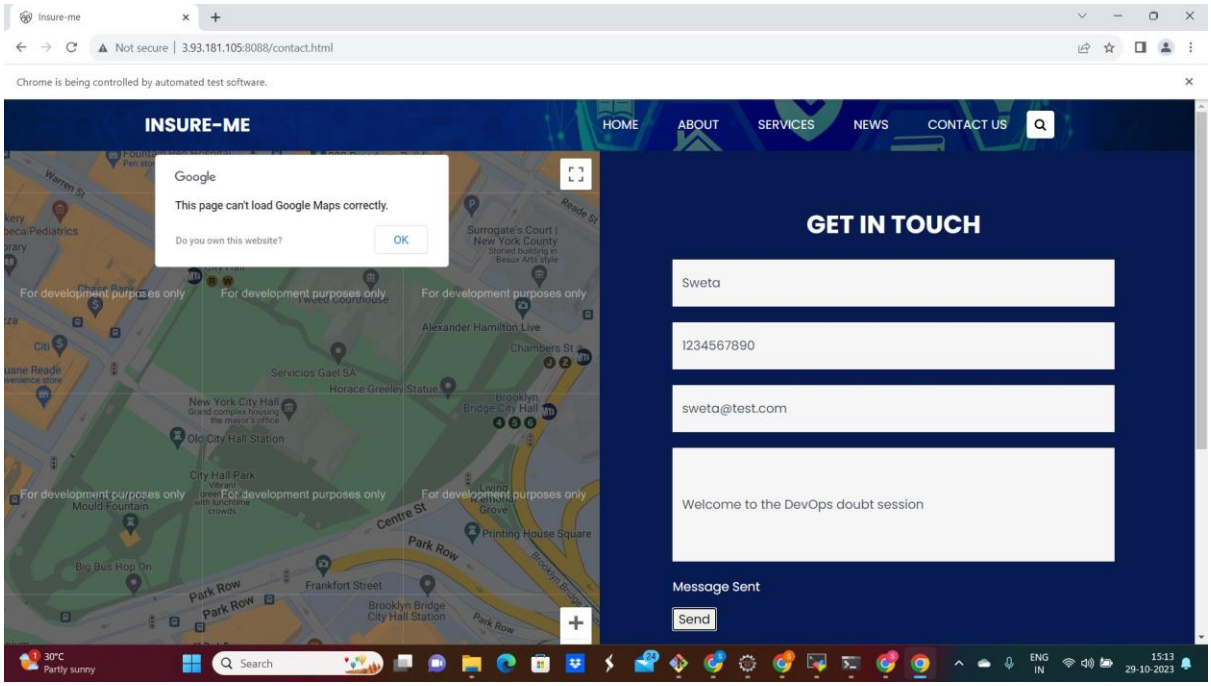
Selenium - For automating tests on the deployed web application

For this I imported this project on eclipse and added the dependencies on pom.xml file

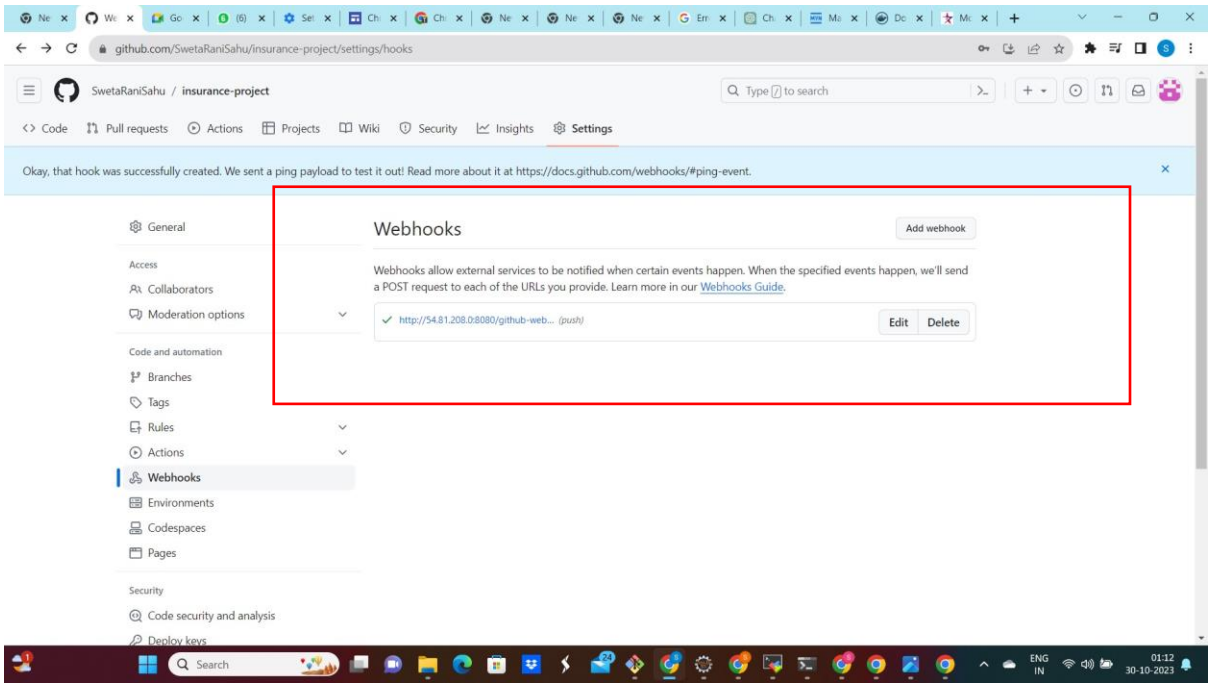


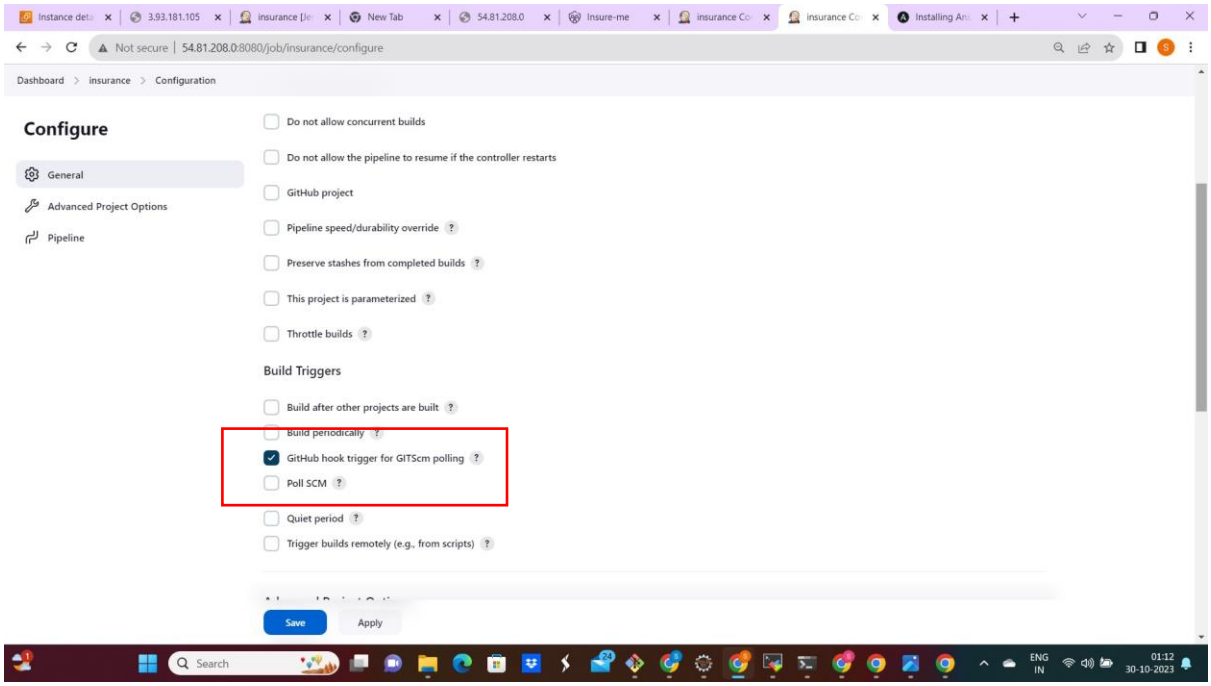
Created test.java application and added all the details to it



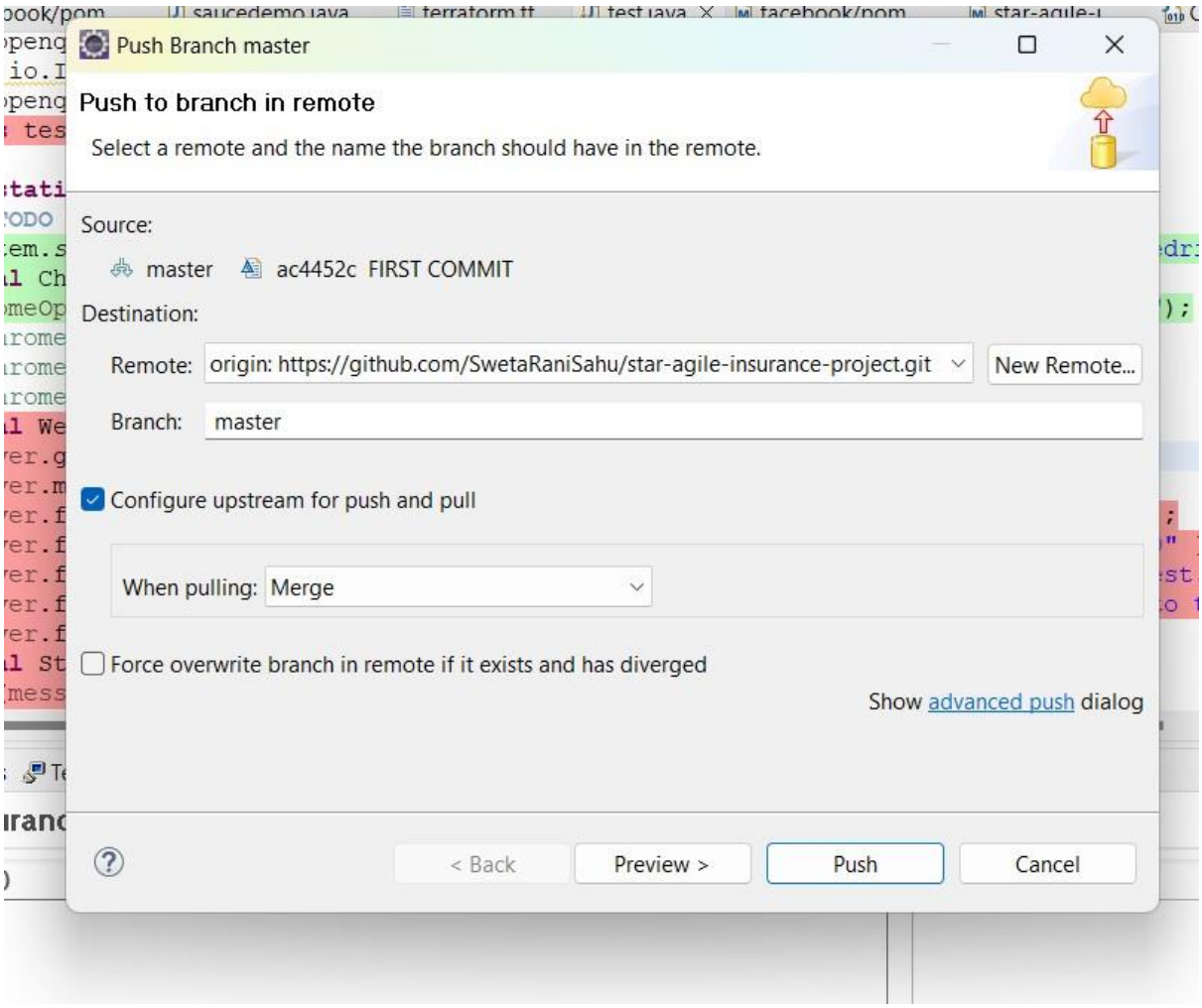


Created Git webhook and attached to the Jenkins master webhook for continuous integration and deployement.





. Push your code into your GitHub Repository.


Push Branch master
Push to branch in remote
Select a remote and the name the branch should have in the remote.
Source:
master
ac4452c FIRST COMMIT
Destination:
Remote:
origin: https://github.com/SwetaRaniSahu/star-agile-insurance-project.git
New Remote...
Branch:
master
Configure upstream for push and pull
When pulling:
Merge
Force overwrite branch in remote if it exists and has diverged
Show advanced push dialog
< Back
Preview >
Push
Cancel