

Certification Project – Insure Me

Insurance Domain

- Using Git - For version control for tracking changes in the code files and uploading the code to git hub repo.

```

LENOVO@DESKTOP-5ALAOUN MINGW64 ~/Documents
$ git clone https://github.com/StarAgileDevOpsTraining/star-agile-insurance-project.git
Cloning into 'star-agile-insurance-project'...
remote: Enumerating objects: 160, done.
remote: Counting objects: 100% (160/160), done.
remote: Compressing objects: 100% (89/89), done.
remote: Total 160 (delta 48), reused 155 (delta 48), pack-reused 0
Receiving objects: 100% (160/160), 19.82 MiB | 1.12 MiB/s, done.
Resolving deltas: 100% (48/48), done.

LENOVO@DESKTOP-5ALAOUN MINGW64 ~/Documents
$ ls
AD_Port                                'New folder'/'
'Custom Office Templates'/'           'Scanned Documents'/'
Exprienc.pdf                          'WhatsApp Image 2023-09-16 at 15.47.20.jpg'
Fax/                                  'WhatsApp Image 2023-09-16 at 15.48.15.jpg'
IMG_20230824_165931.jpg               'WhatsApp Image 2023-09-16 at 15.49.05.jpg'
'Kubernetes Assignment -1 Arman Baig.docx'
'Kubernetes Assignment -1 Chinmay G Bhat.docx'
'Kubernetes Assignment -2 Arman baig.pdf'
'Kubernetes Assignment -2 Chinmay G Bhat.docx'
'desktop.ini'
'income caste.pdf'
'insureproject/'
'kpsc form.pdf'
'sslc marks card.pdf'
'sslc marks card_1.jpg'
'star-agile-insurance-project/'
'My Music'@
'My Pictures'@
'My Videos'@

LENOVO@DESKTOP-5ALAOUN MINGW64 ~/Documents
$ cd insureproject

```

- Initializing the git repository in the local machine .

```

LENOVO@DESKTOP-5ALAOUN MINGW64 ~/Documents/insureproject
$ ls -al
total 18
drwxr-xr-x 1 LENOVO 197121    0 Oct  4 18:48 ./
drwxr-xr-x 1 LENOVO 197121    0 Oct  4 18:47 ../
-rw-r--r-- 1 LENOVO 197121  439 Oct  4 18:46 .gitignore
drwxr-xr-x 1 LENOVO 197121    0 Oct  4 18:48 .mvn/
-rw-r--r-- 1 LENOVO 197121  361 Oct  4 18:46 README.md
-rw-r--r-- 1 LENOVO 197121 1809 Oct  4 18:46 pom.xml
drwxr-xr-x 1 LENOVO 197121    0 Oct  4 18:48 src/

LENOVO@DESKTOP-5ALAOUN MINGW64 ~/Documents/insureproject
$ ls
README.md  mvnw*  mvnw.cmd  pom.xml  src/

LENOVO@DESKTOP-5ALAOUN MINGW64 ~/Documents/insureproject
$ git init
Initialized empty Git repository in C:/Users/LENOVO/Documents/insureproject/.git/

```

Performing git add to send the code to staging area.

```

MINGW64/c/Users/LENOVO/Documents/insureproject
LENOVO@DESKTOP-5ALAOUN MINGW64 ~/Documents/insureproject (master)
$ git add .

LENOVO@DESKTOP-5ALAOUN MINGW64 ~/Documents/insureproject (master)
$ git commit -m "committed code"
[master (root-commit) 29b85c5] committed code
45 files changed, 18725 insertions(+)
create mode 100644 .gitignore
create mode 100644 .mvn/wrapper/maven-wrapper.jar
create mode 100644 .mvn/wrapper/maven-wrapper.properties
create mode 100644 README.md
create mode 100644 mvnw
create mode 100644 mvnw.cmd
create mode 100644 pom.xml
create mode 100644 src/main/java/com/project/staragile/insureme/InsureMeApplication.java
create mode 100644 src/main/java/com/project/staragile/insureme/Policy.java
create mode 100644 src/main/java/com/project/staragile/insureme/PolicyController.java
create mode 100644 src/main/java/com/project/staragile/insureme/PolicyRepository.java
create mode 100644 src/main/java/com/project/staragile/insureme/PolicyService.java
create mode 100644 src/main/resources/application.properties
create mode 100644 src/main/resources/static/about.html
create mode 100644 src/main/resources/static/contact.html
create mode 100644 src/main/resources/static/css/bootstrap.css
create mode 100644 src/main/resources/static/css/font-awesome.min.css
create mode 100644 src/main/resources/static/css/responsive.css
create mode 100644 src/main/resources/static/css/style.css
create mode 100644 src/main/resources/static/css/style.css.map
create mode 100644 src/main/resources/static/css/style.scss
create mode 100644 src/main/resources/static/fonts/fontawesome-webfont.ttf
create mode 100644 src/main/resources/static/fonts/fontawesome-webfont.woff
create mode 100644 src/main/resources/static/fonts/fontawesome-webfont.woff2
create mode 100644 src/main/resources/static/images/about-bg.jpg
create mode 100644 src/main/resources/static/images/about-img.jpg
create mode 100644 src/main/resources/static/images/about-img2.jpg
create mode 100644 src/main/resources/static/images/b1.jpg
create mode 100644 src/main/resources/static/images/b2.jpg
create mode 100644 src/main/resources/static/images/b3.jpg

```

Pushing code from local to git hub repository.

```

LENOVO@DESKTOP-5ALAOUN MINGW64 ~/Documents/insureproject (master)
$ git remote add origin https://github.com/arman-cpu/insureproject.git

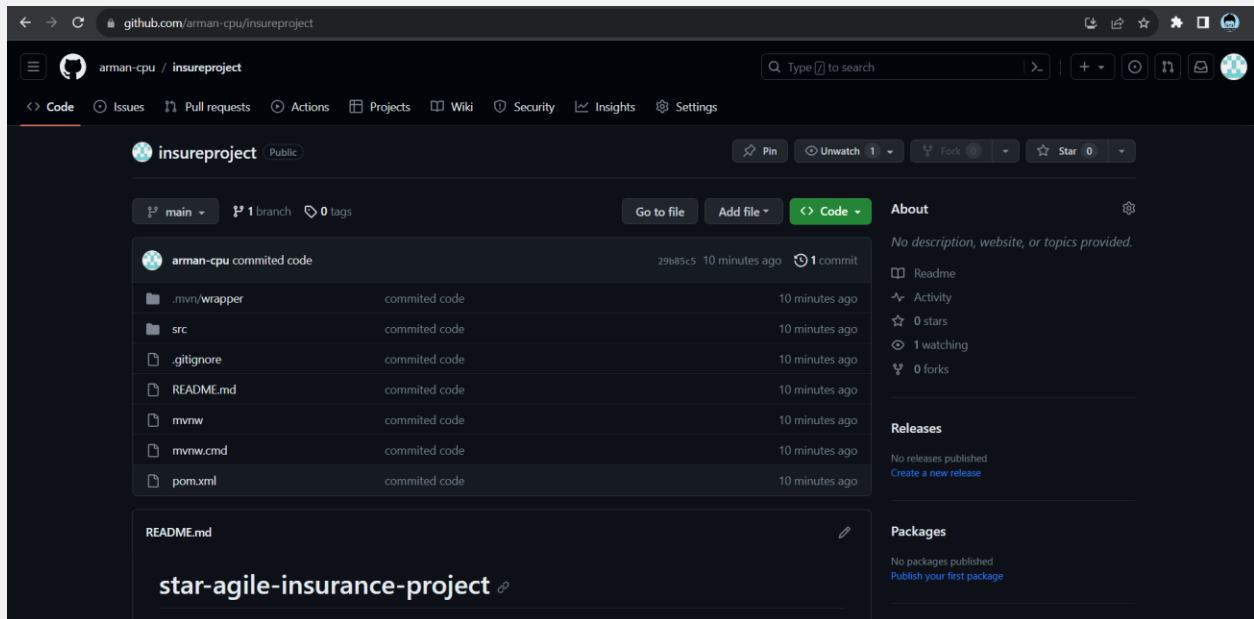
LENOVO@DESKTOP-5ALAOUN MINGW64 ~/Documents/insureproject (master)
$ git branch -M main

LENOVO@DESKTOP-5ALAOUN MINGW64 ~/Documents/insureproject (main)
$ git push -u origin main
Enumerating objects: 69, done.
Counting objects: 100% (69/69), done.
Delta compression using up to 4 threads
Compressing objects: 100% (57/57), done.
Writing objects: 100% (69/69), 1.43 MiB | 510.00 KiB/s, done.
Total 69 (delta 3), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (3/3), done.
To https://github.com/arman-cpu/insureproject.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.

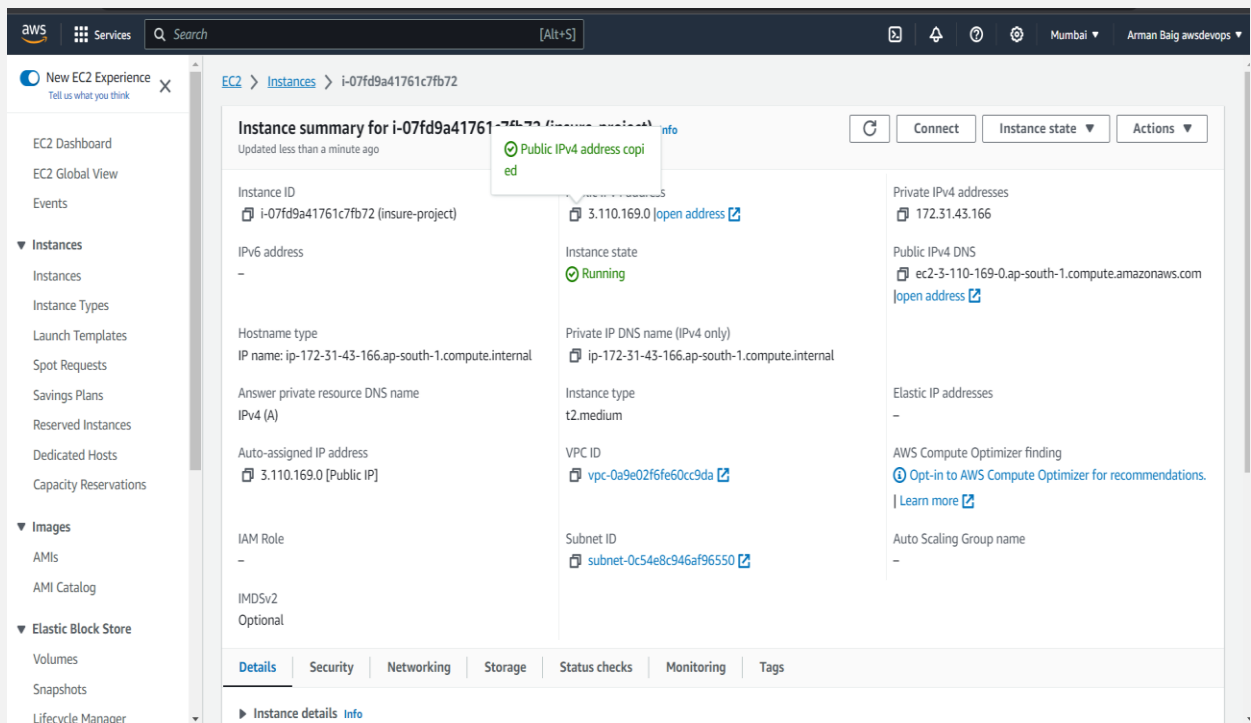
LENOVO@DESKTOP-5ALAOUN MINGW64 ~/Documents/insureproject (main)
$ |

```

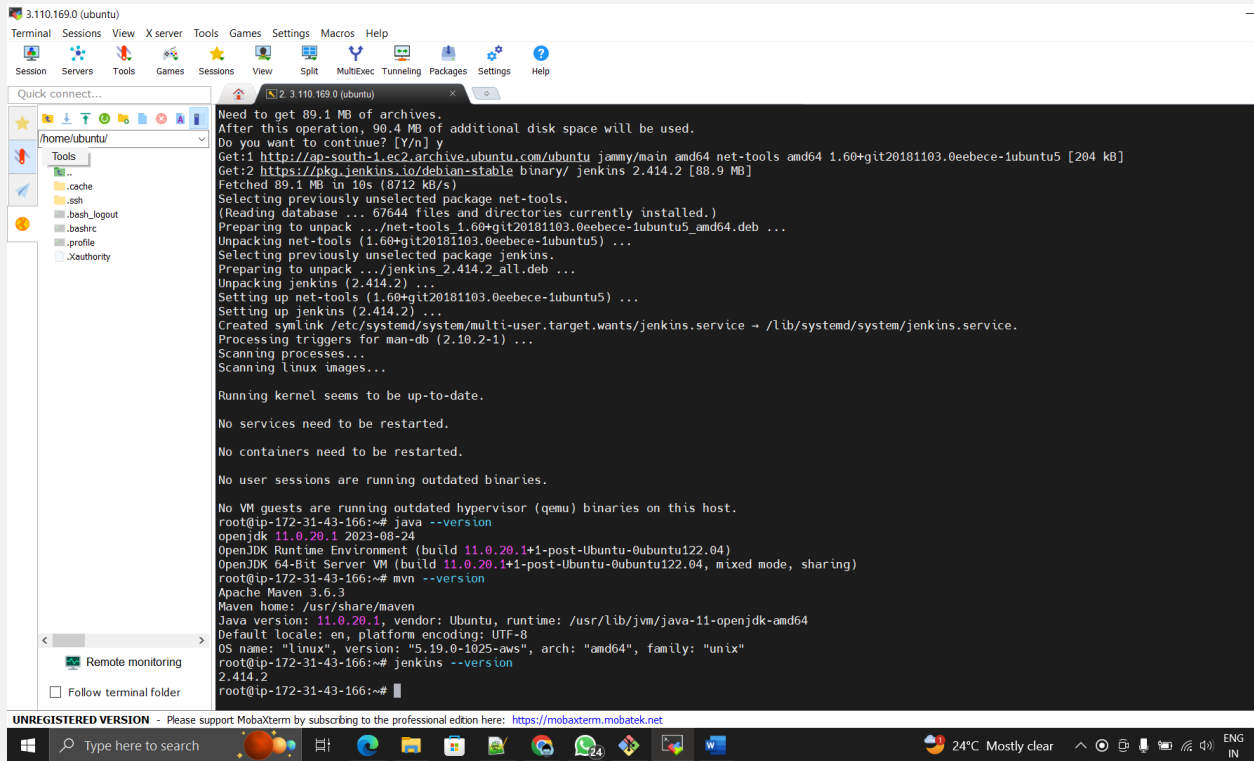
Verifying the source code got pushed to git hub.



Creating a Ec2 instance of type t2-medium of 25gb



Installing JAVA , MAVEN and jenkins in ec2 instance .



```

3.110.169.0 (ubuntu)
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help
Quick connect...
/home/ubuntu/
Tools
.cache
.csh
.bash_logout
.bashrc
.profile
.xauthority
Remote monitoring
Follow terminal folder

Need to get 89.1 MB of archives.
After this operation, 90.4 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 net-tools amd64 1.60+git20181103.0eebece-1ubuntu5 [204 kB]
Get:2 https://pkg.jenkins.io/debian-stable binary/ jenkins 2.414.2 [88.9 MB]
Fetched 89.1 MB in 10s (8712 kB/s)
Selecting previously unselected package net-tools.
(Reading database ... 67644 files and directories currently installed.)
Preparing to unpack .../net-tools_1.60+git20181103.0eebece-1ubuntu5_amd64.deb ...
Unpacking net-tools (1.60+git20181103.0eebece-1ubuntu5) ...
Selecting previously unselected package jenkins.
Preparing to unpack .../jenkins_2.414.2_all.deb ...
Unpacking jenkins (2.414.2) ...
Setting up net-tools (1.60+git20181103.0eebece-1ubuntu5) ...
Setting up jenkins (2.414.2) ...
Created symlink /etc/systemd/system/multi-user.target.wants/jenkins.service → /lib/systemd/system/jenkins.service.
Processing triggers for man-db (2.10.2-1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

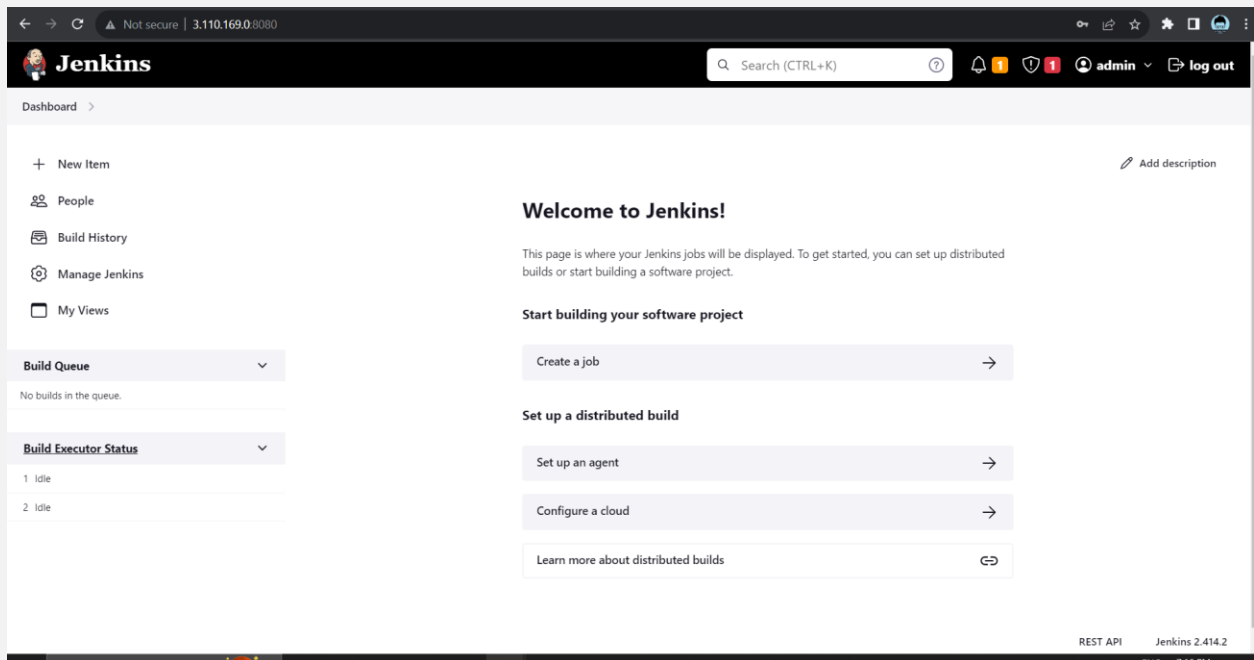
No services need to be restarted.

No containers need to be restarted.

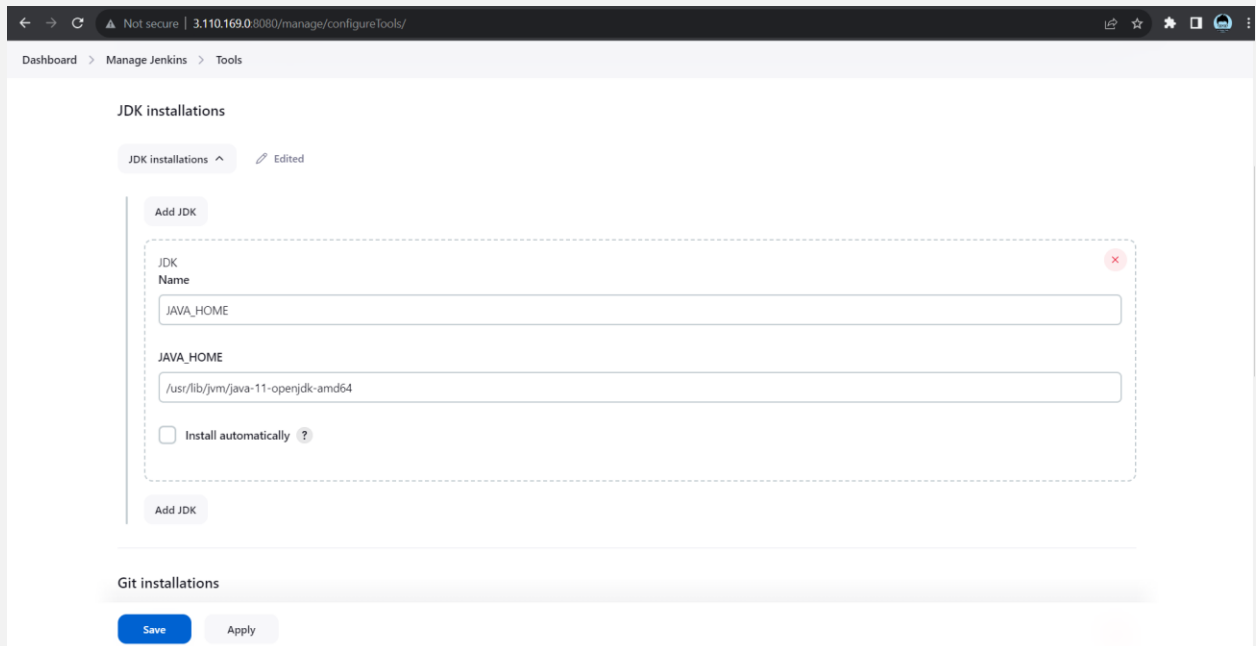
No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-43-166:~# java --version
openjdk 11.0.20.1 2023-08-24
OpenJDK Runtime Environment (build 11.0.20.1+1-post-Ubuntu-0ubuntu122.04)
OpenJDK 64-Bit Server VM (build 11.0.20.1+1-post-Ubuntu-0ubuntu122.04; mixed mode, sharing)
root@ip-172-31-43-166:~# mvn --version
Apache Maven 3.6.3
Maven home: /usr/share/maven
Java version: 11.0.20.1, vendor: Ubuntu, runtime: /usr/lib/jvm/java-11-openjdk-amd64
Default locale: en, platform encoding: UTF-8
OS name: "linux", version: "5.19.0-1025-aws", arch: "amd64", family: "unix"
root@ip-172-31-43-166:~# jenkins --version
2.414.2
root@ip-172-31-43-166:~#
  
```

Launching jenkins on port 8080 by installing required plugins .



Integrating the java and jenkins by adding the path in jenkins portal



The screenshot shows the Jenkins 'Tools' configuration page. The 'JDK installations' section is expanded, showing a form to add a new JDK. The 'Name' field is labeled 'JDK' and contains the text 'JAVA_HOME'. The 'JAVA_HOME' field contains the path '/usr/lib/jvm/java-11-openjdk-amd64'. There is an unchecked checkbox for 'Install automatically'. Below the form is an 'Add JDK' button. At the bottom of the page are 'Save' and 'Apply' buttons.

Dashboard > Manage Jenkins > Tools

JDK installations

JDK installations ^ Edited

Add JDK

JDK

Name

JAVA_HOME

JAVA_HOME

/usr/lib/jvm/java-11-openjdk-amd64

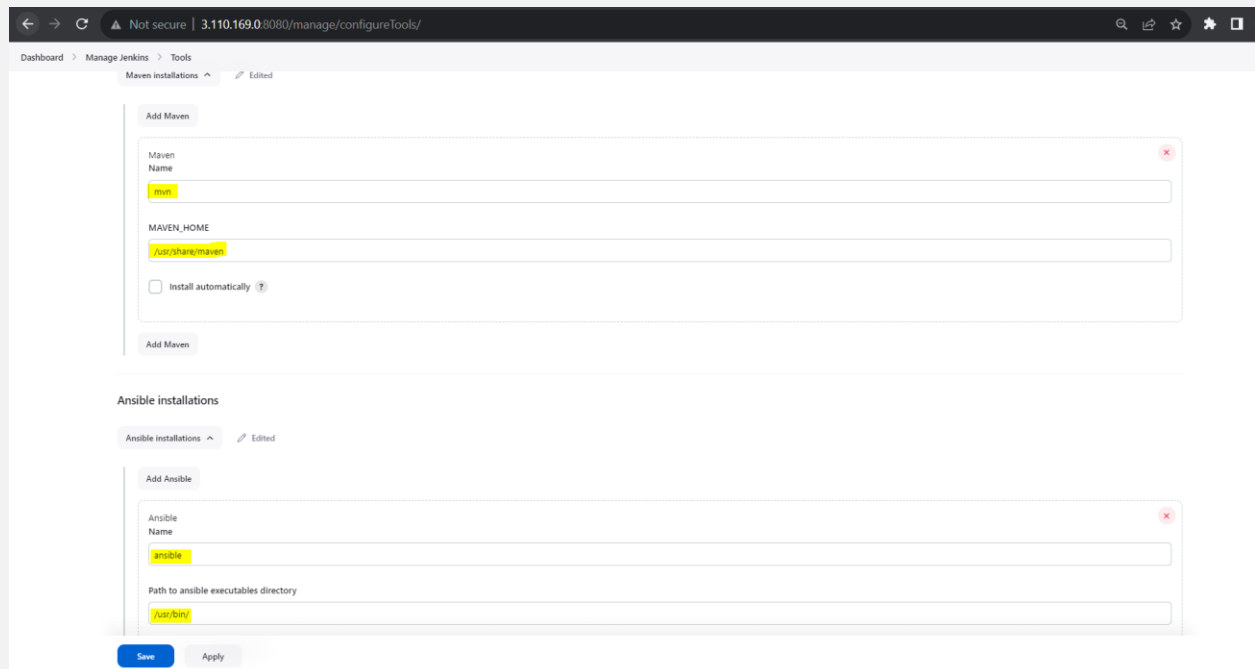
☐ Install automatically ?

Add JDK

Git installations

Save Apply

Integrating the maven,ansible and jenkins by adding the path in jenkins portal



The screenshot shows the Jenkins 'Tools' configuration page with the 'Maven installations' and 'Ansible installations' sections expanded. In the 'Maven installations' section, the 'Name' field is labeled 'Maven' and contains 'maven', and the 'MAVEN_HOME' field contains '/usr/share/maven'. In the 'Ansible installations' section, the 'Name' field is labeled 'Ansible' and contains 'ansible', and the 'Path to ansible executables directory' field contains '/usr/bin/'. Both sections have an unchecked 'Install automatically' checkbox. At the bottom are 'Save' and 'Apply' buttons.

Dashboard > Manage Jenkins > Tools

Maven installations ^ Edited

Add Maven

Maven

Name

maven

MAVEN_HOME

/usr/share/maven

☐ Install automatically ?

Add Maven

Ansible installations

Ansible installations ^ Edited

Add Ansible

Ansible

Name

ansible

Path to ansible executables directory

/usr/bin/

☐ Install automatically ?

Save Apply

Integrating the Git Hub and jenkins by adding the path in jenkins portal

Dashboard > Manage Jenkins > Tools

Git installations

Git

Name: Default

Path to Git executable: git

☐ Install automatically

Add Git

Maven installations

Maven installations Edited

Ansible installations

Save Apply

Creating a dummy job to test & verifying that everything is fine to proceed further .

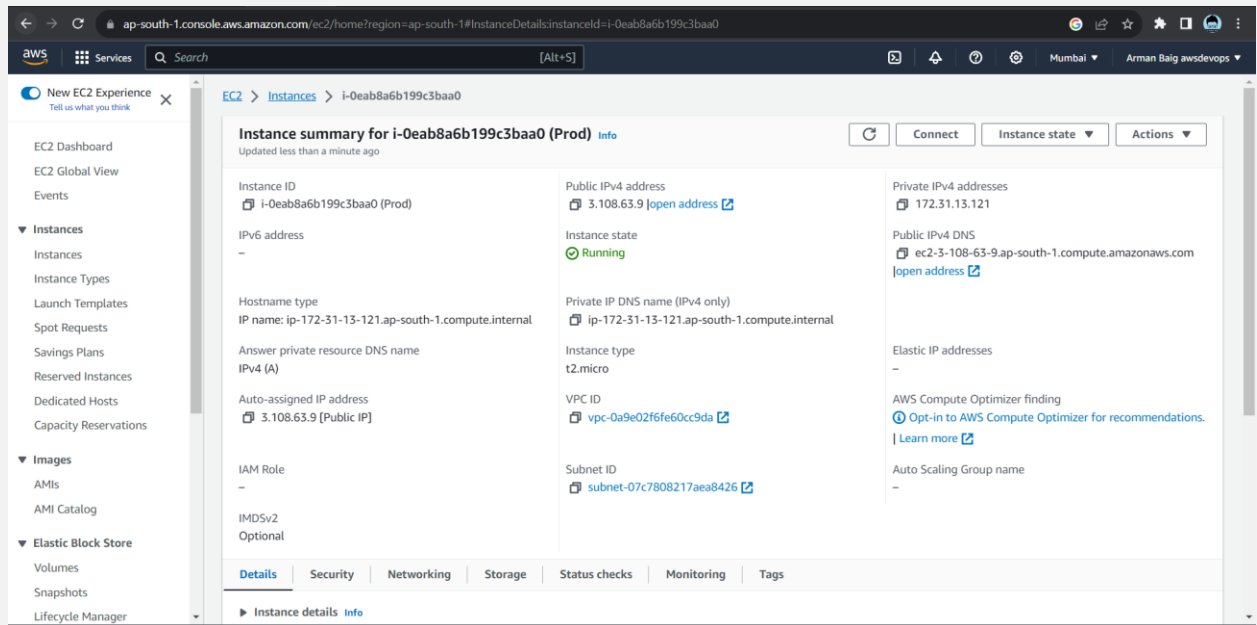
Dashboard > projecttest > #1 > Console Output

```

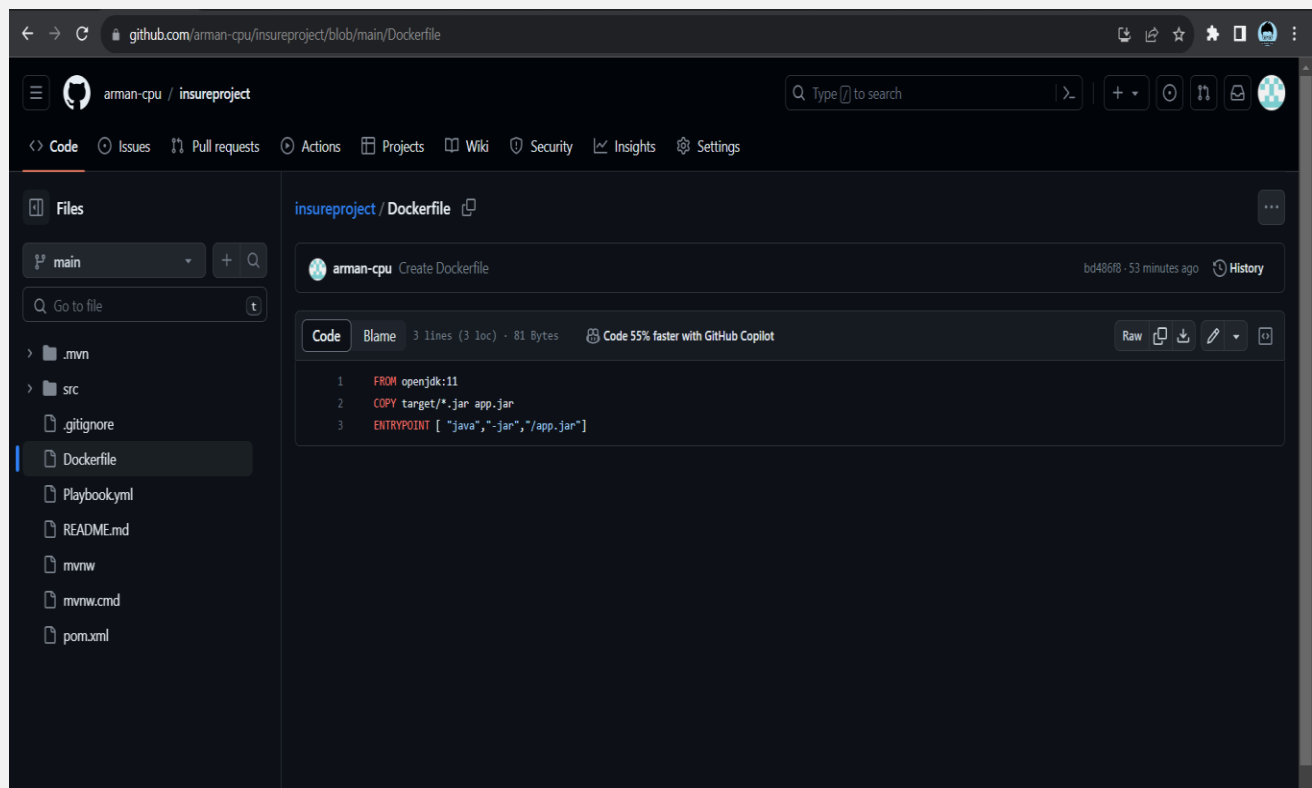
2.3.4.jar
[INFO] Downloaded from central: https://repo.maven.apache.org/maven2/com/google/guava/listenablefuture/9999.0-empty-to-avoid-conflict-with-guava/listenablefuture-9999.0-empty-to-avoid-conflict-with-guava.jar (2.2 kB at 13 kB/s)
[INFO] Downloaded from central: https://repo.maven.apache.org/maven2/com/google/j2objc/j2objc-annotations/1.3/j2objc-annotations-1.3.jar
[INFO] Downloaded from central: https://repo.maven.apache.org/maven2/org/checkerframework/checker-qual/2.5.5/checker-qual-2.5.5.jar (5.9 kB at 34 kB/s)
[INFO] Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/commons/commons-lang3/3.7/commons-lang3-3.7.jar
[INFO] Downloaded from central: https://repo.maven.apache.org/maven2/org/vafer/jdependency/2.4.0/jdependency-2.4.0.jar (180 kB at 1.0 MB/s)
[INFO] Downloaded from central: https://repo.maven.apache.org/maven2/com/google/errorprone/error_prone_annotations/2.3.4/error_prone_annotations-2.3.4.jar (14 kB at 78 kB/s)
[INFO] Downloaded from central: https://repo.maven.apache.org/maven2/com/google/j2objc/j2objc-annotations/1.3/j2objc-annotations-1.3.jar (8.8 kB at 49 kB/s)
[INFO] Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/commons/commons-lang3/3.7/commons-lang3-3.7.jar (500 kB at 2.5 MB/s)
[INFO] Downloaded from central: https://repo.maven.apache.org/maven2/com/google/guava/guava/28.2-android/guava-28.2-android.jar (2.6 MB at 12 MB/s)
[INFO] Replacing main artifact with repackaged archive
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 21.191 s
[INFO] Finished at: 2023-10-04T13:56:24Z
[INFO] -----
Waiting for Jenkins to finish collecting data
[JENKINS] Archiving /var/lib/jenkins/workspace/projecttest/pom.xml to com.project.staragile/insure-me/1.0/insure-me-1.0.pom
[JENKINS] Archiving /var/lib/jenkins/workspace/projecttest/target/insure-me-1.0.jar to com.project.staragile/insure-me/1.0/insure-me-1.0.jar
channel stopped
Finished: SUCCESS
  
```

REST API Jenkins 2.414.2

🌐 Creating another machine to deploy our code and will install docker in it .



🌐 Created a Docker file in the local and pushed to the git hub.



Integrating docker hub with jenkins by providing docker hub credentials

Dashboard > Manage Jenkins > Credentials

Credentials

T	P	Store	Domain	ID	Name
		System	(global)	dockerlogin	arman23/***** (dockerlogin)
		System	(global)	dockerhub	arman23/***** (dockerhub)
		System	(global)	ssh-key	ubuntu (ssh-key-ansible)

Stores scoped to Jenkins

P	Store	Domains
	System	(global)

Icon: S M L

Created a ansible playbook in local and pushed to github repo in name Playbook.yml .

github.com/arman-cpu/insureproject/blob/main/Playbook.yml

arman-cpu / insureproject

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

Files

- main
- .mvn
- src
- .gitignore
- Dockerfile
- Playbook.yml
- README.md
- mvnw
- mvnw.cmd
- pom.xml

insureproject / Playbook.yml

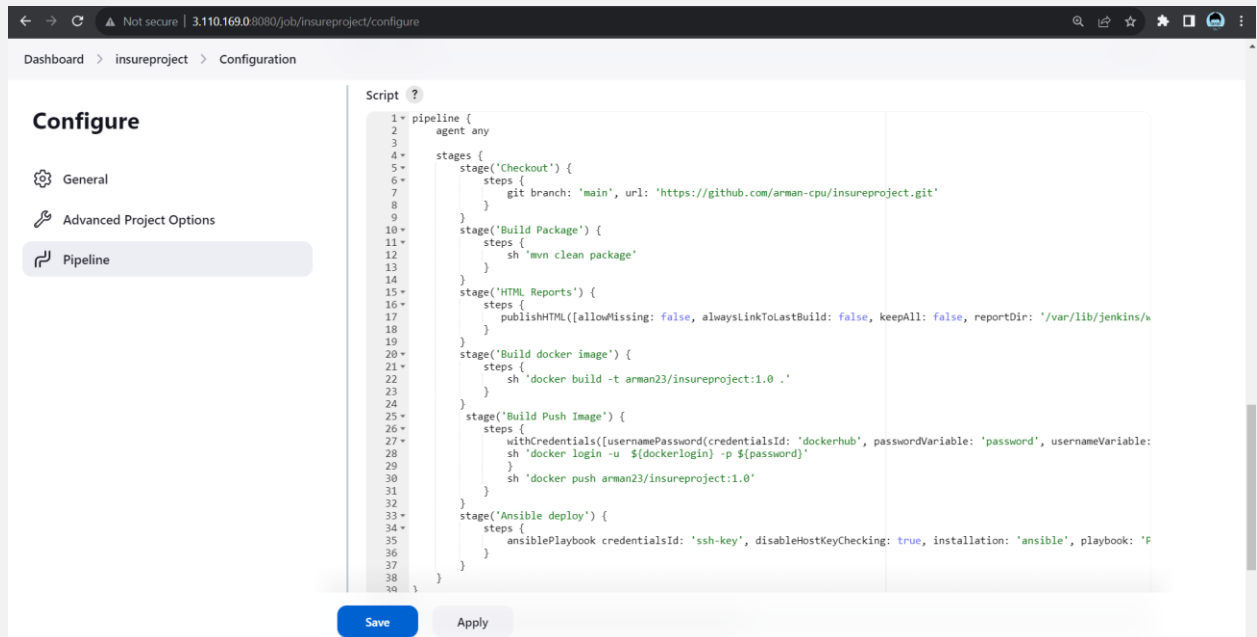
arman-cpu Create Playbook.yml 982b414 · 13 minutes ago History

Code Blame 15 lines (12 loc) · 353 Bytes Code 55% faster with GitHub Copilot

```

1 ---
2 - hosts: all
3   become: true
4   tasks:
5     - name: Updating apt
6       command: sudo apt-get update
7
8     - name: Install Docker
9       command: sudo apt-get install -y docker.io
10
11    - name: Start Docker Service
12      command: sudo systemctl start docker
13
14    - name: Deploy Docker Container
15      command: docker run -itd -p 8084:8081 arman23/insureproject:1.0
  
```


✚ Writing pipeline script to execute the jobs without interruption.



The screenshot shows the Jenkins Configuration page for the 'insureproject' job. The 'Pipeline' tab is selected, displaying a script for a pipeline with the following stages:

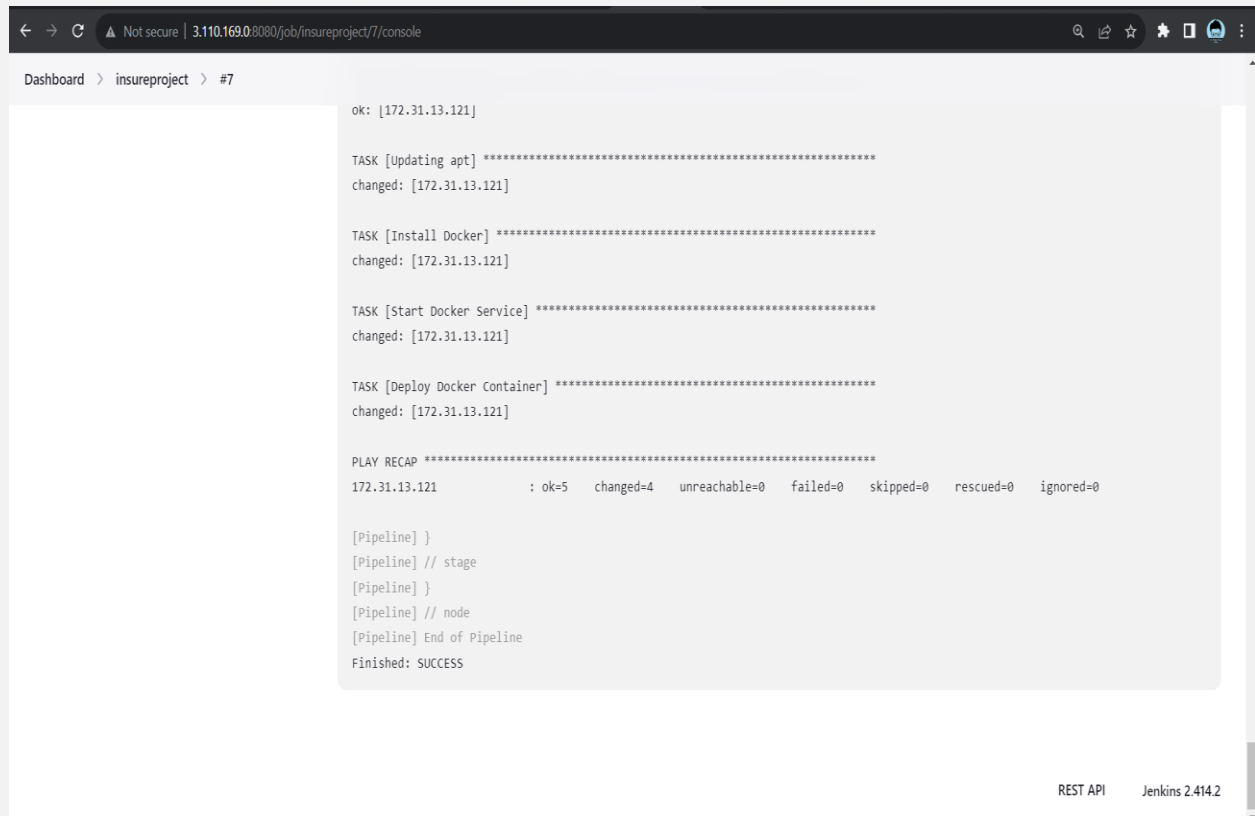
```

1 pipeline {
2   agent any
3
4   stages {
5     stage('Checkout') {
6       steps {
7         git branch: 'main', url: 'https://github.com/arman-cpu/insureproject.git'
8       }
9     }
10    stage('Build Package') {
11      steps {
12        sh 'mvn clean package'
13      }
14    }
15    stage('HTML Reports') {
16      steps {
17        publishHTML([allowMissing: false, alwaysLinkToLastBuild: false, keepAll: false, reportDir: '/var/lib/jenkins/w
18      ])
19    }
20    stage('Build docker image') {
21      steps {
22        sh 'docker build -t arman23/insureproject:1.0 .'
23      }
24    }
25    stage('Build Push Image') {
26      steps {
27        withCredentials([usernamePassword(credentialsId: 'dockerhub', passwordVariable: 'password', usernameVariable:
28        sh 'docker login -u ${dockerlogin} -p ${password}'
29        sh 'docker push arman23/insureproject:1.0'
30      })
31    }
32    stage('Ansible deploy') {
33      steps {
34        ansiblePlaybook credentialsId: 'ssh-key', disableHostKeyChecking: true, installation: 'ansible', playbook: 'F
35      })
36    }
37  }
38 }

```

Buttons for 'Save' and 'Apply' are visible at the bottom of the configuration page.

✚ Executing the job after everything is setup and verifying everything is working fine.



The screenshot shows the Jenkins console output for the 'insureproject' job. The output displays the execution of the pipeline script, including the following tasks and their results:

```

ok: [172.31.13.121]

TASK [Updating apt] *****
changed: [172.31.13.121]

TASK [Install Docker] *****
changed: [172.31.13.121]

TASK [Start Docker Service] *****
changed: [172.31.13.121]

TASK [Deploy Docker Container] *****
changed: [172.31.13.121]

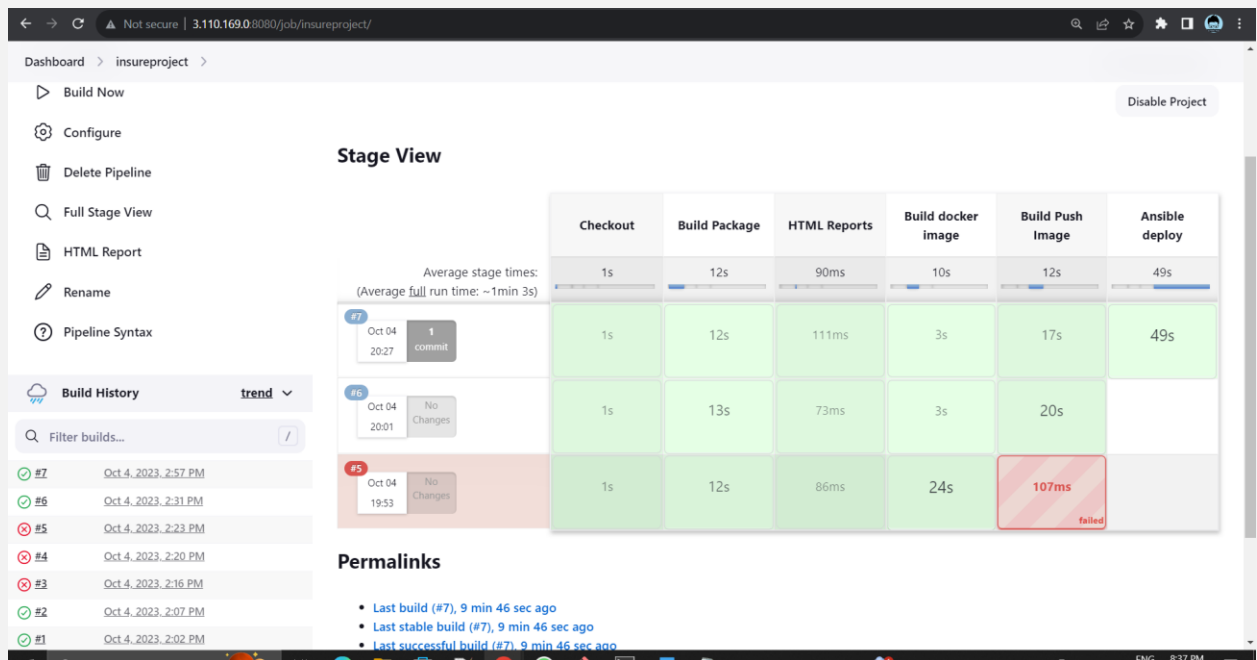
PLAY RECAP *****
172.31.13.121      : ok=5   changed=4    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS

```

The output indicates that the pipeline executed successfully, with all tasks passing and no errors or warnings.

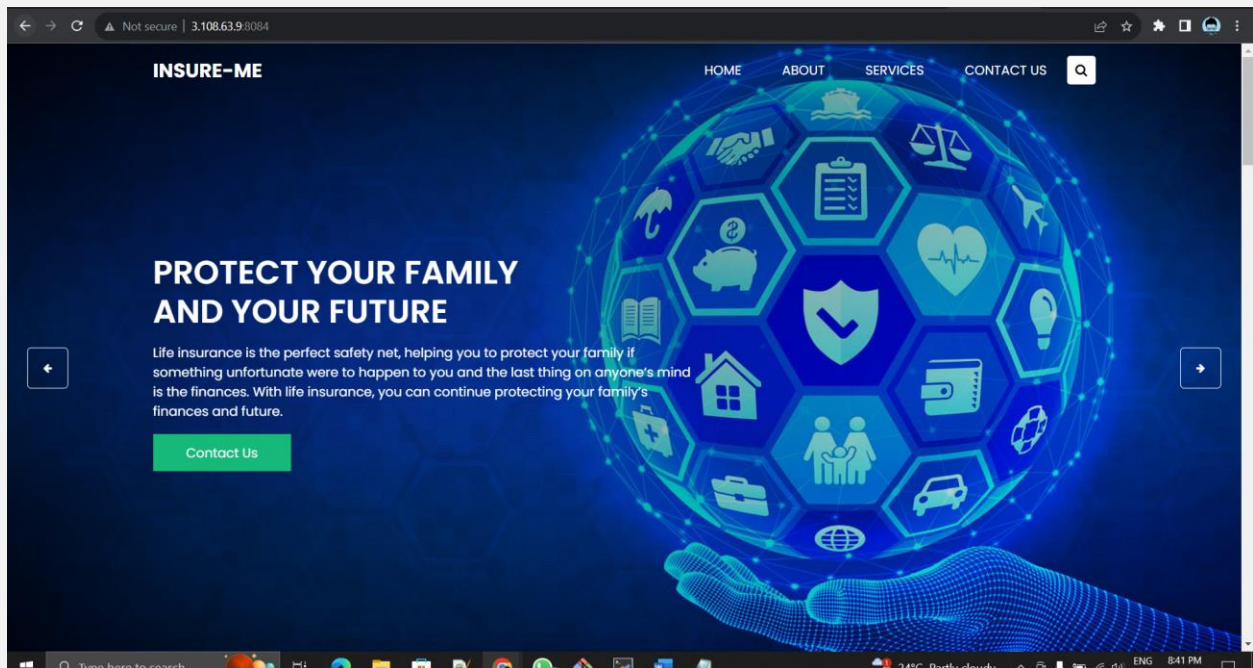
Stage view of the job which are being built.



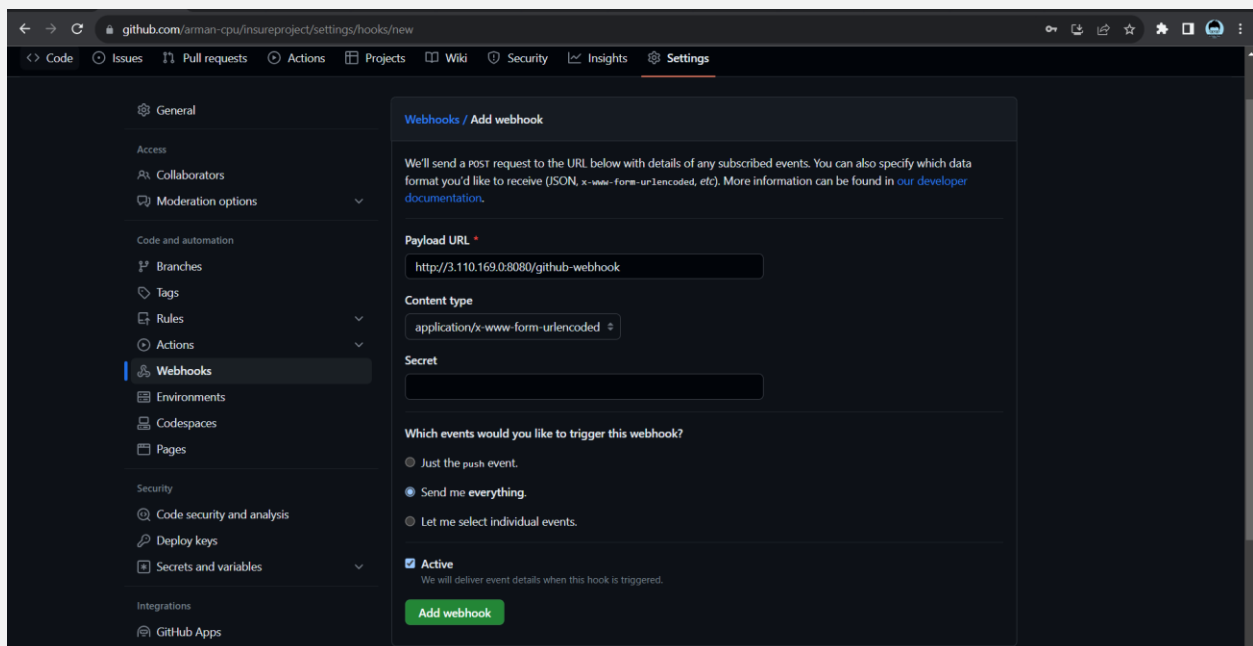
Verifying the docker is installed by checking its version and verifying the code has pulled image from docker Hub.

```
root@ip-172-31-13-121:~# docker --version
Docker version 24.0.5, build 24.0.5-0ubuntu1~22.04.1
root@ip-172-31-13-121:~# docker ps
CONTAINER ID   IMAGE               COMMAND                  CREATED        STATUS        PORTS                               NAMES
71fb2e56e32a   arman23/insureproject:1.0   "java -jar /app.jar"    About an hour ago   Up About an hour   0.0.0.0:8084->8081/tcp, :::8084->8081/tcp   arman
root@ip-172-31-13-121:~#
```

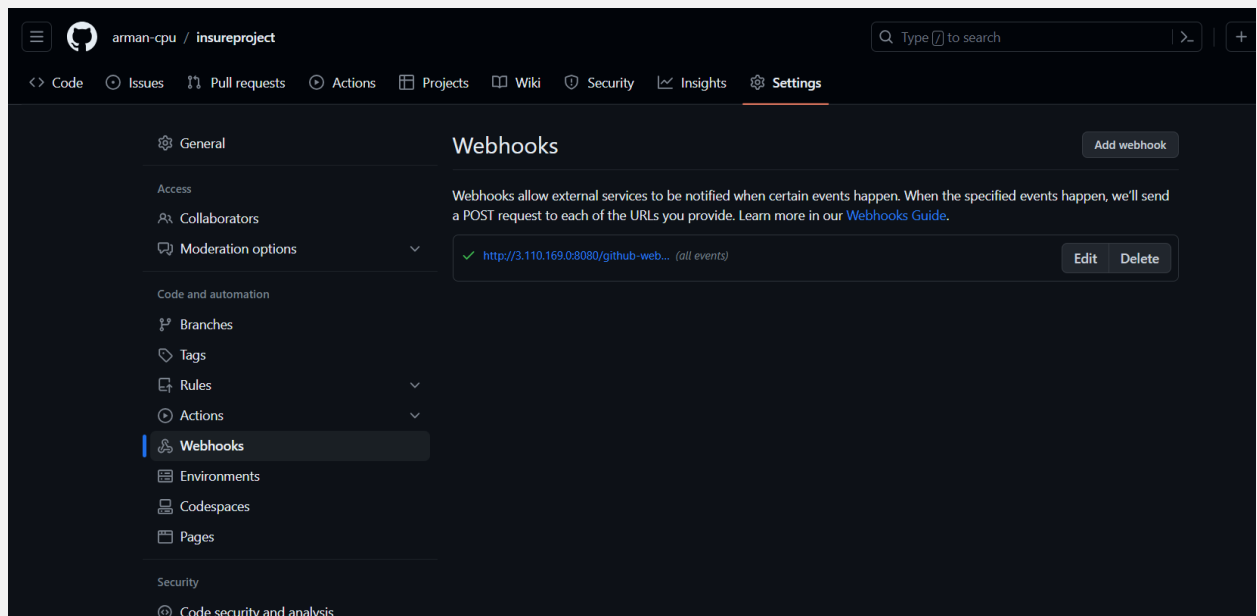
🌈 Verifying our project is up and running by launching it in browser.



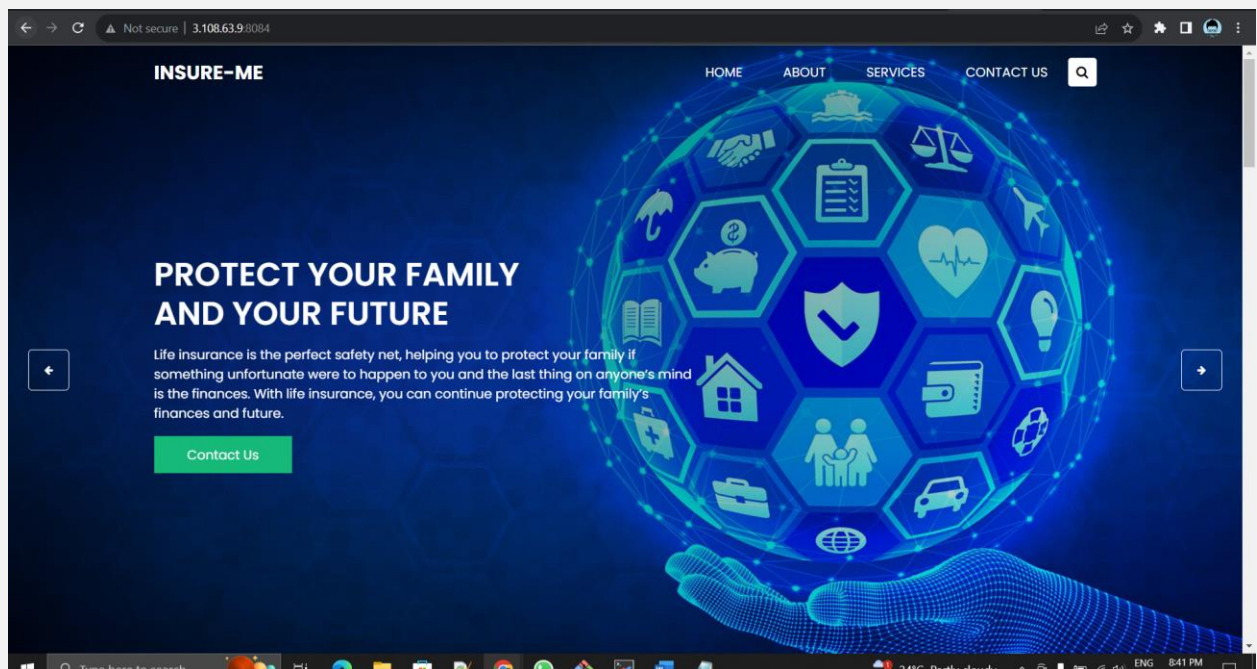
🌈 Integrating webhooks to our project by adding our webapp address to github.



🚀 Successfully added webhooks to our webapp.



🚀 Testing our project using selenium test cases.



✚ Writing the test cases for project

The screenshot displays the Eclipse IDE environment. The Package Explorer on the left shows the project structure, including 'InsuranceTestcases.java'. The main editor window shows the code for 'InsuranceTestcases.java', which is a Selenium test script. The script includes imports for Selenium WebDriver and ChromeOptions, and a 'main' method that sets up a headless Chrome browser, navigates to 'http://13.233.214.11:8084/contact.html', and performs actions like sending keys to input fields and clicking a button. The console at the bottom shows the output 'Welcome to Insure Project'.

Below the IDE, a browser window shows the 'INSURE-ME' application. The page has a dark blue header with navigation links: HOME, ABOUT, SERVICES, NEWS, CONTACT US. The main content area features a map of New York City on the left and a 'GET IN TOUCH' form on the right. The form contains four input fields with the following values: 'abcd efgh', '9876543210', 'abcd.efgh@gmail.com', and 'hello'. A 'Send' button is located at the bottom of the form.

Thank you