DevOps Documentation
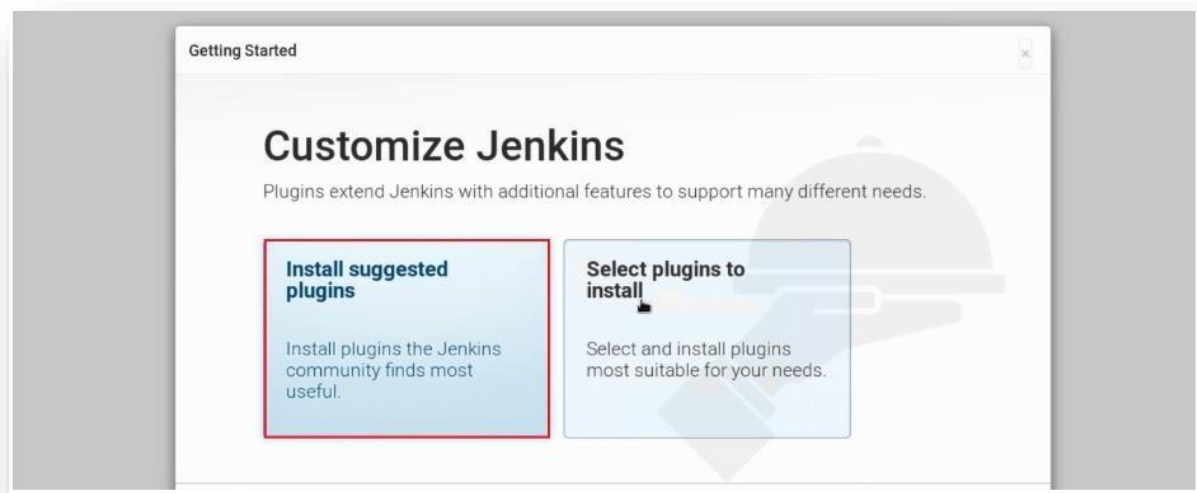
Tools used and its version : -

- Jenkins 2.23
- SonarQube 6.7
- Nexus Repoistory 3
- Tomcat 9x

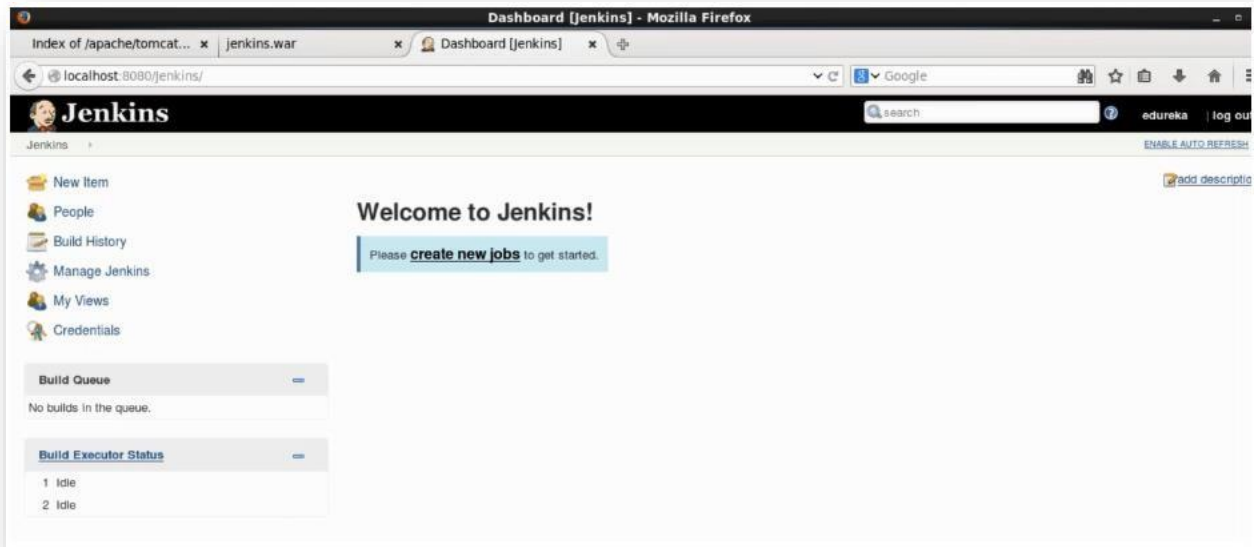- **Step 1: Install Jenkins**
- Download Jenkins from https://www.jenkins.io/download/
- Unlock Jenkins with administrator password

- Select the suggested plugins.

- Jenkins Started then create new jobs

Step 2: Install the required plugins:

- Go to the manage plugins.
- Select the available plugins.
- For deploying install "Deploy to container plugin".
- For pipeline install "Delivery Pipeline plugin".
- For Nexus Repository install "Nexus Artifact Uploader".
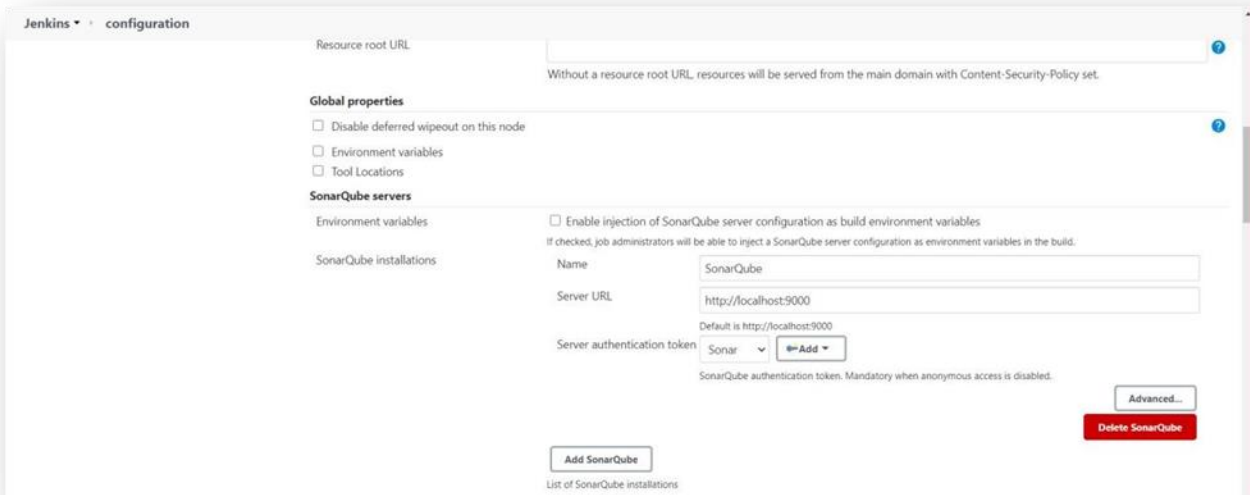- For SonarQube install "SonarQube Scanner plugin".

Step 3: Install the SonarQube:

- Install SonarQube from https://www.sonarqube.org/downloads/
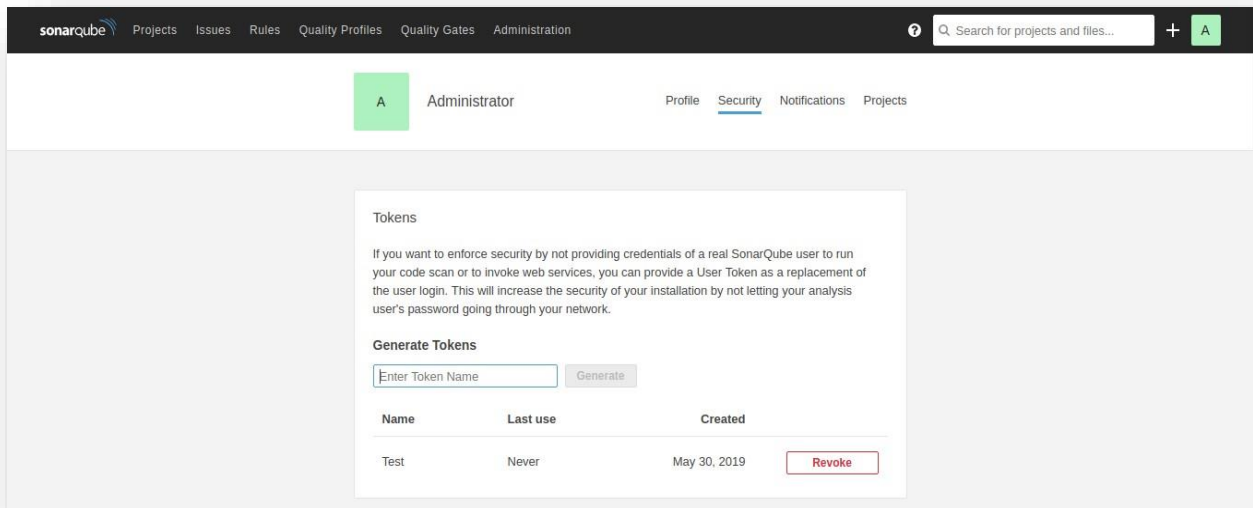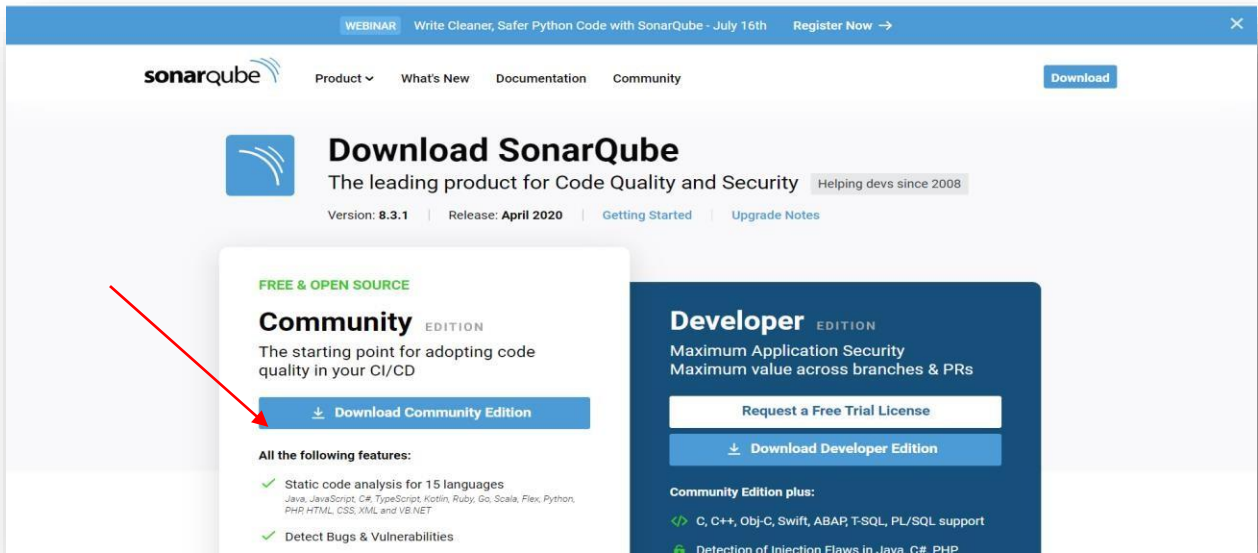
Step 4: Configure SonarQube with Jenkins:

- Go to Manage Jenkins
- Configure Systems
- SonarQube Servers

- SonarQube server always run on http://localhost:9000
- Now click on add.

Step 5: Configure Sonar Scanner with Jenkins:

- Download Sonar Scanner from https://docs.sonarqube.org/latest/analysis/scan/sonarscanner/

- Go to Manage Jenkins

- Global Tool Configuration

- SonarQube Scanner

- Here give name and path of the sonar scanner.

- Now apply and save it.

Step 5: Install the Nexus Repository:

- Download Nexus from https://www.sonatype.com/download-oss-sonatype
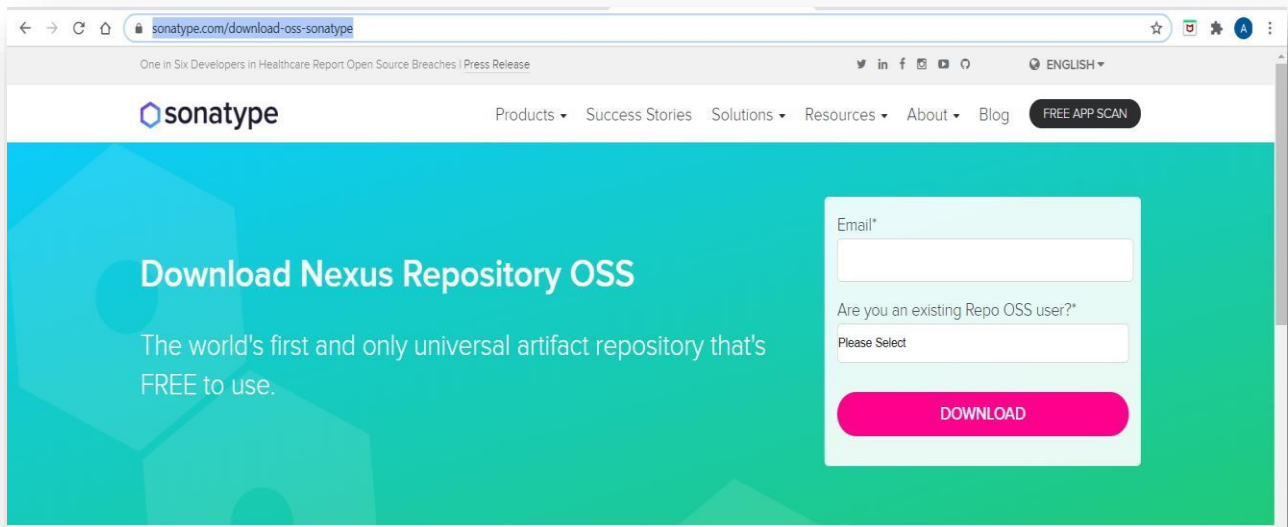
Step 6: Create the freestyle project(without pipeline):

- Select new item.

- Select freestyle project.

- Click on OK.

Step 7: Freestyle Project Configuration:

- Give the path of directory.

General	Source Code Management	Build Triggers	Build Environment	Build	Post-build Actions
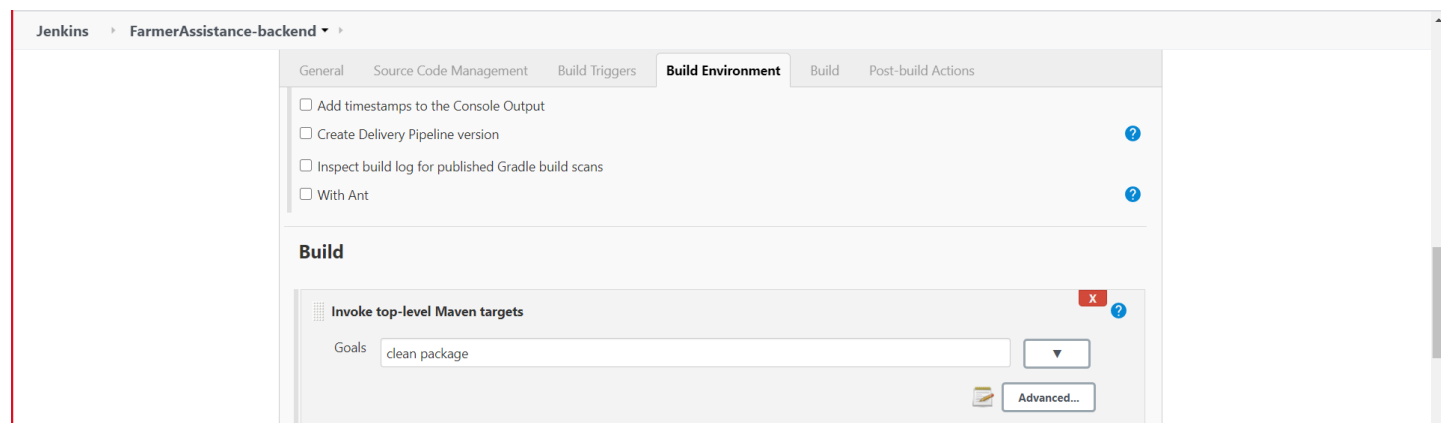
☐ Throttle builds

☐ Disable this project

☐ Execute concurrent builds if necessary

☐ Quiet period

☐ Retry Count

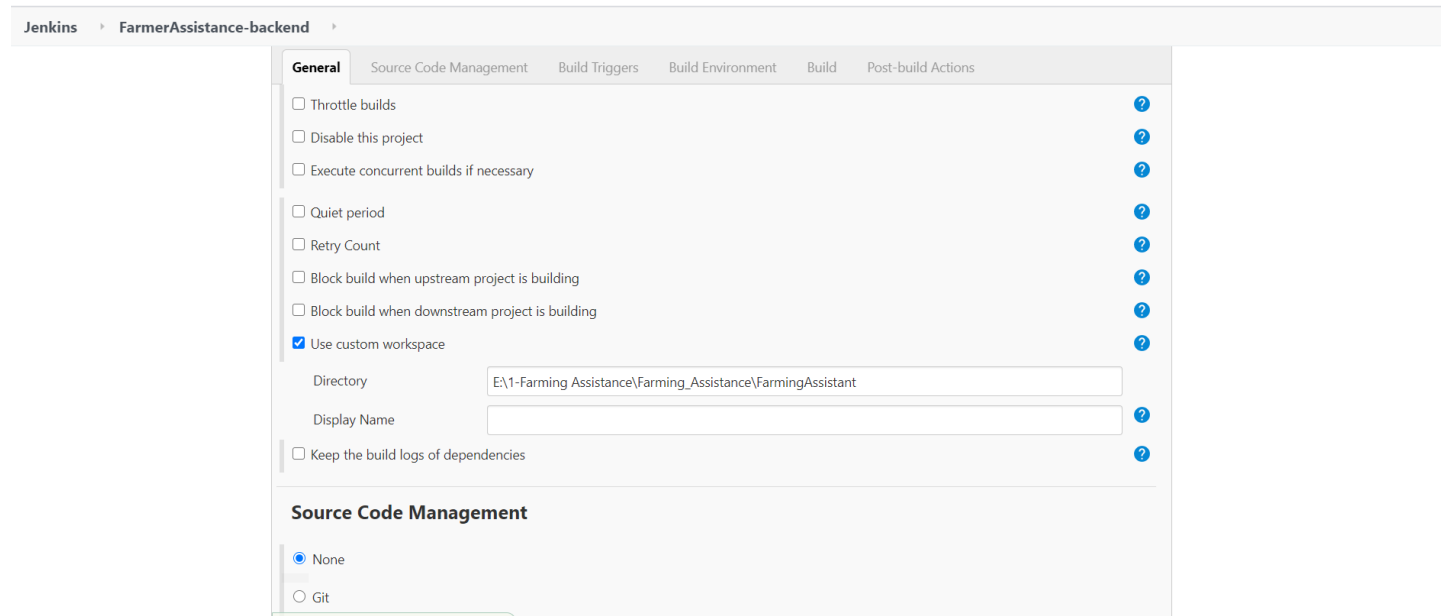☐ Block build when upstream project is building

☐ Block build when downstream project is building

☑ Use custom workspace

Directory   E:\1-Farming Assistance\Farming_Assistance\FarmingAssistant

Display Name

☐ Keep the build logs of dependencies

Source Code Management

◉ None

◯ Git

- Build Project:

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

☐ Add timestamps to the Console Output

☐ Create Delivery Pipeline version

☐ Inspect build log for published Gradle build scans

☐ With Ant

Build

Invoke top-level Maven targets   X

Goals   clean package   ▼

Advanced...

- Add Nexus Repository Details:

- Add SonarQube details:

- Deploying the Project:

- Build Project:
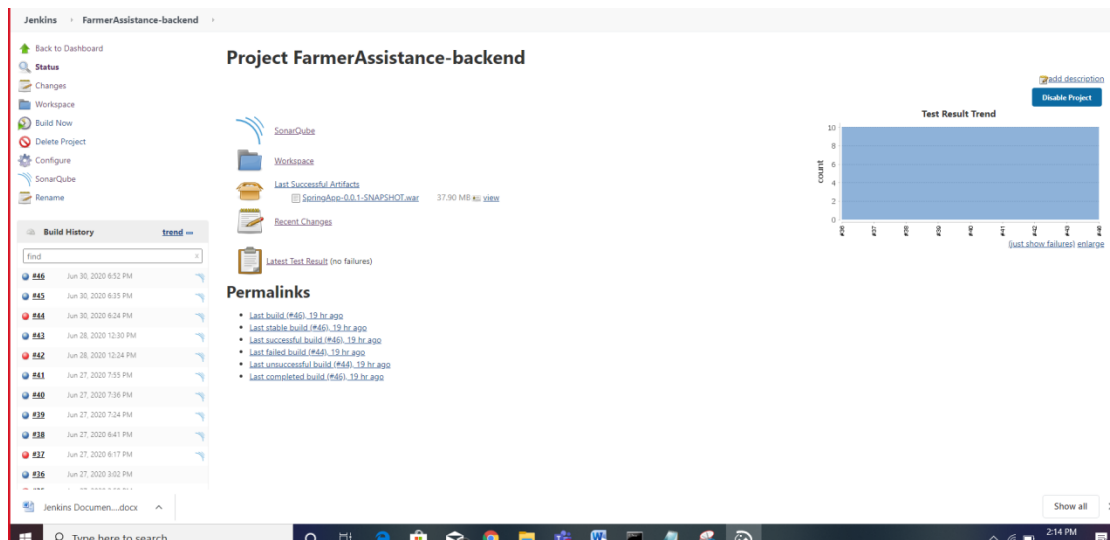
- Console Output:

Back to Project
Status
Changes
Console Output
  View as plain text
Edit Build Information
Delete build '#46'
Test Result
Previous Build

Console Output

Started by user admin
Running as SYSTEM
Building in workspace E:\1-Farming Assistance\Farming_Assistance\FarmingAssistant
[FarmingAssistant] $ cmd.exe /C "mvn -f pom.xml clean package && exit %%ERRORLEVEL%%"
[INFO] Scanning for projects...
[INFO]
[INFO] ------------------------< com.cap:SpringApp >------------------------
[INFO] Building SpringApp 0.0.1-SNAPSHOT
[INFO] --------------------------------[war]---------------------------------
[INFO]
[INFO] --- maven-clean-plugin:3.1.0:clean (default-clean) @ SpringApp ---
[INFO] Deleting E:\1-Farming Assistance\Farming_Assistance\FarmingAssistant\target
[INFO] --- maven-resources-plugin:3.1.0:resources (default-resources) @ SpringApp ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Copying 1 resource
[INFO] Copying 0 resource
[INFO]
[INFO] --- maven-compiler-plugin:3.8.1:compile (default-compile) @ SpringApp ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 38 source files to E:\1-Farming Assistance\Farming_Assistance\FarmingAssistant\target\classes
[INFO]
[INFO] --- maven-resources-plugin:3.1.0:testResources (default-testResources) @ SpringApp ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory E:\1-Farming Assistance\Farming_Assistance\FarmingAssistant\src\test\resources
[INFO]
[INFO] --- maven-compiler-plugin:3.8.1:testCompile (default-testCompile) @ SpringApp ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 2 source files to E:\1-Farming Assistance\Farming_Assistance\FarmingAssistant\target\test-classes
[INFO]
[INFO] --- maven-surefire-plugin:2.22.2:test (default-test) @ SpringApp ---
[INFO]
[INFO] ---
[INFO] T E S T S
[INFO] ---
[INFO] Running com.capgemini.controller.FarmerControllerTest
[INFO] Tests run: 9, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.957 s - in com.capgemini.controller.FarmerControllerTest

[INFO] 1/1 source files have been analyzed
[INFO] Sensor XML Sensor [xml]
[INFO] Sensor XML Sensor [xml] (done) | time=442ms
[INFO] Sensor Analyzer for "php.ini" files [php]
[INFO] Sensor Analyzer for "php.ini" files [php] (done) | time=0ms
[INFO] Sensor Zero Coverage Sensor
[INFO] Sensor Zero Coverage Sensor (done) | time=104ms
[INFO] Sensor CPD Block Indexer
[INFO] Sensor CPD Block Indexer (done) | time=106ms
[INFO] SCM provider for this project is: git
[INFO] 3 files to be analyzed
[INFO] 0/3 files analyzed
[WARNING] Missing blame information for the following files:
[WARNING] * pom.xml
[WARNING] * src/main/java/com/capgemini/SpringAppApplication.java
[WARNING] * src/test/java/com/capgemini/SpringAppApplicationTests.java
[WARNING] This may lead to missing/broken features in SonarQube
[INFO] 21 files had no CPD blocks
[INFO] Calculating CPD for 17 files
[INFO] CPD calculation finished
[INFO] Analysis report generated in 1074ms, dir size=108 KB
[INFO] Analysis reports compressed in 4529ms, zip size=108 KB
[INFO] Analysis report uploaded in 364ms
[INFO] ANALYSIS SUCCESSFUL, you can browse http://localhost:9000/dashboard/index/com.cap:SpringApp
[INFO] Note that you will be able to access the updated dashboard once the server has processed the submitted analysis report
[INFO] More about the report processing at http://localhost:9000/api/ce/task?id=AXHFZy2_KgJBKrlRLvnB
[INFO] Task total time: 34.942 s
[INFO] --
[INFO] BUILD SUCCESS
[INFO] --
[INFO] Total time: 51.363 s
[INFO] Finished at: 2020-06-30T18:55:15+05:30
[INFO] --
SonarQube analysis completed: SUCCESS
[DeployPublisher][INFO] Attempting to deploy 1 war file(s)
[DeployPublisher][INFO] Deploying E:\1-Farming Assistance\Farming_Assistance\FarmingAssistant\target\SpringApp-0.0.1-SNAPSHOT.war to container Tomcat 9.x Remote with context farmerassistance
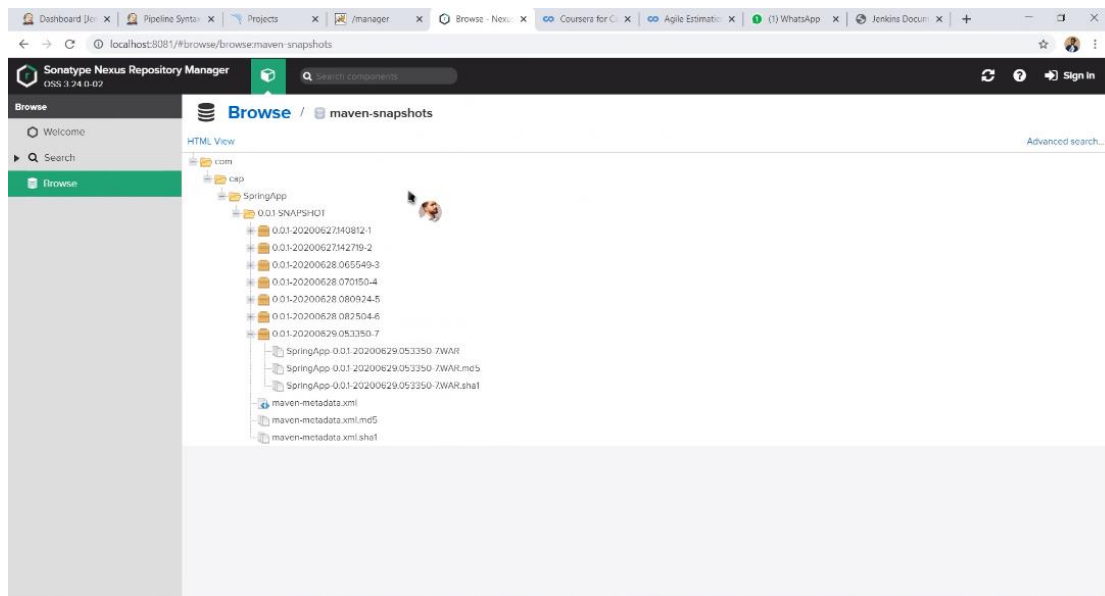 Redeploying [E:\1-Farming Assistance\Farming_Assistance\FarmingAssistant\target\SpringApp-0.0.1-SNAPSHOT.war]
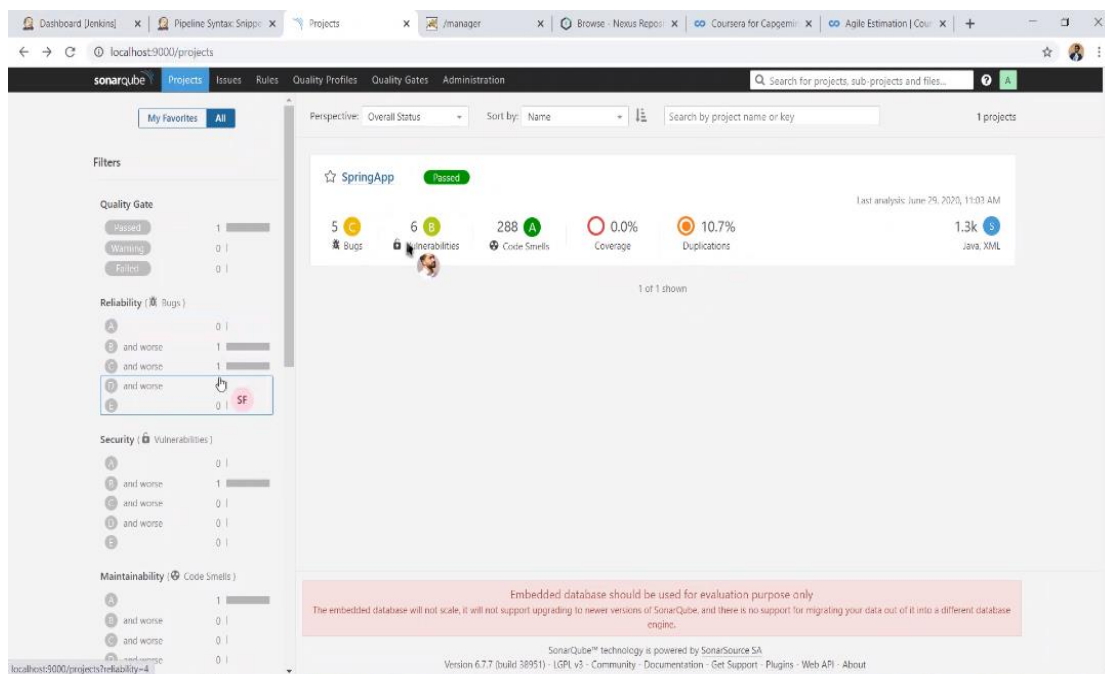 Undeploying [E:\1-Farming Assistance\Farming_Assistance\FarmingAssistant\target\SpringApp-0.0.1-SNAPSHOT.war]
  Deploying [E:\1-Farming Assistance\Farming_Assistance\FarmingAssistant\target\SpringApp-0.0.1-SNAPSHOT.war]
Finished: SUCCESS

- Artifact saved on Nexus Repository:

- SonarQube Code Coverage

- Deploying on Tomcat:

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Step 8:Create a Pipeline Project   :

- Select new item.

- Select pipeline project.

- Click on OK.

- Click on Configure and generate the pipeline script.
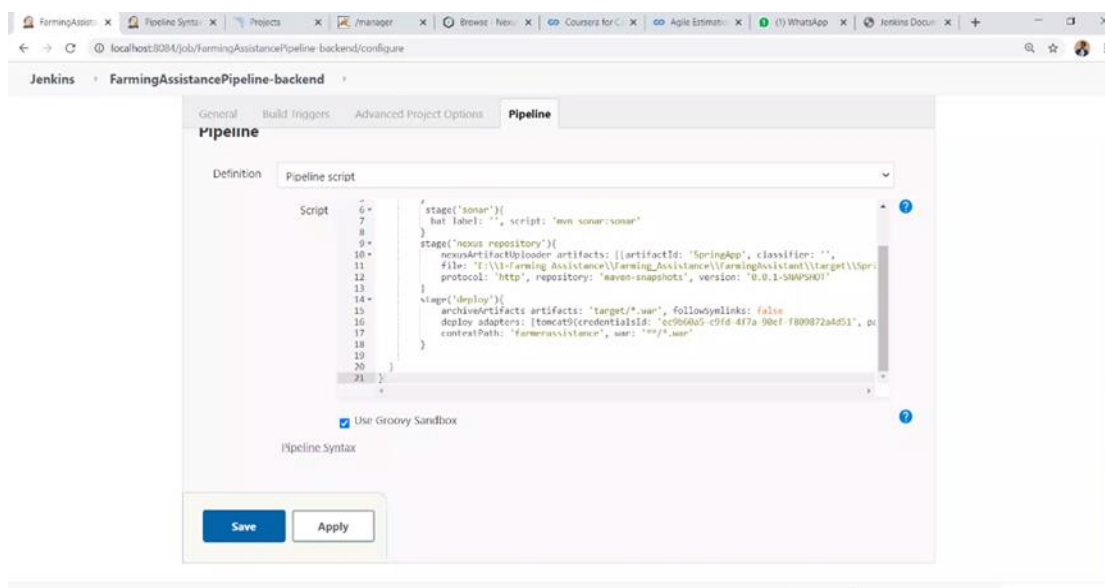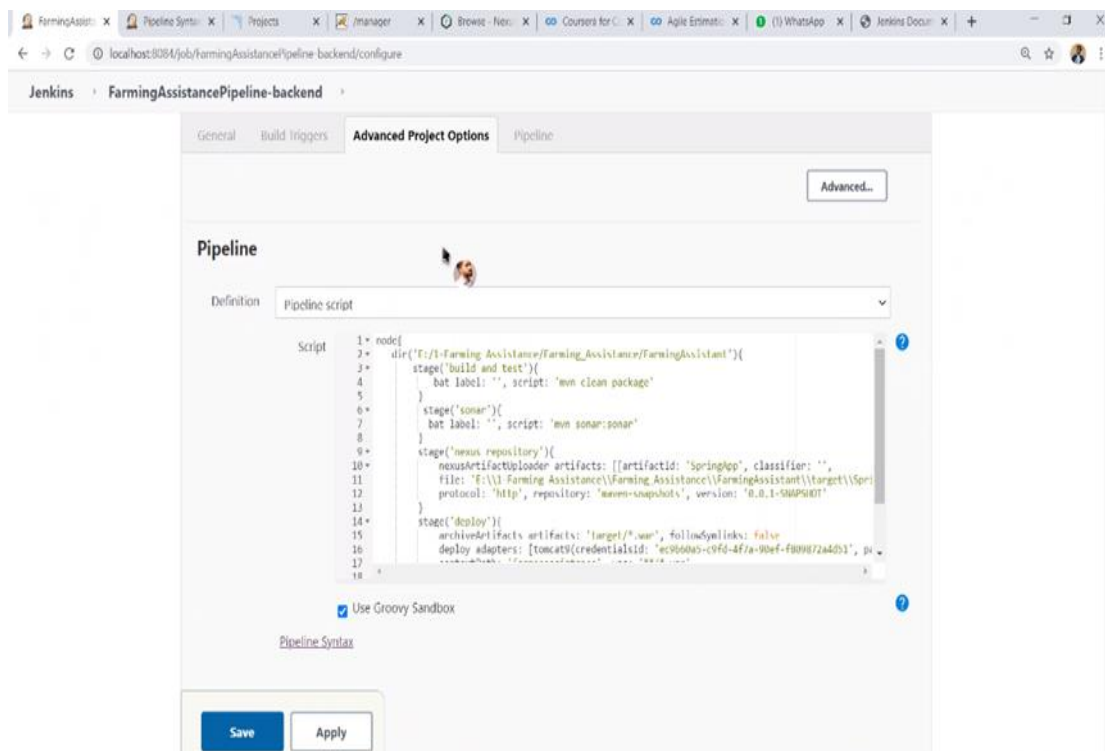
- Output with Pipeline:

- Console Output:

THANK YOU