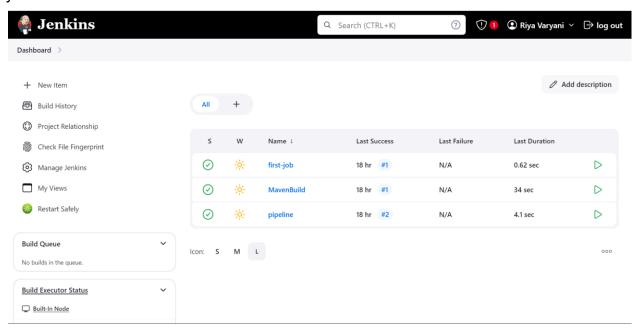
## ADVANCE DEVOPS EXP-7

RIYA VARYANI D15A/64

**Aim:** To understand Static Analysis SAST process and learn to integrate Jenkins SAST to SonarQube/GitLab.

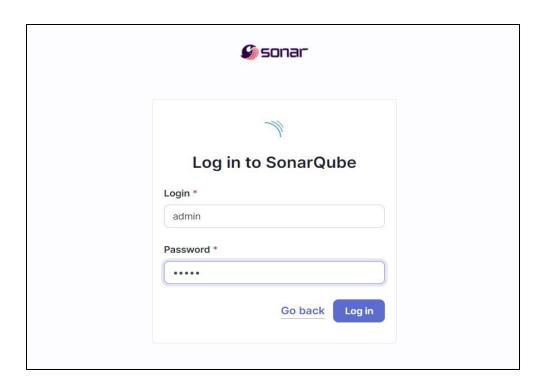
**Step-1:** Open up Jenkins Dashboard on localhost, port 8080 or whichever port it is at for you.



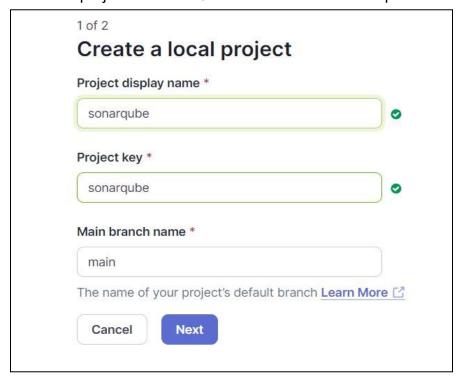
**Step-2:** Run SonarQube in a Docker container using this command :- a]docker -v b] docker run -d --name sonarqube -e SONAR\_ES\_BOOTSTRAP\_CHECKS\_DISABLE=true -p 9000:9000 sonarqube:latest

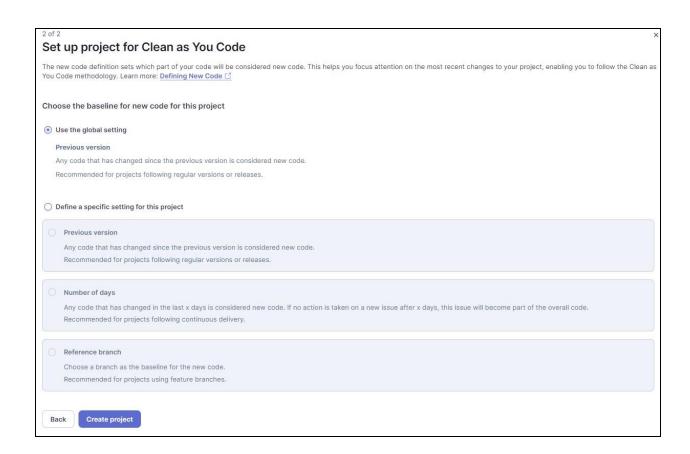
```
C:\Users\varya>docker run -d --name sonarqube -e SONAR_ES_BOOTSTRAP_CHECKS_DISABLE=true -p 9000:9000 sonarqube:latest Unable to find image 'sonarqube:latest' locally latest: Pulling from library/sonarqube 7478e0ac0f23: Pull complete 90a925ab929a: Pull complete 90a925ab929a: Pull complete 80338217a4ab: Pull complete la5fd5c7e184: Pull complete 1a5fd5c7e184: Pull complete 9b87d6fa783d: Pull complete 9b87d6fa783d: Pull complete 9d819c9b5ead: Pull complete 4f4fb700ef54: Pull complete Unique 9beto 9beto
```

**Step-3:** Once the container is up and running, you can check the status of SonarQube at localhost port 9000. The login id is "admin" and the password is also "admin".

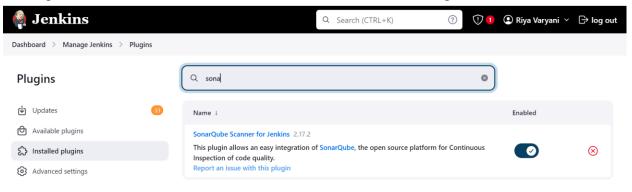


Step-4: Create a local project in SonarQube with the name sonarqube

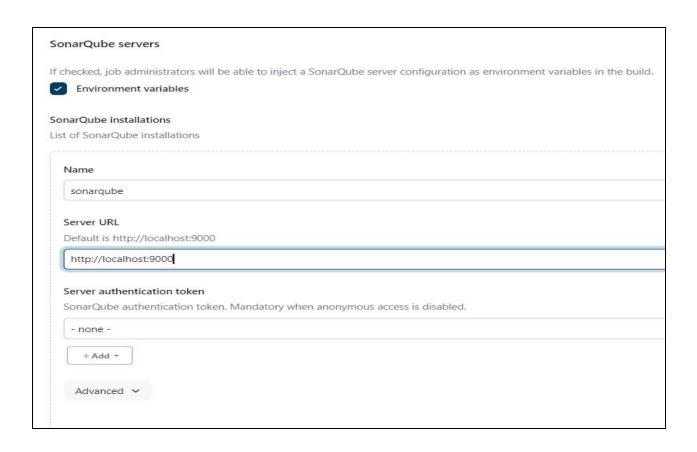




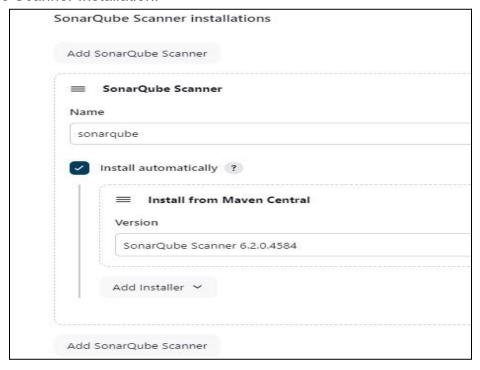
**Step-5:** Setup the project and come back to Jenkins Dashboard. Go to Manage Jenkins → Plugins and search for SonarQube Scanner in Available Plugins and install it.



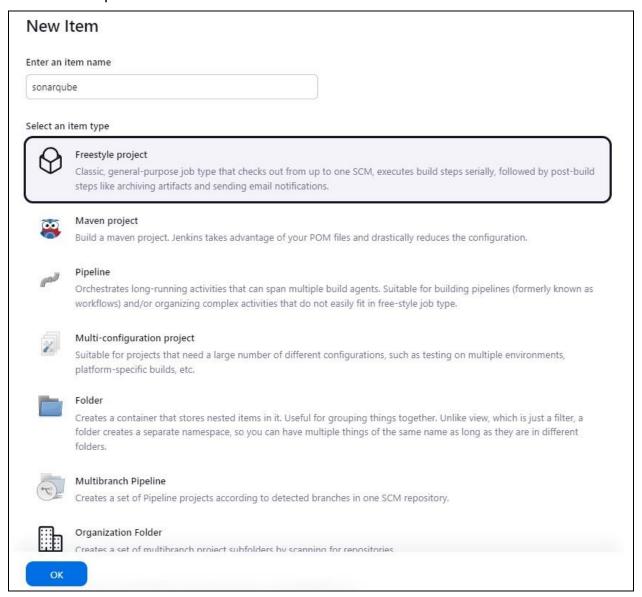
**Step-6:** Under 'Manage Jenkins  $\rightarrow$  System', look for SonarQube Servers and enter these details. Name: sonarqube, Server URL: http://localhost:9000



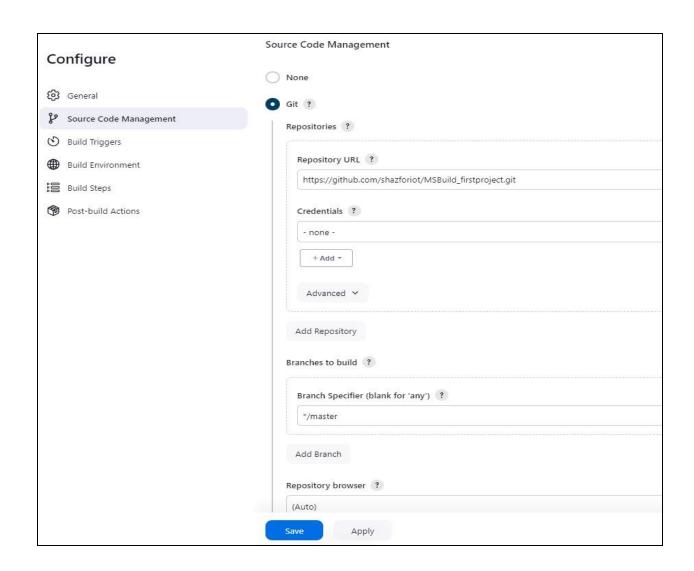
**Step-7:** Search for SonarQube Scanner under Global Tool Configuration. Choose the latest configuration and choose Install automatically. Manage Jeknins  $\rightarrow$  Tools  $\rightarrow$  SonarQube Scanner Installation.



**Step-8:** After the configuration, create a New Item in Jenkins, choose a freestyle project named sonarqube.



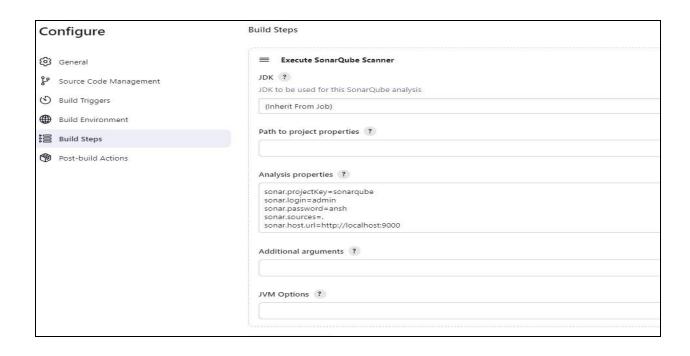
**Step-9:** Choose this GitHub repository in Source Code Management. <a href="https://github.com/shazforiot/MSBuild\_firstproject.git">https://github.com/shazforiot/MSBuild\_firstproject.git</a>. It is a sample hello-world project with no vulnerabilities and issues, just to test the integration.



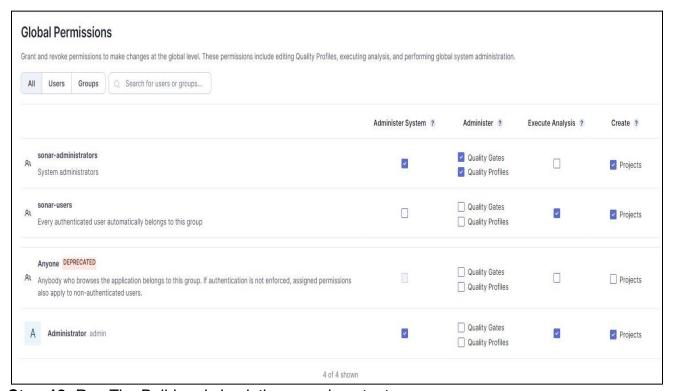
**Step-10:** Under Build-> Execute SonarQube Scanner, enter these Analysis Properties. Mention the SonarQube Project Key, Login, Password, Source path and Host URL.

sonar.projectKey=sonarqube
sonar.login=admin
sonar.password=riya 123
sonar.sources=.

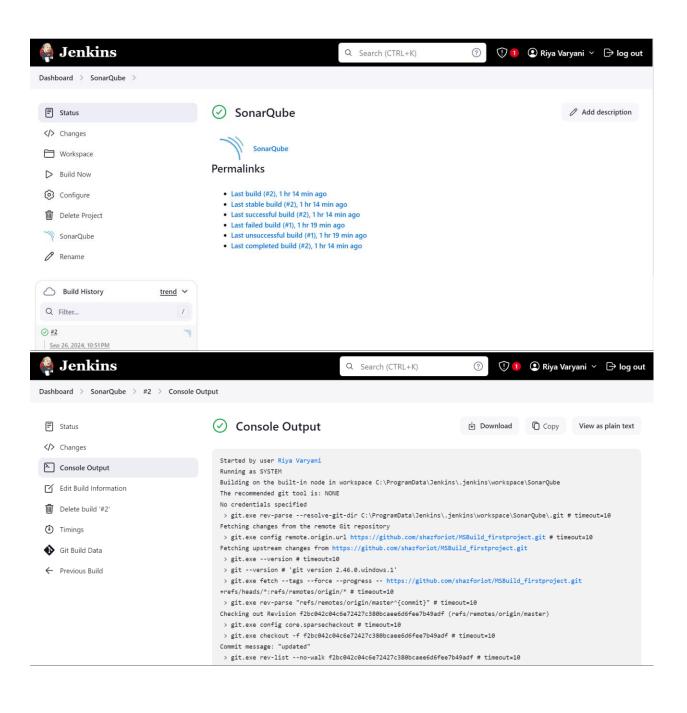
sonar.host.url=http://localhost:9000



**Step-11:** Go to <a href="http://localhost:9000/admin/permissions">http://localhost:9000/admin/permissions</a> and allow Execute Permissions to the Admin user.



Step-12: Run The Build and check the console output.



```
Dashboard > SonarQube > #2 > Console Output
                                                 44.34.44.444 INFO Sensor Lero Coverage Sensor
                                                22:52:22.262 INFO Sensor Zero Coverage Sensor (done) | time=18ms
                                                22:52:22.264 INFO SCM Publisher SCM provider for this project is: git
                                                22:52:22.266 INFO SCM Publisher 4 source files to be analyzed
                                                22:52:22.679 INFO SCM Publisher 4/4 source files have been analyzed (done) | time=413ms
                                                22:52:22.683 INFO CPD Executor Calculating CPD for 0 files
                                                22:52:22.684 INFO CPD Executor CPD calculation finished (done) | time=0ms
                                                22:52:22.691 INFO SCM revision ID 'f2bc042c04c6e72427c380bcaee6d6fee7b49adf'
                                                22:52:22.947 INFO Analysis report generated in 128ms, dir size=201.0 kB
                                                22:52:23.019 INFO Analysis report compressed in 58ms, zip size=22.5 kB
                                                22:52:23.156 INFO Analysis report uploaded in 135ms
                                                22:52:23.156 INFO ANALYSIS SUCCESSFUL, you can find the results at: http://localhost:9000/dashboard?id=sonarqube
                                                22:52:23.158 INFO Note that you will be able to access the updated dashboard once the server has processed the
                                                 submitted analysis report
                                                22:52:23.158 INFO More about the report processing at http://localhost:9000/api/ce/task?id=7cb01bac-c199-40ab-
                                                8c99-3c35629e6a80
                                                22:52:23.165 INFO Analysis total time: 17.327 s
                                                22:52:23.165 INFO SonarScanner Engine completed successfully
                                                22:52:23.216 INFO EXECUTION SUCCESS
                                                22:52:23.227 INFO Total time: 24.808s
                                                Finished: SUCCESS
```

REST API Jenkins 2.462.2

Step-13: Once the build is complete, check the project in SonarQube.

