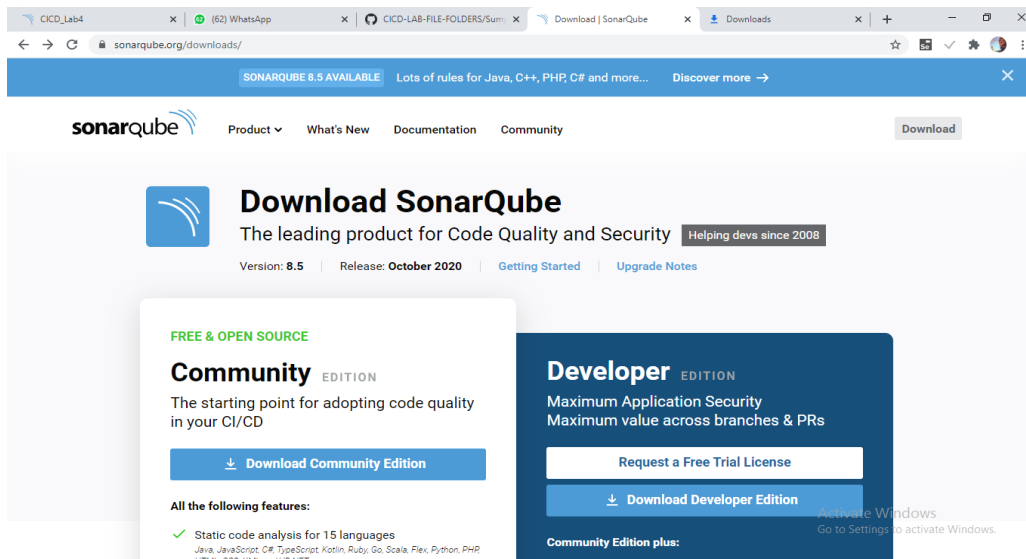
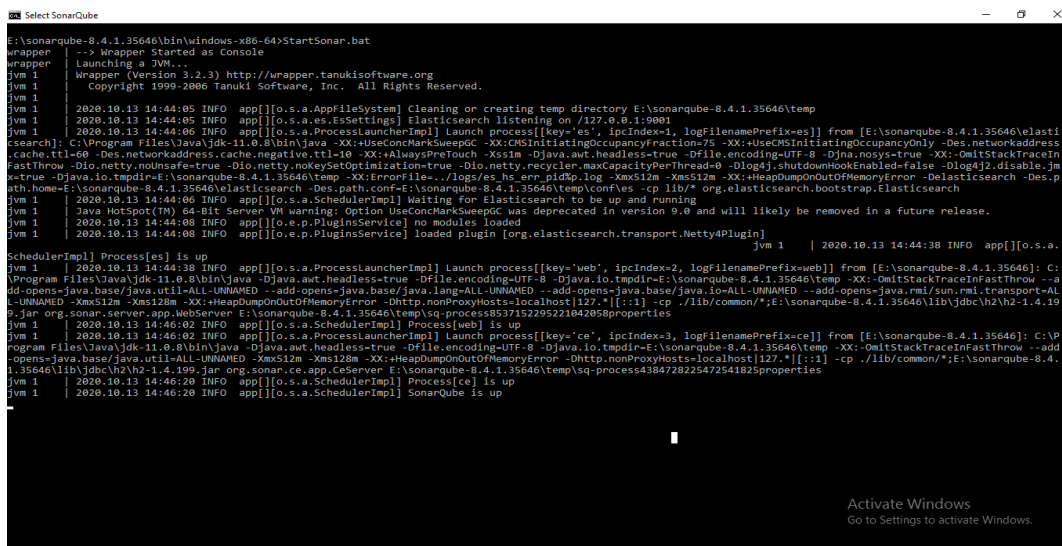


Experiment-4 (Static Code Analysis using SonarQube)

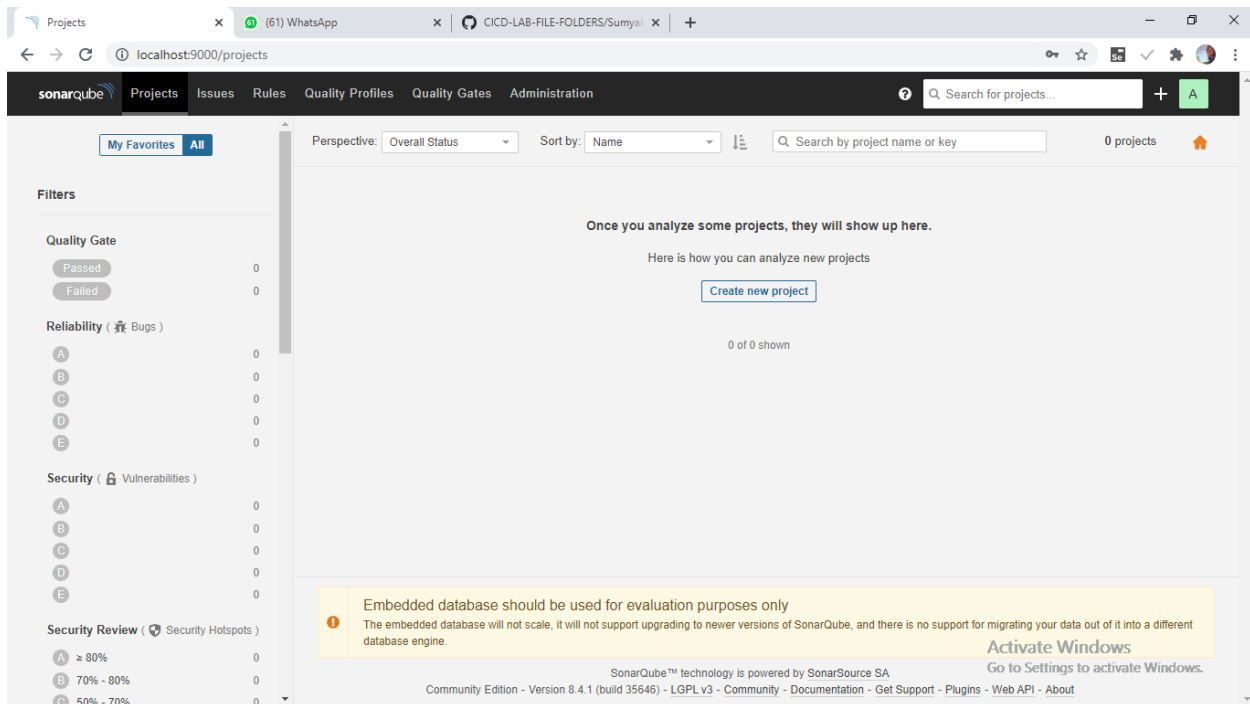
Step 1 – Install sonarqube



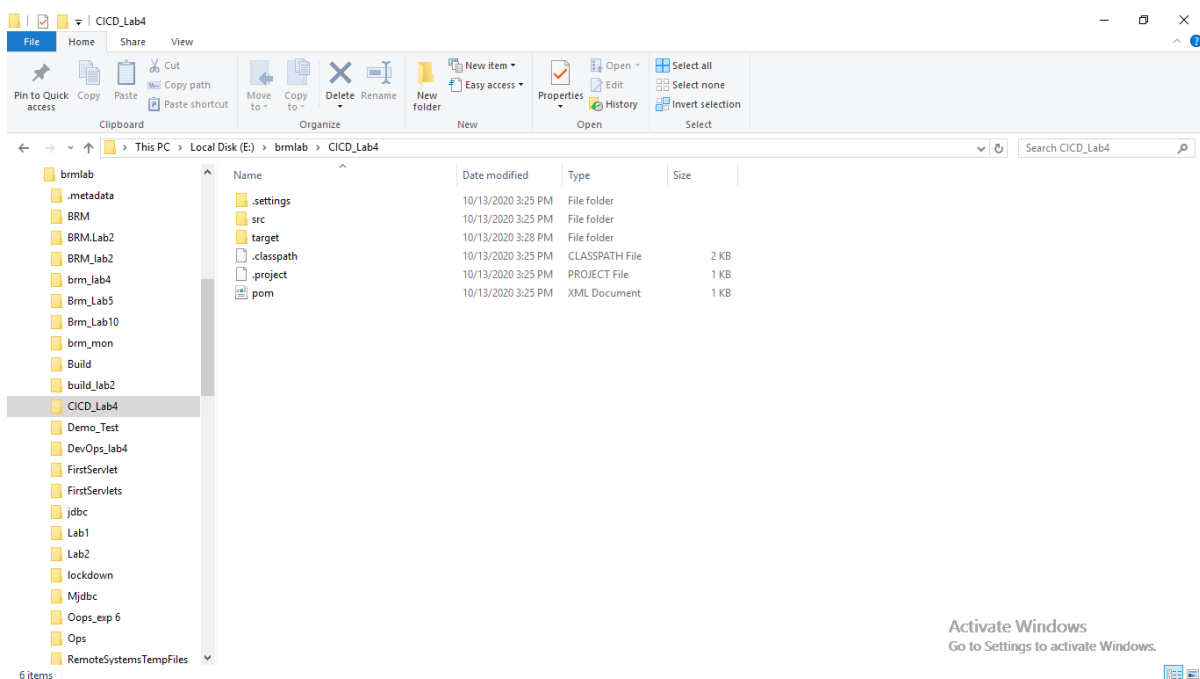
Step-2 Unzip the sonarqube folder and then in Command Prompt open StartSonar.bat file



Step-3 Now in browser hit localhost:9000 where sonarqube is working



Step-4 Now we should have one maven project for further steps



Step-6 In command prompt give this command:-

mvn clean install sonar:sonar -Dsonar.host.url=http://localhost:9000 -Dsonar.mode=publish

```
Command Prompt
E:\brmlab\CICD_Lab4>mvn clean install sonar:sonar -Dsonar.host.url=http://localhost:9000 -Dsonar.mode=publish
[INFO] Scanning for projects...
[INFO] -----< CICD_Lab4:CICD_Lab4 >-----
[INFO] Building CICD_Lab4 0.0.1-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ CICD_Lab4 ---
[INFO] Deleting E:\brmlab\CICD_Lab4\target
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ CICD_Lab4 ---
[WARNING] Using platform encoding (cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] Copying 0 resource
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ CICD_Lab4 ---
[INFO] Nothing to compile - all classes are up to date
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ CICD_Lab4 ---
[WARNING] Using platform encoding (cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] Copying 0 resource
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ CICD_Lab4 ---
[INFO] Nothing to compile - all classes are up to date
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ CICD_Lab4 ---
[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ CICD_Lab4 ---
[INFO] Building jar: E:\brmlab\CICD_Lab4\target\CICD_Lab4-0.0.1-SNAPSHOT.jar
[INFO] --- maven-install-plugin:2.4:install (default-install) @ CICD_Lab4 ---
[INFO] Installing E:\brmlab\CICD_Lab4\target\CICD_Lab4-0.0.1-SNAPSHOT.jar to C:\Users\HP\.m2\repository\CICD_Lab4\CICD_Lab4\0.0.1-SNAPSHOT\CICD_Lab4-0.0.1-SNAPSHOT.jar
[INFO] Installing E:\brmlab\CICD_Lab4\pom.xml to C:\Users\HP\.m2\repository\CICD_Lab4\CICD_Lab4\0.0.1-SNAPSHOT\CICD_Lab4-0.0.1-SNAPSHOT.pom
[INFO] -----< CICD_Lab4:CICD_Lab4 >-----
[INFO] Building CICD_Lab4 0.0.1-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO] --- sonar-maven-plugin:3.7.0.1746:sonar (default-cli) @ CICD_Lab4 ---
Downloading from central: https://repo.maven.apache.org/maven2/org/sonatype/plexus/plexus-sec-dispatcher/1.4/plexus-sec-dispatcher-1.4.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/sonatype/plexus/plexus-sec-dispatcher/1.4/plexus-sec-dispatcher-1.4.pom (3.0 kB at 915 B/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.2.1/plexus-utils-3.2.1.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.2.1/plexus-utils-3.2.1.pom (5.3 kB at 915 B/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/sonarsource/scanner/api/sonar-scanner-api/2.14.0.2002/sonar-scanner-api-2.14.0.2002.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/sonarsource/scanner/api/sonar-scanner-api/2.14.0.2002/sonar-scanner-api-2.14.0.2002.pom (5.2 kB at 11 KB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/sonarsource/scanner/api/sonar-scanner-api/2.14.0.2002/sonar-scanner-api-2.14.0.2002.jar
[INFO] BUILD SUCCESS
[INFO] Total time: 35.573 s
[INFO] Finished at: 2020-10-13T15:28:09+05:30
[INFO] -----
[WARNING] The requested profile "profile1" could not be activated because it does not exist.
[WARNING] The requested profile "profile2" could not be activated because it does not exist.
E:\brmlab\CICD_Lab4>
```

Step-7 Build Success

```
Command Prompt
[INFO] Load project repositories (done) | time=12ms
[INFO] Sensor JavaXmlSensor [java] (done) | time=372ms
[INFO] 1/1 source files have been analyzed
[INFO] Sensor HTML [web]
[INFO] Sensor HTML [web] (done) | time=28ms
[INFO] Sensor XML Sensor [xml]
[INFO] 1 source files to be analyzed
[INFO] Sensor XML Sensor [xml] (done) | time=394ms
[INFO] 1/1 source files have been analyzed
[INFO] ----- Run sensors on project
[INFO] Sensor Zero Coverage Sensor
[INFO] Sensor Zero Coverage Sensor (done) | time=6ms
[INFO] SCM Publisher SCM provider for this project is: git
[INFO] SCM Publisher 1 source file to be analyzed
[INFO] SCM Publisher 0/1 source files have been analyzed (done) | time=121ms
[WARNING] Missing blame information for the following files:
[WARNING] * pom.xml
[WARNING] This may lead to missing/broken features in SonarQube
[INFO] CPD Executor Calculating CPD for 0 files
[INFO] CPD Executor CPD calculation finished (done) | time=0ms
[INFO] Analysis report generated in 135ms, dir size=80 KB
[INFO] Analysis report compressed in 24ms, zip size=11 KB
[INFO] Analysis report uploaded in 1276ms
[INFO] ANALYSIS SUCCESSFUL, you can browse http://localhost:9000/dashboard?id=CICD_Lab4%3ACICD_Lab4
[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=AXUhZVIFqX-mpnRgIGeQ
[INFO] Analysis total time: 19.604 s
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 35.573 s
[INFO] Finished at: 2020-10-13T15:28:09+05:30
[INFO] -----
[WARNING] The requested profile "profile1" could not be activated because it does not exist.
[WARNING] The requested profile "profile2" could not be activated because it does not exist.
E:\brmlab\CICD_Lab4>
```

Activate Windows
Go to Settings to activate Windows.

Step-8 Now we can see our project in sonarqube

The screenshot shows the SonarQube web interface at `localhost:9000/projects`. The 'Projects' tab is active, displaying a list of projects. The project 'CICD_Lab4' is highlighted, showing a 'Passed' status. The last analysis was on October 13, 2020, at 3:28 PM. The project's quality gate is 'Passed', and the overall status is 'A'. The metrics shown are: 0 Bugs, 0 Vulnerabilities, 0 Hotspots Reviewed, 0 Code Smells, and 0.0% Duplications. The project has 7 XML files. The interface also includes a search bar, filters, and a warning message about the embedded database.

Projects

Search for projects...

Perspective: Overall Status Sort by: Name

1 projects

Filters

Quality Gate

Passed 1 Failed 0

Reliability (Bugs)

A 1 B 0 C 0 D 0 E 0

Security (Vulnerabilities)

A 1 B 0 C 0 D 0 E 0

Security Review (Security Hotspots)

A ≥ 80% 1 B 70% - 80% 0 C 50% - 70% 0

CICD_Lab4 Passed

Last analysis: October 13, 2020, 3:28 PM

0 A Bugs 0 A Vulnerabilities - A Hotspots Reviewed 0 A Code Smells 0.0% Duplications 7 XS XML

1 of 1 shown

Embedded database should be used for evaluation purposes only

The embedded database will not scale, it will not support upgrading to newer versions of SonarQube, and there is no support for migrating your data out of it into a different database engine.

Activate Windows

Go to Settings to activate Windows.

SonarQube™ technology is powered by SonarSource SA

Community Edition - Version 8.4.1 (build 35646) - LGPL v3 - Community - Documentation - Get Support - Plugins - Web API - About

The screenshot shows the SonarQube project dashboard for 'CICD_Lab4'. The 'Overview' tab is active, displaying the 'QUALITY GATE STATUS' as 'Passed' with the message 'All conditions passed.' The 'MEASURES' section shows the following metrics: 0 Bugs, 0 Vulnerabilities, 0 Security Hotspots Reviewed, 0 Debt, and 0 Code Smells. The project's overall status is 'A'. The interface also includes a search bar, filters, and a warning message about the embedded database.

CICD_Lab4

Search for projects...

Overview Issues Security Hotspots Measures Code Activity

Project Settings Project Information

QUALITY GATE STATUS

Passed

All conditions passed.

MEASURES

New Code Overall Code

0 Bugs Reliability A

0 Vulnerabilities Security A

0 Security Hotspots Reviewed Security Review A

0 Debt 0 Code Smells Maintainability A

Activate Windows

Go to Settings to activate Windows.