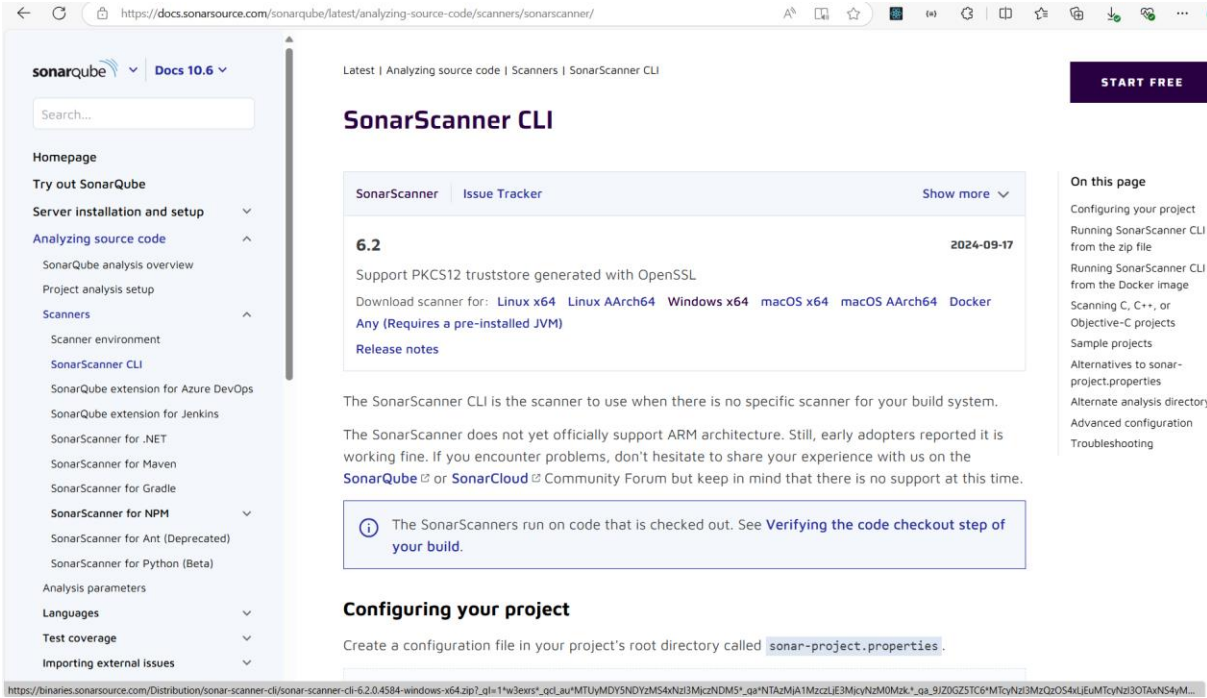


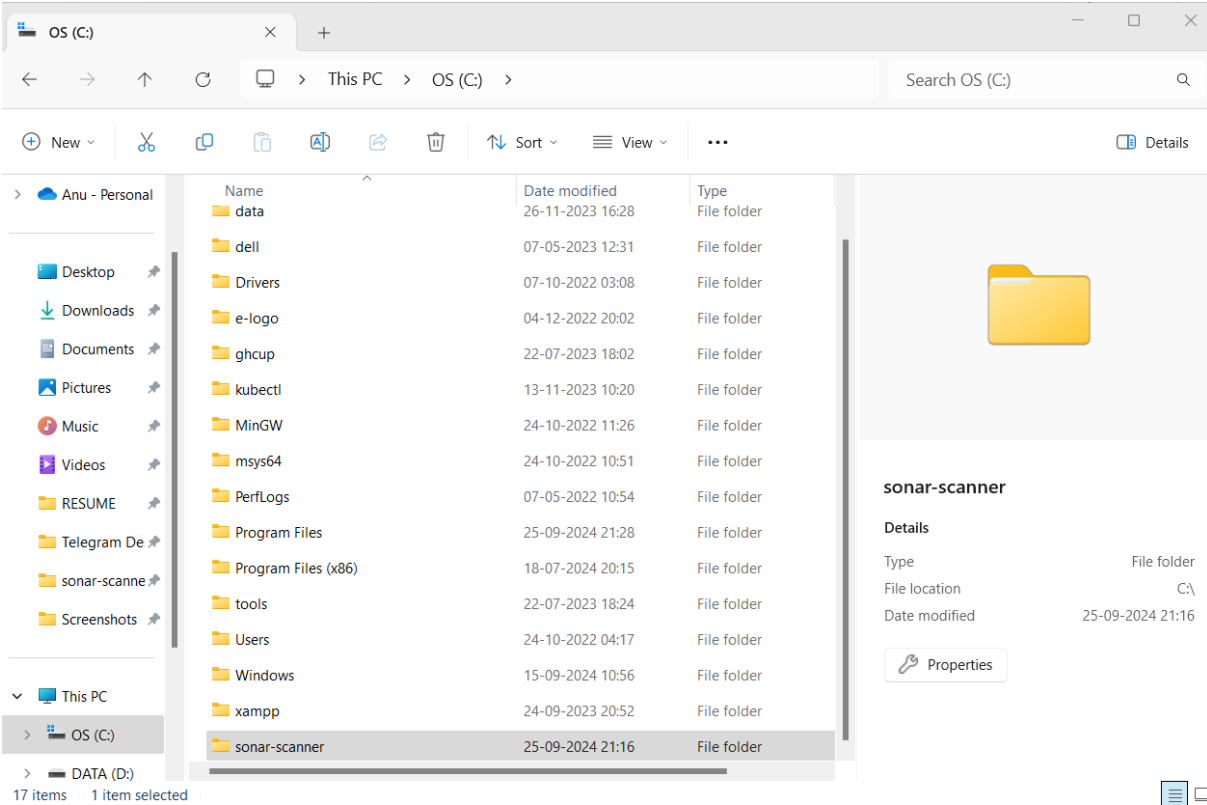
Experiment 8

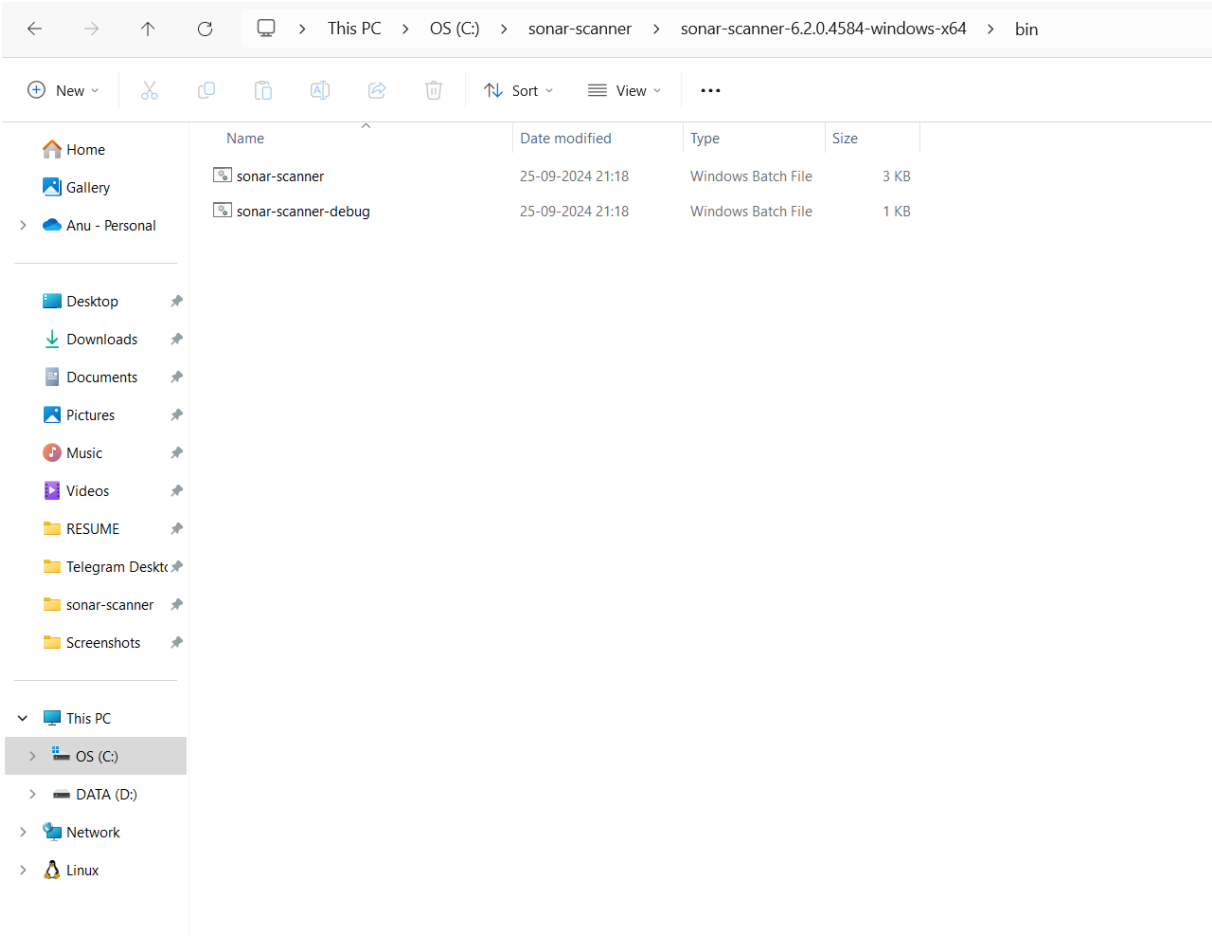
Aim: Create a Jenkins CICD Pipeline with SonarQube / GitLab Integration to perform a static analysis of the code to detect bugs, code smells, and security vulnerabilities on a sample Web /Java / Python application.

Step 1 : Visit the following link to download the SonarScanner CLI - <https://docs.sonarsource.com/sonarqube/latest/analyzing-source-code/scanners/sonarscanner/> and then click on Windows x-64 to download the zip file.

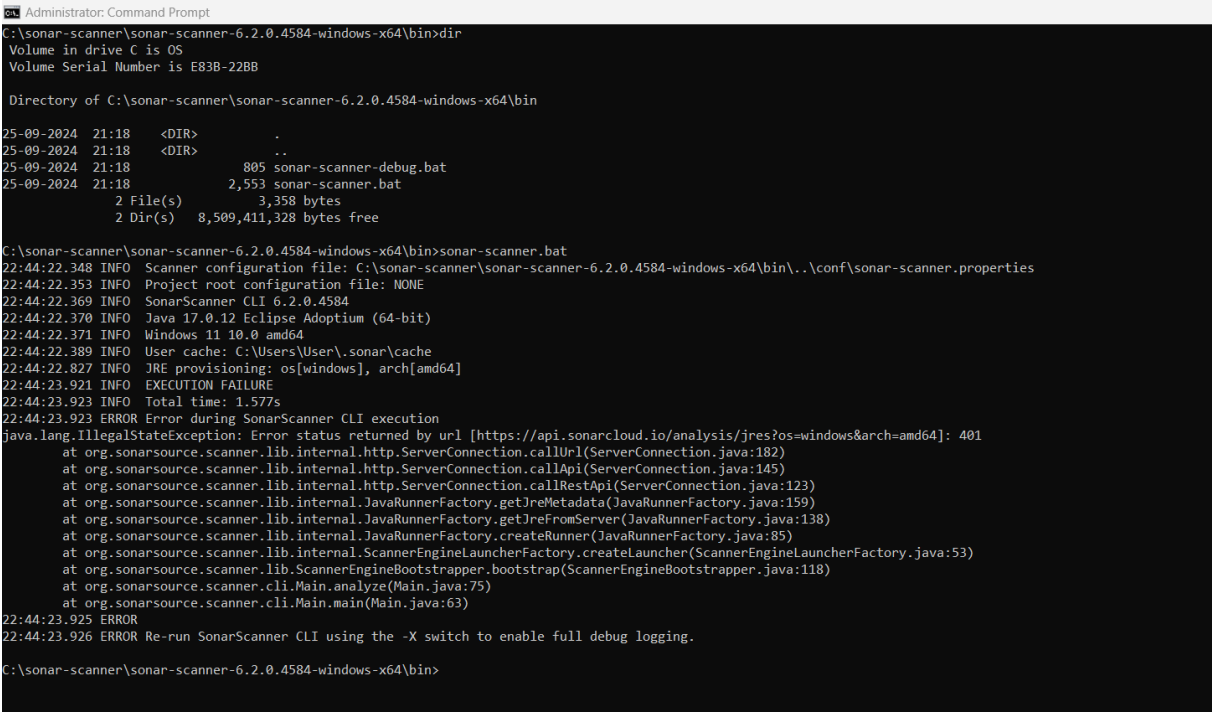


Step 2: Extract the content in C drive and name the folder sonar-scanner






Step 3: Open Command Prompt and run as administrator and run the following commands –  
cd C:\sonar-scanner\sonar-scanner-6.2.0.4584-windows-x64\bin  
dir  
sonar-scanner.bat




Step 4: Open Jenkins and create a pipeline and name the pipeline SonarQube Pipeline and then click on okay.

Enter an item name


*\* Required field*


**Freestyle project**


Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications.


**Maven project**


Build a maven project. Jenkins takes advantage of your POM files and drastically reduces the configuration.


**Pipeline**


Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.


**Multi-configuration project**

Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.


**Folder**

Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a separate namespace, so you can have multiple things of the same name as long as they are in different folders.


**Discover branch Pipeline**

Discover a set of Pipeline projects according to detected branches in one SCM repository.

Step 5: In the configuration, under the Pipeline Section write the following Pipeline Script -

```
node {
```

```
    stage('Cloning the GitHub Repo') {
        git 'https://github.com/shazforiot/MSBuild_firstproject.git'
    }

    stage('SonarQube analysis') {
        withSonarQubeEnv('sonarqube') {
            bat "C:/sonar-scanner/sonar-scanner-6.2.0.4584-windows-x64/bin/sonar-scanner.bat \
                -D sonar.login=admin \
                -D sonar.password=sonarqube \
                -D sonar.projectKey=sonarqube-test \
                -D sonar.exclusions=vendor/**,resources/**,**/*.java \
                -D sonar.host.url=http://127.0.0.1:9000/"
        }
    }
}
```

Then click on the save button.

Dashboard > SonarQube Pipeline > Configuration

Configure

General

Advanced Project Options

Pipeline

Pipeline

Definition

Pipeline script

Script ?

```
1 - node {
2   stage('Cloning the GitHub Repo') {
3     git 'https://github.com/shazforiot/MSBuild_firstproject.git'
4   }
5   stage('SonarQube analysis') {
6     withSonarQubeEnv('sonarqube') {
7       bat "C:/sonar-scanner/sonar-scanner-6.2.0.4584-windows-x64/bin/sonar-scanner.bat \
8         -D sonar.login=admin \
9         -D sonar.password=sonarqube \
10        -D sonar.projectKey=sonarqube-test \
11        -D sonar.exclusions=vendor/**,resources/**,**/*.java \
12        -D sonar.host.url=http://127.0.0.1:9000/"
13      }
14    }
15  }
16 }
```

☒ Use Groovy Sandbox ?

[Pipeline Syntax](#)

Save

Apply

REST API    Jenkins 2.452.3

Step 6: Now, click on Build Now and the build is successful.

Jenkins

Q Search (CTRL+K)

Anuprita Mhapankar log out

Dashboard > SonarQube Pipeline >

Status

Changes

Build Now

Configure

Delete Pipeline

Full Stage View

SonarQube

Stages

Rename

Pipeline Syntax

Build History

trend

Filter...

#10

Sep 25, 2024, 9:55 PM

#9

Sep 25, 2024, 9:52 PM

#8

✓ SonarQube Pipeline

Add description

Disable Project

Stage View

	Cloning the GitHub Repo	SonarQube analysis
Average stage times: (Average full run time: ~22s)	4s	3s
#10 Sep 25 21:55 No Changes	1s	20s
#9 Sep 25 21:52 No Changes	19s	549ms failed
#8 Sep 25 21:43 No Changes	1s	1s failed
#7 Sep 25 21:33 No Changes	1s	957ms failed

Step 7: Now, visit <http://127.0.0.1:9000/dashboard?id=sonarqube-test> to see the result.

127.0.0.1:9000/dashboard?id=sonarqube-test&codeScope=overall

sonarqube

Projects Issues Rules Quality Profiles Quality Gates Administration More

sonarqube-test / main

Overview Issues Security Hotspots Measures Code Activity

Project Settings Project Information

Quality Gate **Passed**

The last analysis has warnings. [See details](#)

New Code Overall Code

<b>Security</b> 0 Open issues 0 H 0 M 0 L A	<b>Reliability</b> 0 Open issues 0 H 0 M 0 L A	<b>Maintainability</b> 0 Open issues 0 H 0 M 0 L A
<b>Accepted Issues</b> 0 Valid issues that were not fixed B	<b>Coverage</b> On 0 lines to cover. C	<b>Duplications</b> 0.0% On 86 lines. C
<b>Security Hotspots</b> 0 A		

127.0.0.1:9000/dashboard?id=sonarqube-test&codeScope=overall

sonarqube

ProjectsIssuesRulesQuality ProfilesQuality GatesAdministrationMore

sonarqube-test / main

OverviewIssuesSecurity HotspotsMeasuresCodeActivity

Project SettingsProject Information

Learn how to improve your code base by cleaning only new code.

Take the TourNot now

Quality Gate

Passed

Last analysis 45 minutes ago

The last analysis has warnings. See details

New CodeOverall Code

Security

0 Open issues

0 H0 M0 L

Reliability

68k Open issues

0 H47k M21k L

Maintainability

164k Open issues

7 H143k M21k L

Accepted issues

0

Valid issues that were not fixed

Coverage

On 0 lines to cover.

Duplications

50.6%

On 759k lines.

Security Hotspots