Experiment No 8

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D15A 48
Batch C

AIM: Integrating Jenkins with SonarQube.

Open up Jenkins Dashboard on localhost, port 8080
Run SonarQube in a Docker container using this command -
$ docker run -d --name sonarqube -e SONAR_ES_BOOTSTRAP_CHECKS_DISABLE=true -p 9000:9000
sonarqube:latest

```
PS D:\Desktop\DockerFile> docker run -d --name sonarqube -e SONAR_ES_BOOTSTRAP_CHECKS_DISABLE=true -p 9000:9000 sonarqub
e:latest
Unable to find image 'sonarqube:latest' locally
latest: Pulling from library/sonarqube
44ba2882f8eb: Pull complete
2cabec57fa36: Pull complete
c20481384b6a: Pull complete
bf7b17ee74f8: Pull complete
38617faac714: Pull complete
b795b715553d: Pull complete
c5244f6c9231: Pull complete
Digest: sha256:1ffd122cfb37ce982289dc7f5d38bb702ba05af7b5a50f7cb077ae25e60b5b9a
Status: Downloaded newer image for sonarqube:latest
1442c4e613b25aaedec05c060f020a00802b1c6dbaa27e8c5c0dad4ed8fc1f76
```

sonarqube

Log in to SonarQube

admin

•••••

Log in   Cancel
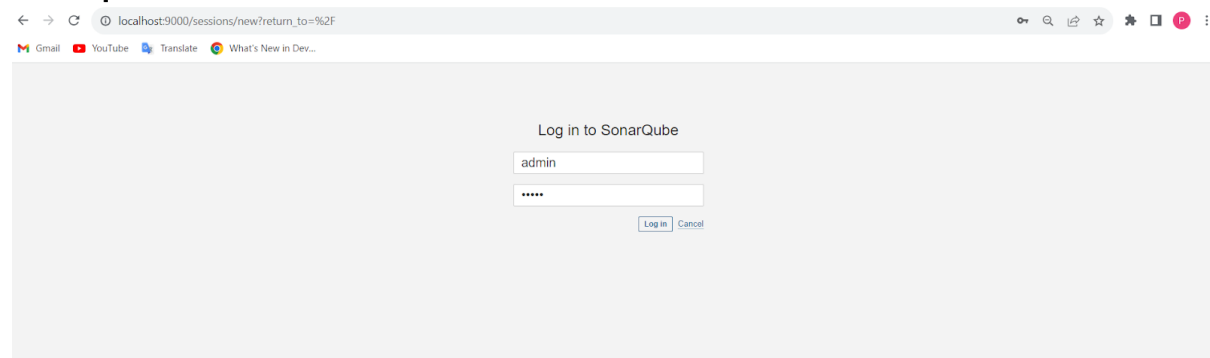
Create project manually

Create a project

Project display name *

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Up to 255 characters. Some scanners might override the value you provide.
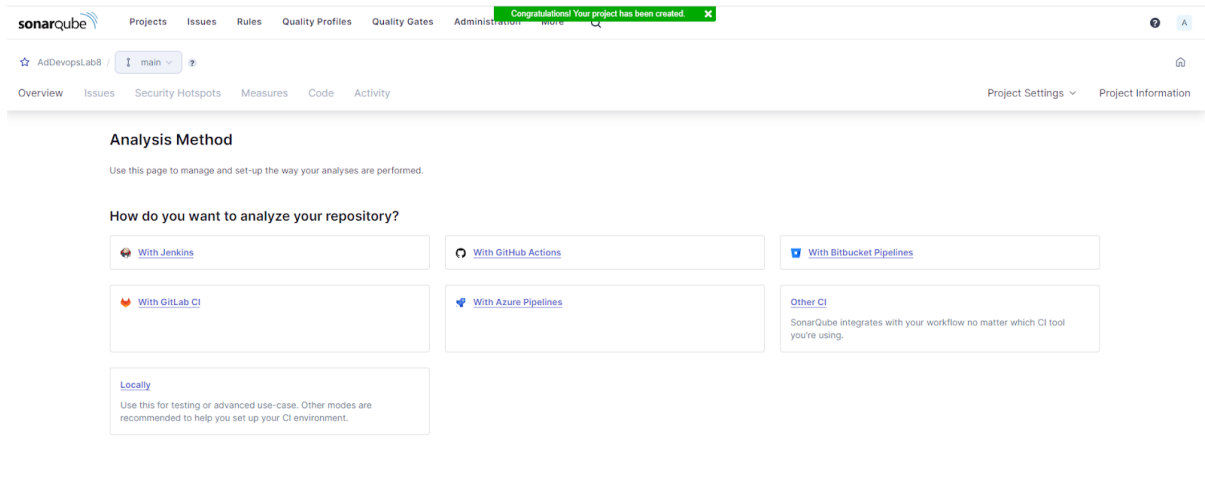
Project key *

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The project key is a unique identifier for your project. It may contain up to 400 characters.
Allowed characters are alphanumeric, '-' (dash), '_' (underscore), '.' (period) and ':' (colon), with at
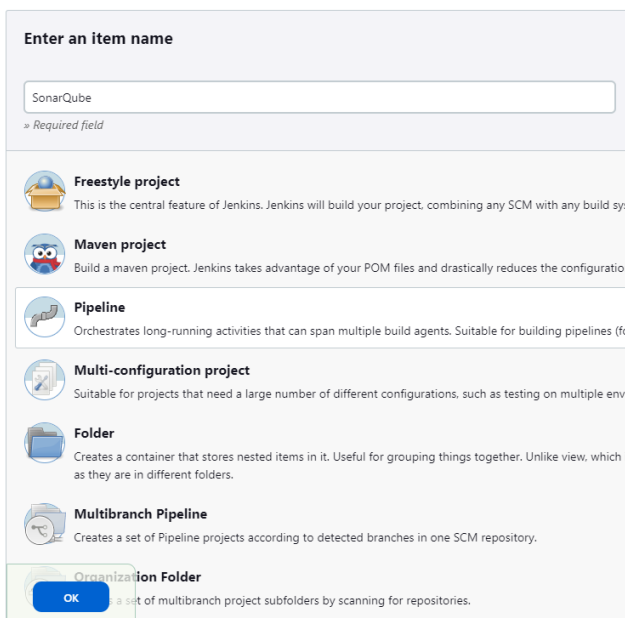least one non-digit.

Main branch name *

main

The name of your project's default branch Learn More

Next

In Jenkins create a pipeline here named "SonarQube"

Enter the following in pipeline script:

```
node {
    stage('Cloning the GitHub Repo') {
        git 'https://github.com/PrajaktaUpadhye6/MSBuild_firstproject.git'
    }
    stage('SonarQube analysis') {
        withSonarQubeEnv('sonarqube') {
            bat "D:/sonar-scanner-cli-5.0.1.3006-windows/sonar-scanner-5.0.1.3006-
windows/bin/sonar-scanner.bat \
                -D sonar.login=admin \
                -D sonar.password=abc \
                -D sonar.projectKey=AdDevops \
                -D sonar.exclusions=vendor/**,resources/**,**/*.java \
                -D sonar.host.url=http://127.0.0.1:9000/"
        }
    }
```

```
        }
}
```

Pipeline

Definition

Pipeline script

Script ?

```
 1 ▾  node {
 2 ▾      stage('Cloning the GitHub Repo') {
 3             git 'https://github.com/PrajaktaUpadhye6/HTML_TRIAL.git'
 4         }
 5 ▾      stage('SonarQube analysis') {
 6 ▾          withSonarQubeEnv('sonarqube') {
 7                 bat "D:/sonar-scanner-cli-5.0.1.3006-windows/sonar-scanner-5.0.1.3006-windows/bin/sonar-scanner.bat \
 8                     -D sonar.login=admin \
 9                     -D sonar.password=abc \
10                     -D sonar.projectKey=AdDevops \
11                     -D sonar.exclusions=vendor/**,resources/**,**/*.java \
12                     -D sonar.host.url=http://127.0.0.1:9000/"
13             }
14         }
15  }
```

☑ Use Groovy Sandbox ?

Pipeline Syntax

[Save] [Apply]

It is a java sample project which has a lot of repetitions and issues that will be detected by SonarQube.
Build and run:

	Status
</>	Changes
▷	Build Now
⚙	Configure
🗑	Delete Pipeline
🔍	Full Stage View
◯	GitHub
〰	SonarQube
✎	Rename
?	Pipeline Syntax

Build History trend ⌄

🔍 Filter builds... /

✅ #8
Sep 20, 2023, 12:36 PM

🔊 Atom feed for all 🔊 Atom feed for failures

Pipeline SonarQube

Lab 8

Stage View

	Cloning the GitHub Repo	SonarQube analysis
Average stage times: (Average full run time: ~36s)	2s	33s
#8 Sep 20 12:36	No Changes	2s	33s

Permalinks

- Last build (#8), 1 min 44 sec ago
- Last stable build (#8), 1 min 44 sec ago
- Last successful build (#8), 1 min 44 sec ago
- Last completed build (#8), 1 min 44 sec ago

Console output:

Console Output

Started by user Prajakta Upadhye
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in C:\ProgramData\Jenkins\.jenkins\workspace\SonarQube
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Cloning the GitHub Repo)
[Pipeline] git
The recommended git tool is: NONE
No credentials specified
 > git.exe rev-parse --resolve-git-dir C:\ProgramData\Jenkins\.jenkins\workspace\SonarQube\.git # timeout=10
Fetching changes from the remote Git repository
 > git.exe config remote.origin.url https://github.com/PrajaktaUpadhye6/MSBuild_firstproject.git # timeout=10
Fetching upstream changes from https://github.com/PrajaktaUpadhye6/MSBuild_firstproject.git
 > git.exe --version # timeout=10
 > git --version # 'git version 2.39.2.windows.1'
 > git.exe fetch --tags --force --progress -- https://github.com/PrajaktaUpadhye6/MSBuild_firstproject.git +refs/heads/*:refs/rem
 > git.exe rev-parse "refs/remotes/origin/master^{commit}" # timeout=10
Checking out Revision f2bc042c04c6e72427c380bcaee6d6fee7b49adf (refs/remotes/origin/master)
 > git.exe config core.sparsecheckout # timeout=10
 > git.exe checkout -f f2bc042c04c6e72427c380bcaee6d6fee7b49adf # timeout=10
 > git.exe branch -a -v --no-abbrev # timeout=10
 > git.exe branch -D master # timeout=10
 > git.exe checkout -b master f2bc042c04c6e72427c380bcaee6d6fee7b49adf # timeout=10
Commit message: "updated"
 > git.exe rev-list --no-walk f2bc042c04c6e72427c380bcaee6d6fee7b49adf # timeout=10
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (SonarQube analysis)

INFO: Sensor Analysis Warnings import [csharp] (done) | time=0ms
INFO: Sensor C# File Caching Sensor [csharp]
WARN: Incremental PR analysis: Could not determine common base path, cache will not be computed. Consider setting 'sonar.project
INFO: Sensor C# File Caching Sensor [csharp] (done) | time=0ms
INFO: Sensor Zero Coverage Sensor
INFO: Sensor Zero Coverage Sensor (done) | time=13ms
INFO: SCM Publisher SCM provider for this project is: git
INFO: SCM Publisher 4 source files to be analyzed
INFO: SCM Publisher 4/4 source files have been analyzed (done) | time=885ms
INFO: CPD Executor Calculating CPD for 0 files
INFO: CPD Executor CPD calculation finished (done) | time=0ms
INFO: Analysis report generated in 94ms, dir size=139.1 kB
INFO: Analysis report compressed in 47ms, zip size=19.0 kB
INFO: Analysis report uploaded in 293ms
INFO: ANALYSIS SUCCESSFUL, you can find the results at: http://127.0.0.1:9000/dashboard?id=AdDevopsLab8
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://127.0.0.1:9000/api/ce/task?id=AYqxaYIISBkGVlDYdy2L
INFO: Analysis total time: 25.031 s
INFO: --
INFO: EXECUTION SUCCESS
INFO: --
INFO: Total time: 30.481s
INFO: Final Memory: 20M/70M
INFO: --
[Pipeline] }
[Pipeline] // withSonarQubeEnv
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS

sonarqube:

☆ AdDevops PUBLIC   ✓ Passed

Last analysis: 3 minutes ago · **543** Lines of Code · HTML, CSS

| E **7** Bugs | A **0** Vulnerabilities | E **0.0%** Hotspots Reviewed | A **8** Code Smells | — Coverage | **22.3%** Duplications |

☆ AdDevops /   ⇅ main ✓ ∨   ?

⚠ The last analysis has warnings. See details   Version not provided ⌂

Overview   Issues   Security Hotspots   Measures   Code   Activity   Project Settings ∨   Project Information

Quality Gate Status ?

✓ Quality Gate
Passed

Enjoy your sparkling clean code!

Measures

New Code | Overall Code

🏛 Reliability		⚙ Maintainability	
7 Bugs	E	**8** Code Smells	A

🔒 Security		🛡 Security Review	
0 Vulnerabilities	A	**6** Security Hotspots ?	E

Duplications	
22.3% Duplications	

Reliability:

Bugs:

Maintanaibility:

Security:

Duplications:

Cyclomatic complexity:

Activity:
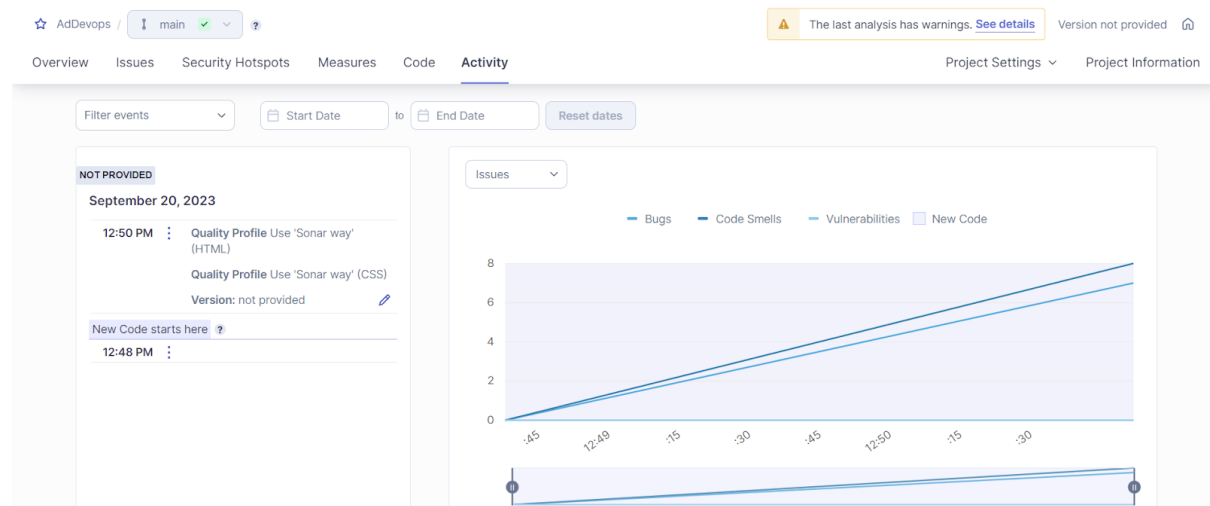
Conclusion: Thus, we have successfully integrated Jenkins with SonarQube.