

## Experiment No 8

**Vaibhav Boudh**  
**D15B 07**

### **AIM: Integrating Jenkins with SonarQube.**

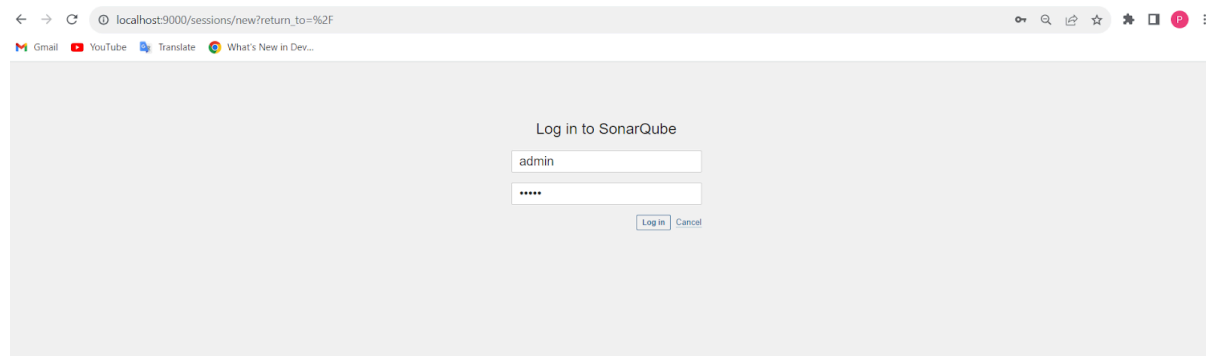
Open up Jenkins Dashboard on localhost, port 8080

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 sonarqube: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: sha256:1fffd122cfb37ce982289dc7f5d38bb702ba05af7b5a50f7cb077ae25e60b5b9a
Status: Downloaded newer image for sonarqube:latest
1442c4e613b25aaedec05c060f020a00802b1c6dbaa27e8c5c0dad4ed8fc1f76
```

### **sonarqube**



### **Create project manually**

#### **Create a project**

Project display name \*

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

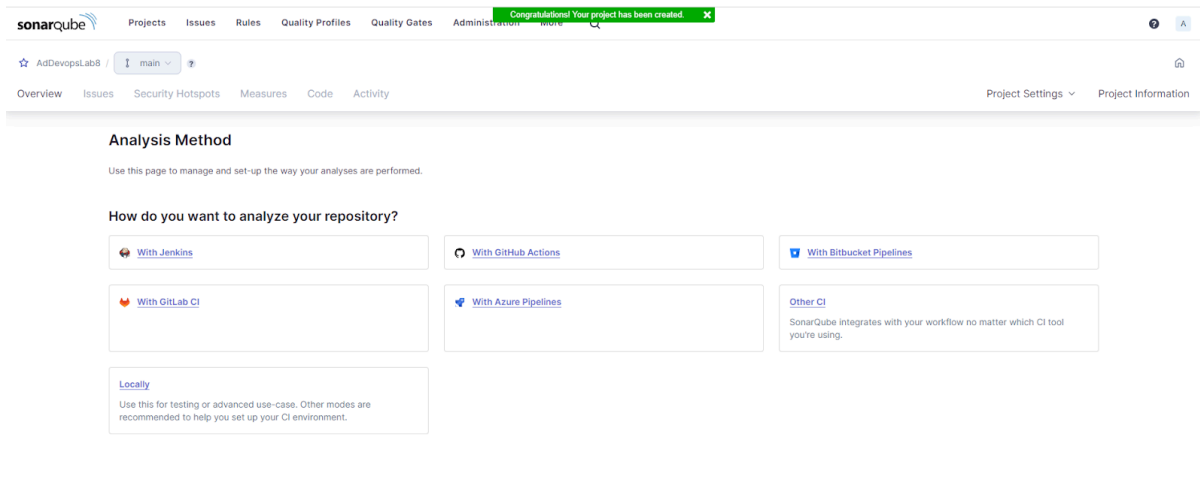
Project key \*

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.

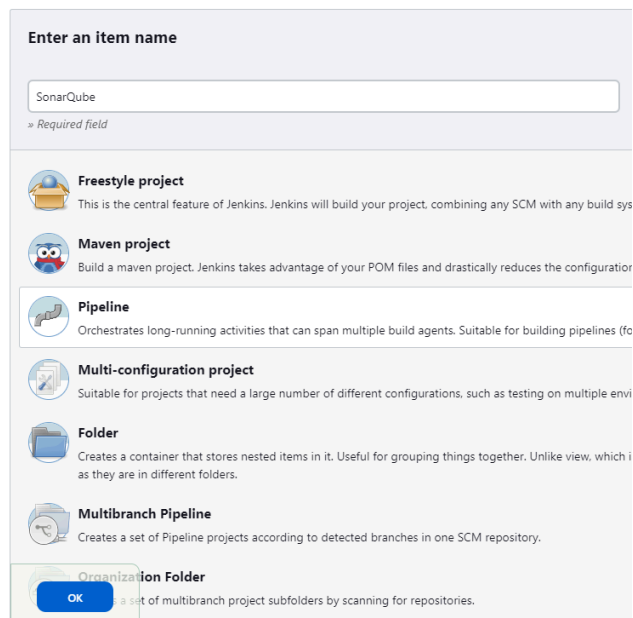
Main branch name \*

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

Filter builds...

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
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 credential 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/PrajaktaUpadhye/H5Build_FirstProject.git # timeout=10
Fetching upstream changes from https://github.com/PrajaktaUpadhye/H5Build_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/PrajaktaUpadhye/H5Build_FirstProject.git --refs/heads/*:refs/rem
> git.exe rev-parse "refs/remotes/origin/master:[commit]" # timeout=10
Checking out Revision f2bc042c04c6e72427c380bcaceedd6fe7b49adf (refs/remotes/origin/master)
> git.exe config core.sparsecheckout # timeout=10
> git.exe checkout -f f2bc042c04c6e72427c380bcaceedd6fe7b49adf # timeout=10
> git.exe branch -a -v --no-above # timeout=10
> git.exe branch -D master # timeout=10
> git.exe checkout -b master f2bc042c04c6e72427c380bcaceedd6fe7b49adf # timeout=10
Commit message: "updated"
> git.exe rev-list --no-walk f2bc042c04c6e72427c380bcaceedd6fe7b49adf # 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=19.1 kB
INFO: Analysis report compressed in 94ms, 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=AdDevsopsLab8
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=47q8vT1186dV12Dy2L
INFO: Analysis total time: 25.831 s
INFO: .....
INFO: EXECUTION SUCCESS
INFO: .....
INFO: Total time: 36.483s
INFO: Final Memory: 20M/70M
INFO: .....
[Pipeline] }
[Pipeline] // withSonarQubeEnv
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

## sonarqube:

☆ AdDevsops 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

☆ AdDevsops / 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

7 Bugs

E

Maintainability

8 Code Smells

A

Security

0 Vulnerabilities

A

Security Review

6 Security Hotspots ?

E

Duplications

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

Project Overview

Reliability

Overview

New Code

Bugs

0

Rating

A

Remediation Effort

0

Overall Code

Bugs

7

AdDevops

View as

List

Select files

Navigate

15 files

Reliability Rating

E

See history

New Code: Since September 20, 2023

scroll.css

trial.css

verticaltable.html

demo.html

index.html

payment.html

There are 9 hidden components with a score of A.

Show Them

## Bugs:

AdDevops /

main

?

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

Version not provided

Overview

Issues

Security Hotspots

Measures

Code

Activity

Project Settings

Project Information

Bugs

0

Rating

A

Remediation Effort

0

Overall Code

Bugs

7

Rating

E

Remediation Effort

28min

Security

Security Review

Bugs 7

See history

New Code: Since September 20, 2023

box.html

class.css

demo.html

element.css

float property.html

home.html

id.css

index.html

payment.html

scroll.css

0

0

1

0

0

0

1

1

1

## Maintanaibility:

AdDevops /

main

?

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

Version not provided

Overview

Issues

Security Hotspots

Measures

Code

Activity

Project Settings

Project Information

Project Overview

Reliability

Security

Security Review

Maintainability

Overview

New Code

Code Smells

0

AdDevops

View as

List

Select files

Navigate

15 files

Maintainability Rating

A

See history

New Code: Since September 20, 2023

box.html

class.css

demo.html

element.css

float property.html

home.html

id.css

index.html

A

A

A

A

A

A

A

A

## Security:

AdDevops / main

The last analysis has warnings. [See details](#) Version not provided

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

Project Overview

Reliability

Security

Security Review

New Code

Security Hotspots 0

Rating A

Overall Code

Security Hotspots 6

AdDevops View as List Select files Navigate 15 files

Security Review Rating E [See history](#) New Code: Since September 20, 2023

demo.html	E
home.html	E
index.html	E

There are 12 hidden components with a score of A. [Show Them](#)

## Duplications:

AdDevops / main

The last analysis has warnings. [See details](#) Version not provided

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

Project Overview

Reliability

Security

Security Review

Maintainability

Coverage

Duplications

Overview

AdDevops View as List Select files Navigate 15 files

Duplicated Lines (%) 22.3% [See history](#) New Code: Since September 20, 2023

	Duplicated Lines (%)	Duplicated Lines
demo.html	100%	67
index.html	100%	67
box.html	0.0%	0
class.css	0.0%	0
element.css	0.0%	0
float property.html	0.0%	0
home.html	0.0%	0

## Cyclomatic complexity:

AdDevops / main

The last analysis has warnings. [See details](#) Version not provided

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

New Lines 0

Lines of Code 543

Lines 602

Files 15

Comment Lines 47

Comments (%) 8.0%

Complexity

Cyclomatic Complexity 9

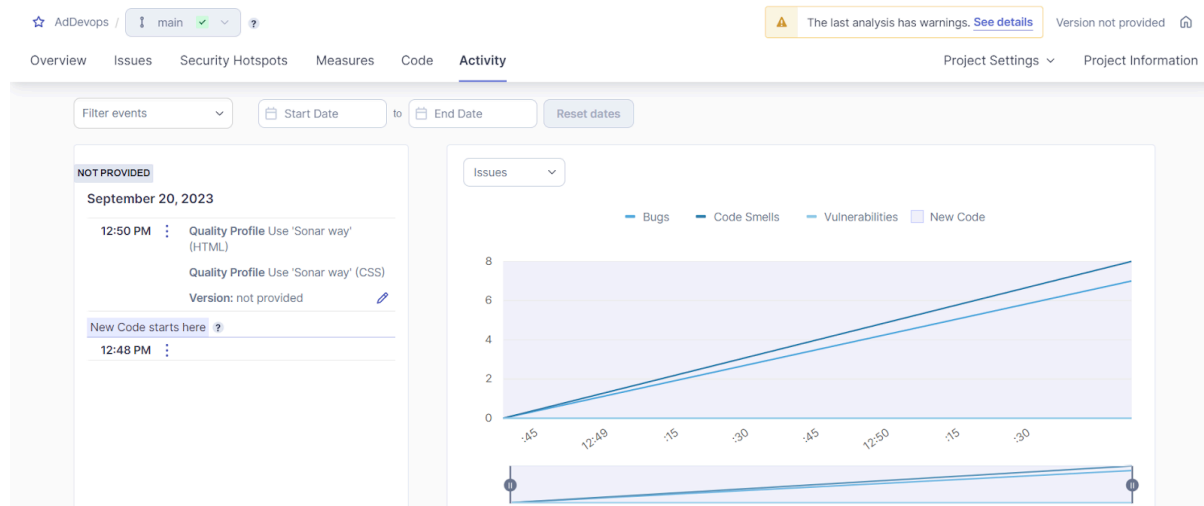
Issues

AdDevops View as List Select files Navigate 9 files

Cyclomatic Complexity 9 [See history](#) New Code: Since September 20, 2023

box.html	1
demo.html	1
float property.html	1
home.html	1
index.html	1
payment.html	1
start.html	1
trial.html	1
verticaltable.html	1

## Activity:



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