



PARSHVANATH CHARITABLE TRUST'S

A. P. SHAH INSTITUTE OF TECHNOLOGY

Department of Information Technology

(NBA Accredited)



Academic Year: 2025-26

Semester: V

Class / Branch/ Div: TEIT C

Subject: ADL Lab

Name of Student: Shreya Sonawale

Student ID: 23104134

Roll No. 43

Date of Submission: 19/09/25

Experiment No: 07

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

Software Used: ubuntu

Code & Output:

```
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ wget -q -O - https://pkg.jenkins.io/debian/jenkins.io.key | sudo apt-key add -
[sudo] password for apsit:
Warning: apt-key is deprecated. Manage keyring files in trusted.gpg.d instead (see apt-key(8)).
OK
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo sh -c 'echo deb http://pkg.jenkins.io/debian-stable binary/ > /etc/apt/sources.list.d/jenkins.list'
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo apt update
Hit:1 https://deb.nodesource.com/node_20.x nodistro InRelease
Hit:2 http://in.archive.ubuntu.com/ubuntu jammy InRelease
Get:3 http://security.ubuntu.com/ubuntu jammy-security InRelease [129 kB]
Get:4 http://in.archive.ubuntu.com/ubuntu jammy-updates InRelease [128 kB]
Get:5 http://in.archive.ubuntu.com/ubuntu jammy-backports InRelease [127 kB]
Get:6 http://security.ubuntu.com/ubuntu jammy-security/main amd64 DEP-11 Metadata [54.5 kB]
Get:7 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 DEP-11 Metadata [208 B]
Get:8 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 DEP-11 Metadata [112 kB]
Get:9 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 DEP-11 Metadata [125 kB]
Get:10 http://in.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 DEP-11 Metadata [212 B]
Get:11 http://in.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 DEP-11 Metadata [359 kB]
Hit:12 https://packages.microsoft.com/repos/code stable InRelease
Get:13 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 DEP-11 Metadata [208 B]
Hit:14 https://dl.google.com/linux/chrome/deb stable InRelease
Get:15 http://in.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 DEP-11 Metadata [940 B]
Get:16 http://in.archive.ubuntu.com/ubuntu jammy-backports/main amd64 DEP-11 Metadata [7,084 B]
Get:17 http://in.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 DEP-11 Metadata [212 B]
Get:18 http://in.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 DEP-11 Metadata [26.0 kB]
Get:19 http://in.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 DEP-11 Metadata [212 B]
Ign:20 https://pkg.jenkins.io/debian-stable binary/ InRelease
Hit:21 https://pkg.jenkins.io/debian-stable binary/ Release
Fetched 1,070 kB in 12s (87.2 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
20 packages can be upgraded. Run 'apt list --upgradable' to see them.
W: Skipping acquire of configured file 'main/binary-i386/Packages' as repository 'https://deb.nodesource.com/node_20.x nodistro InRelease' doesn't support architecture 'i386'
W: http://pkg.jenkins.io/debian-stable/binary/Release.gpg: Key is stored in legacy trusted.gpg keyring (/etc/apt/trusted.gpg), see the DEPRECATION section in apt-key(8) for details.
```



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```
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo apt install jenkins
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
jenkins is already the newest version (2.516.3).
0 upgraded, 0 newly installed, 0 to remove and 20 not upgraded.
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo systemctl start jenkins
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/lib/systemd/system/jenkins.service; enabled; vendor preset: enabled)
   Active: active (running) since Fri 2025-09-26 12:37:48 IST; 6min ago
     Main PID: 1090 (java)
       Tasks: 59 (limit: 9222)
      Memory: 481.8M
         CPU: 22.892s
    CGroup: /system.slice/jenkins.service
            └─1090 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080

Sep 26 12:37:54 apsit-HP-280-Pro-G6-Microtower-PC jenkins[1090]: at hudson.model.UpdateSite.updateDirectlyNow(UpdateSite.java:235)
Sep 26 12:37:54 apsit-HP-280-Pro-G6-Microtower-PC jenkins[1090]: at hudson.PluginManager.checkUpdatesServer(PluginManager.java:2179)
Sep 26 12:37:54 apsit-HP-280-Pro-G6-Microtower-PC jenkins[1090]: at hudson.util.Retrier.start(Retrier.java:62)
Sep 26 12:37:54 apsit-HP-280-Pro-G6-Microtower-PC jenkins[1090]: at hudson.PluginManager.doCheckUpdatesServer(PluginManager.java:2150)
Sep 26 12:37:54 apsit-HP-280-Pro-G6-Microtower-PC jenkins[1090]: at jenkins.DailyCheck.execute(DailyCheck.java:93)
Sep 26 12:37:54 apsit-HP-280-Pro-G6-Microtower-PC jenkins[1090]: at hudson.model.AsyncPeriodicWork.lambda$doRun$0(AsyncPeriodicWork.java:102)
Sep 26 12:37:54 apsit-HP-280-Pro-G6-Microtower-PC jenkins[1090]: at java.base/java.lang.Thread.run(Thread.java:840)
Sep 26 12:37:54 apsit-HP-280-Pro-G6-Microtower-PC jenkins[1090]: 2025-09-26 07:07:54.494+0000 [id=71] INFO hudson.util.Retrier#start: Calling the listener
Sep 26 12:37:54 apsit-HP-280-Pro-G6-Microtower-PC jenkins[1090]: 2025-09-26 07:07:54.495+0000 [id=71] INFO hudson.util.Retrier#start: Attempted the action
Sep 26 12:37:54 apsit-HP-280-Pro-G6-Microtower-PC jenkins[1090]: 2025-09-26 07:07:54.496+0000 [id=71] SEVERE hudson.PluginManager#doCheckUpdatesServer: Error
[lines 1-20/20] (END)
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo ufw allow 8080
Skipping adding existing rule
Skipping adding existing rule (v6)
```

```
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Dia Loaded: loaded (/lib/systemd/system/jenkins.service; enabled; vendor preset: enabled)
   Active: active (running) since Fri 2025-09-19 13:38:29 IST; 1min 16s ago
     Main PID: 6422 (java)
       Tasks: 56 (limit: 9222)
      Memory: 831.6M
         CPU: 28.442s
    CGroup: /system.slice/jenkins.service
            └─6422 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080

Sep 19 13:38:29 apsit-HP-280-Pro-G6-Microtower-PC jenkins[6422]: 2025-09-19 08:29:29
Sep 19 13:38:29 apsit-HP-280-Pro-G6-Microtower-PC jenkins[6422]: 2025-09-19 08:29:29
Sep 19 13:38:29 apsit-HP-280-Pro-G6-Microtower-PC jenkins[6422]: 2025-09-19 08:29:29
Sep 19 13:38:29 apsit-HP-280-Pro-G6-Microtower-PC systemd[1]: Started Jenkins Continuous Integration Server
Sep 19 13:38:44 apsit-HP-280-Pro-G6-Microtower-PC jenkins[6422]: 2025-09-19 08:29:44
Sep 19 13:38:46 apsit-HP-280-Pro-G6-Microtower-PC jenkins[6422]: 2025-09-19 08:29:46
Sep 19 13:38:48 apsit-HP-280-Pro-G6-Microtower-PC jenkins[6422]: 2025-09-19 08:29:48
Sep 19 13:38:50 apsit-HP-280-Pro-G6-Microtower-PC jenkins[6422]: 2025-09-19 08:29:50
Sep 19 13:38:54 apsit-HP-280-Pro-G6-Microtower-PC jenkins[6422]: 2025-09-19 08:29:54
Sep 19 13:38:54 apsit-HP-280-Pro-G6-Microtower-PC jenkins[6422]: 2025-09-19 08:29:54
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo ufw allow 8080
Skipping adding existing rule
Skipping adding existing rule (v6)
```



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```
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
7c8d8c73e8204cf7ab52d866b1c06575
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ docker run -d -p 9000:9000 sonarqube
docker: permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Head "http://%2Fvar%2Frun%2Fdocker.sock/_ping": dial unix
/var/run/docker.sock: connect: permission denied

Run 'docker run --help' for more information
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ ^C
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo nano /var/lib/jenkins/config.xml
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo systemctl start jenkins
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo docker run -d -p 9000:9000 sonarqube
5cf1248dae421f862c7919680df89a0837f7be3705deb8bbcb76ad679387a3
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$
```

⚠ Embedded database should be used for evaluation purposes only. It doesn't support scaling, upgrading to a new SonarQube Server version, or migration to another database.



[Projects](#) [Issues](#) [Rules](#) [Quality Profiles](#) [Quality Gates](#) [Administration](#) [More](#) ▾

How do you want to create your project?

Do you want to benefit from all of SonarQube Community Build's features (like repository import and Pull Request decoration)?

Create your project from your favorite DevOps platform.

First, you need to set up a DevOps platform configuration.

Import from Azure DevOps

Setup

Import from Bitbucket Cloud

Setup

Import from Bitbucket

Import from GitHub

Setup

Import from GitLab


Setup

Are you just testing or have an advanced use-case?

Create a local project

SonarQube™ technology is powered by [SonarSource SA](#)

Community Build • v25.9.0.112764 • MQR MODE



Get the most out of SonarQube Community Build. Take advantage of the whole ecosystem: SonarQube for IDE, a free IDE plugin, and fix issues earlier in your workflow. SonarQube for IDE to SonarQube Community Build sync rule sets and issue states.



/ Configuration



Pipeline script

Script ?

```
1 node
2 {
3   stage('clonningfrom GIT'){
4     git branch: 'main', credentialsid: 'GIT_REPO', url: 'https://github.com/vishal003/jenkins-sonarqube.git'
5   }
6 }
```

try sample Pipeline...

☒ Use Groovy Sandbox ?

[Pipeline Syntax](#)

Advanced

Save

Apply



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github.com/vishal003/jenkins-sonarqube

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vishal003 / jenkins-sonarqube
forked from devopshim/jenkins-sonarqube

Code Pull requests Actions Projects Wiki Security Insights Settings

main 1 branch 0 tags

This branch is 6 commits ahead of devopshim:main.

vishal003 Update README.md 88c34f4 41 minutes ago 16 commits

project	Update sonar-analysis	42 minutes ago
README.md	Update README.md	41 minutes ago

README.md

Dashboard > sonarqube > #2

Back to Project
Status
Changes
Console Output
View as plain text
Edit Build Information
Delete build #2
Git Build Data
Open Blue Ocean
Replay
Pipeline Steps
Workspaces
Previous Build
Next Build

Console Output

Started by user unknown or anonymous
Running in Durability level: MAX SURVIVABILITY
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/lib/jenkins/workspace/sonarqube
[Pipeline] {
[Pipeline] stage
[Pipeline] {
[Pipeline] git
The recommended git tool is: NONE
Warning: CredentialId "GIT_REPO" could not be found.
Cloning the remote Git repository
Cloning repository https://github.com/vishal003/jenkins-sonarqube.git
> git init /var/lib/jenkins/workspace/sonarqube # timeout=10
Fetching upstream changes from https://github.com/vishal003/jenkins-sonarqube.git
> git --version # timeout=10
> git fetch --tags --progress -- https://github.com/vishal003/jenkins-sonarqube.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git config remote.origin.url https://github.com/vishal003/jenkins-sonarqube.git # timeout=10
> git config --add remote.origin.fetch +refs/heads/*:refs/remotes/origin/* # timeout=10
Avoid second fetch
> git rev-parse refs/remotes/origin/main^{commit} # timeout=10
Checking out Revision ea3f635e2ce7b1e2d9b1feef33942799611ea38 (refs/remotes/origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f ea3f635e2ce7b1e2d9b1feef33942799611ea38 # timeout=10
> git branch a v no abbrev # timeout=10
> git checkout -b main ea3f635e2ce7b1e2d9b1feef33942799611ea38 # timeout=10
Commit message: "Update sonar-analysis"
First time build. Skipping changelog.
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS



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Conclusion: In this experiment, we learned to find all the relevant information on selected websites using network