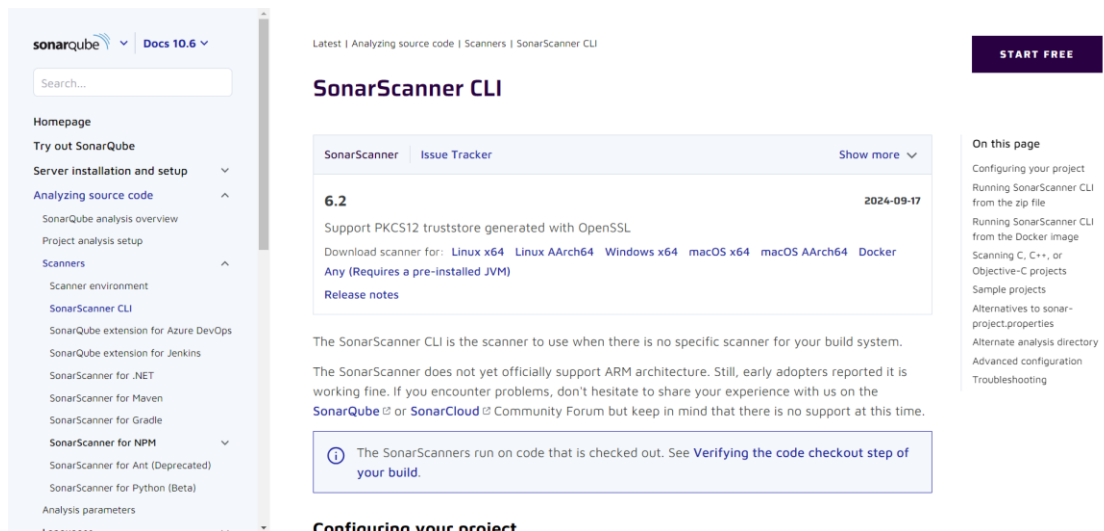**Name:- Bhagyesh Patil**

Roll :- 36

Experiment no 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.
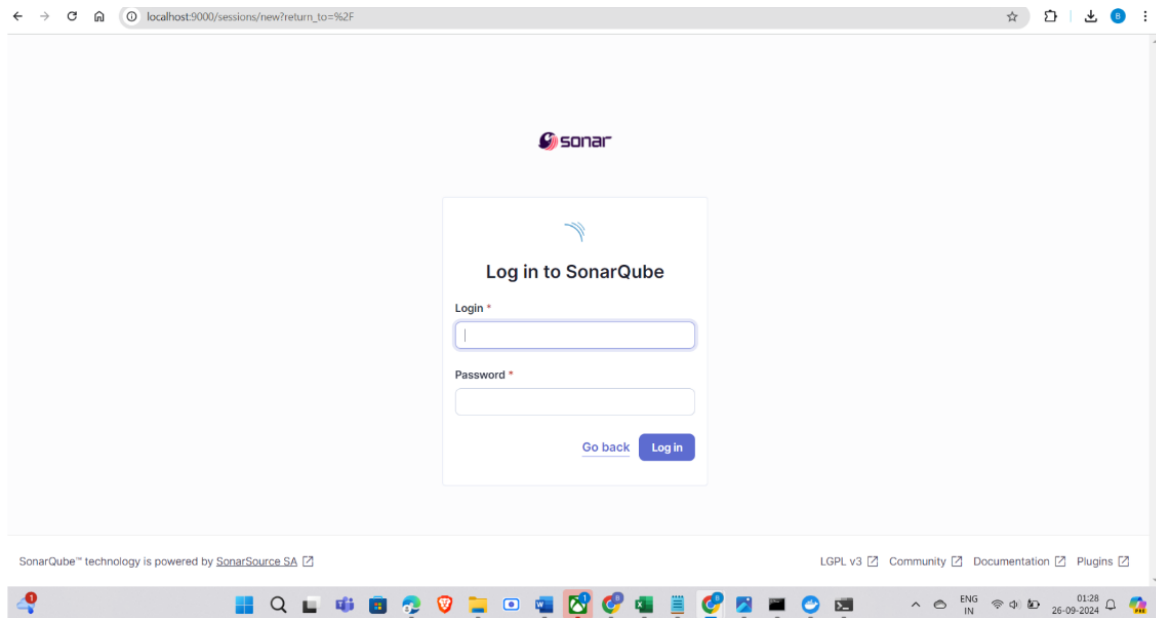
Step 1: Download sonar scanner

1. Command: docker pull sonarqube

2. Login the details

3. Give the name of the project
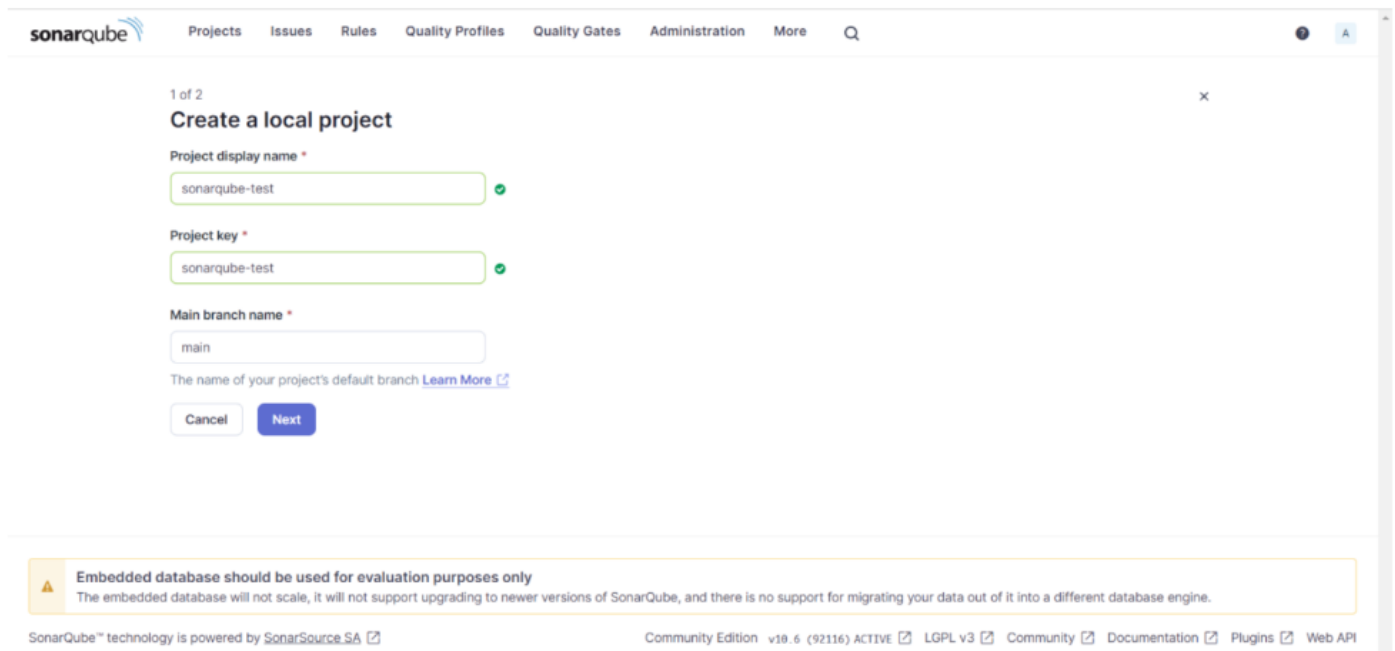
4. Open up Jenkins Dashboard on localhost, port 8081 or which ever portitisat for you.

S	W	Name ↓	Last Success	Last Failure	Last Duration	
✓	☀	bbparil	10 days #1	N/A	5.3 sec	▷
⋯	☀	bhagyesh	N/A	N/A	N/A	▷
✕	⛈	bhagyesh patil opo	N/A	1 day 0 hr #2	8.7 sec	▷
✕	⛈	bhagyesh_mavev	N/A	1 day 0 hr #2	7.8 sec	▷
⋯	☀	bhagyesh_niraj	N/A	N/A	N/A	▷
✕	⛈	bhagyesh_Niraj_final	N/A	6 hr 13 min #1	4.7 sec	▷
✓	☀	bhagyeshpipi	8 days 10 hr #1	N/A	5.5 sec	▷
✕	⛈	bp_nk	N/A	6 hr 13 min #1	9.4 sec	▷
✓	☀	lipo	1 day 0 hr #1	N/A	0.36 sec	▷

5. to Manage Jenkins and search for SonarQube Scanner for Jenkins and install it.
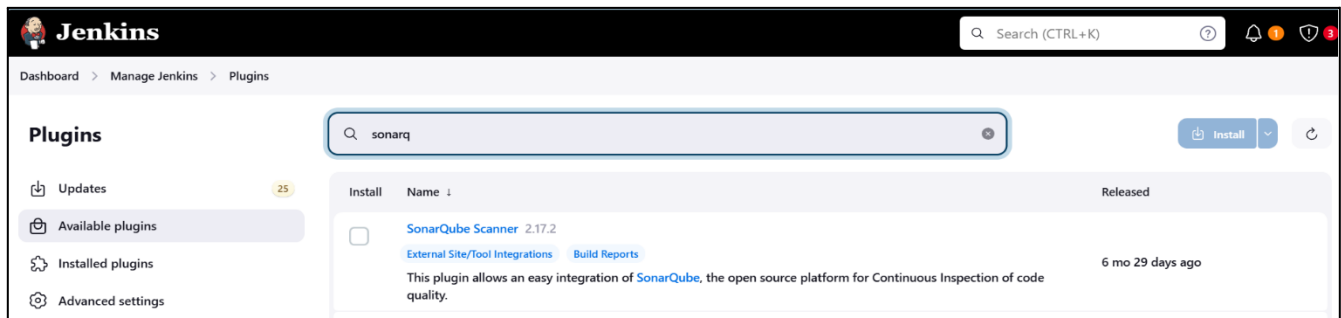

2.SonarQubeServers
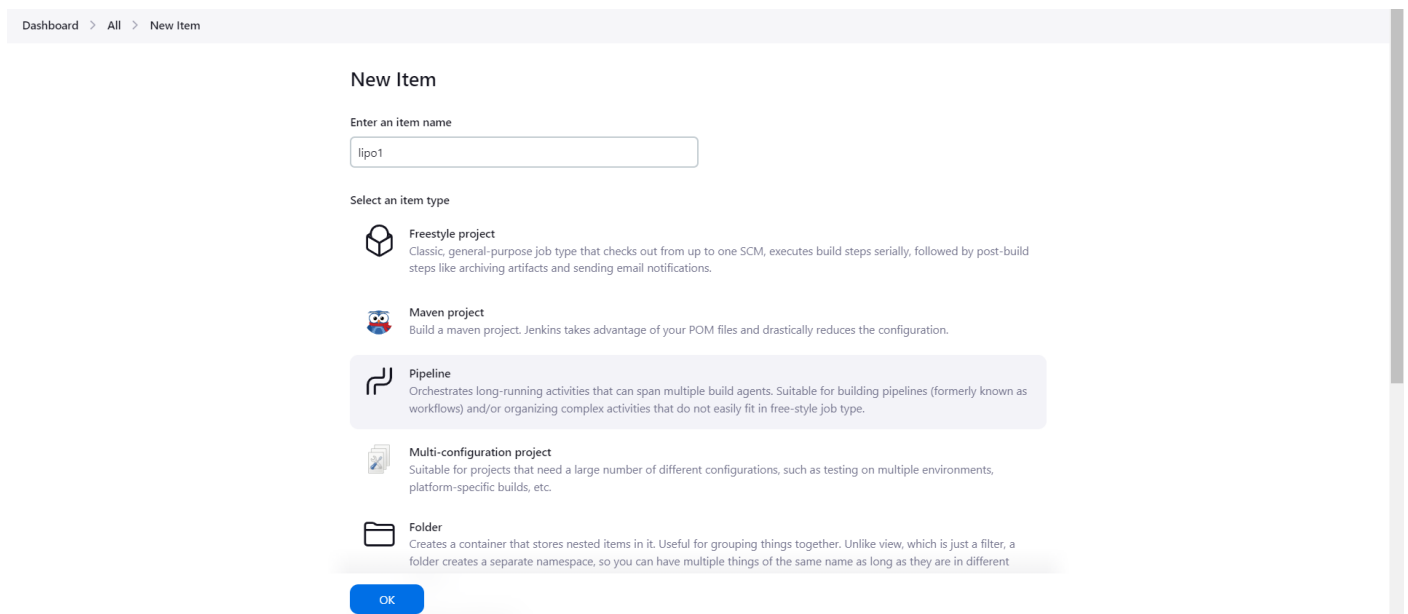and enter the details.
Enter the Server Authentication token if needed.

In SonarQube installations: Under **Name** add <project name of sonarqube> for me
adv_devops_7_sonarqube
In **Server URL** Default is **http://localhost:9000**

6. After configuration, create a New Item → choose a pipeline project.

This is java code put in the pipeline script

Under Pipeline script, enter the following:

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

  stage('SonarQube analysis') {
    withSonarQubeEnv('<Name_of_SonarQube_environment_on_Jenki
    ns>') {
      sh """
        <PATH_TO_SONARQUBE_SCANNER_FOLDER>/bin/sonar-scanner \
        -D sonar.login=<SonarQube_USERNAME> \
        -D sonar.password=<SonarQube_PASSWORD> \
        -D sonar.projectKey=<Project_KEY> \
```

```
                    -D sonar.exclusions=vendor/**,resources/**,**/*.java \
                    -D sonar.host.url=<SonarQube_URL>(default:
              http://localhost:9000/)"""
          }
      }
```

Definition

Pipeline script ⌄

Script ?

```
 1 ▾ node {
 2 ▾ stage('Cloning the GitHub Repo') {
 3     git 'https://github.com/shazforiot/GOL.git'
 4   }
 5
 6 ▾ stage('SonarQube analysis') { withSonarQubeEnv('<Name_of_SonarQube_environment_on_Jenkins>') {
 7     sh """
 8     <PATH_TO_SONARQUBE_SCANNER_FOLDER>/bin/sonar-scanner \
 9     -D sonar.login=admin \
10     -D sonar.password=admin> \
11     -D sonar.projectKey=sonarqube \
12     -D sonar.exclusions=vendor/**,resources/**,**/*.java \
13     -D sonar.host.url=http://localhost:9000
14     """
15   }
16   }
17   }
18
```
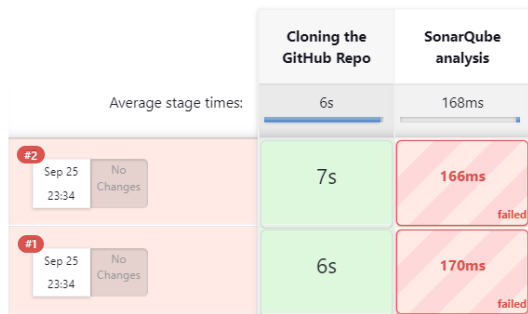
✔ Use Groovy Sandbox ?

Pipeline Syntax

7. Build project

Stage View

		Cloning the GitHub Repo	SonarQube analysis
Average stage times:		6s	168ms
#2 Sep 25 23:34	No Changes	7s	166ms failed
#1 Sep 25 23:34	No Changes	6s	170ms failed

Permalinks

- Last build (#2), 1 day 1 hr ago
- Last failed build (#2), 1 day 1 hr ago
- Last unsuccessful build (#2), 1 day 1 hr ago
- Last completed build (#2), 1 day 1 hr ago

8. Check Console

9. Now, check the project in SonarQube
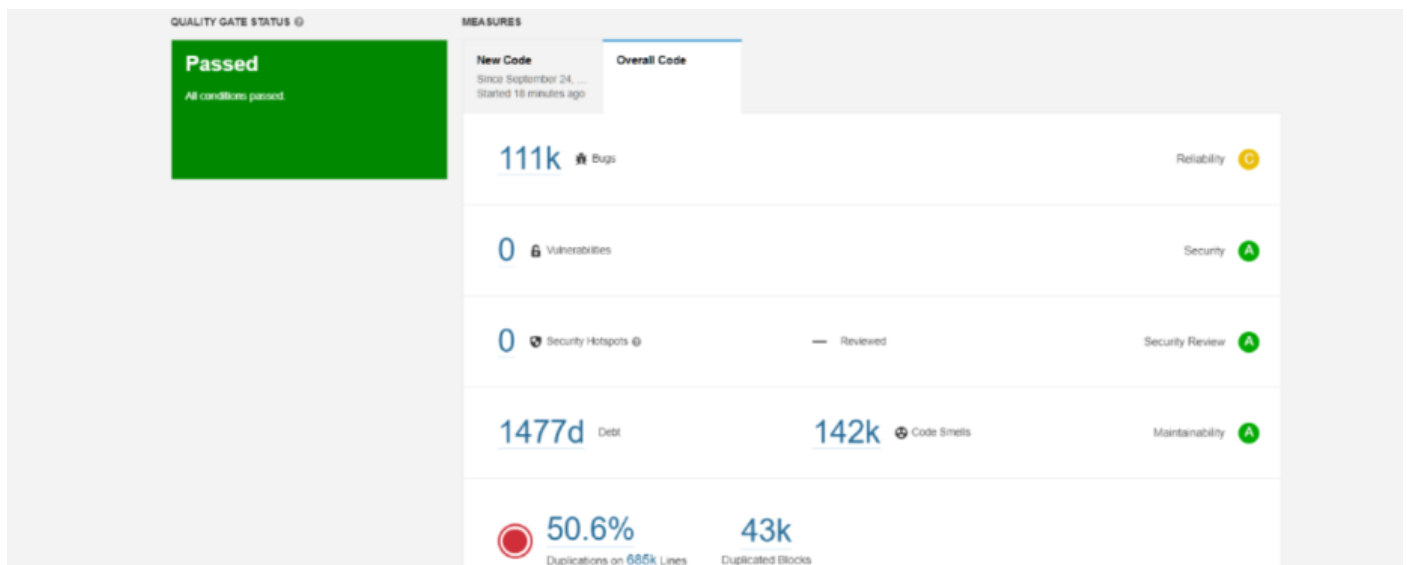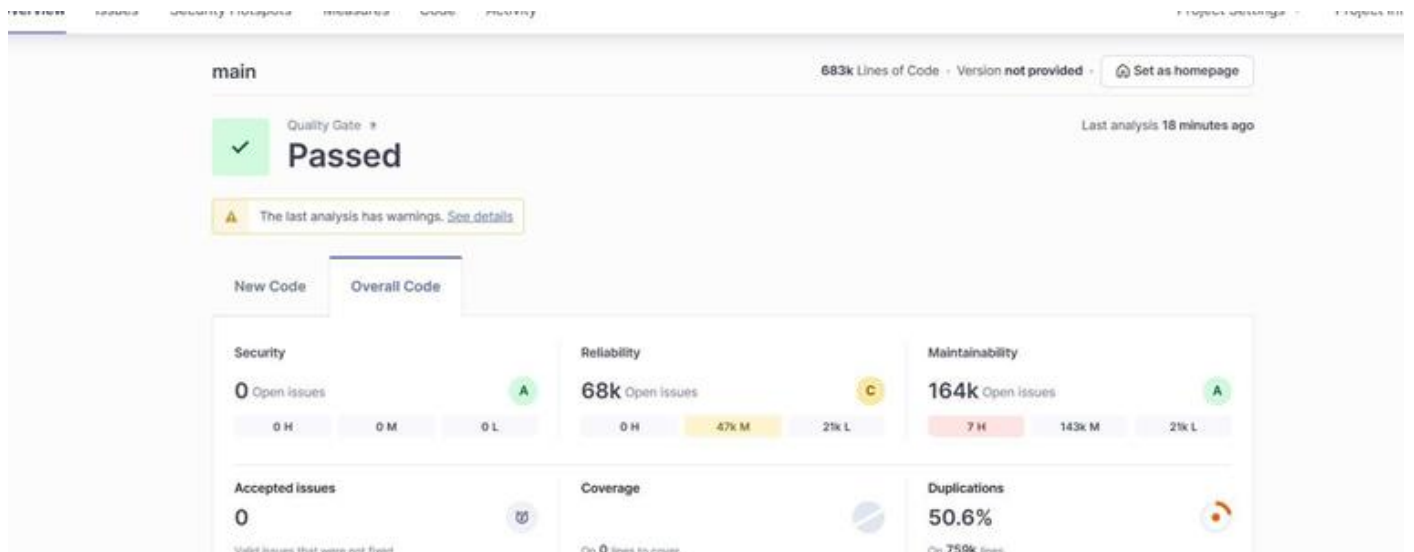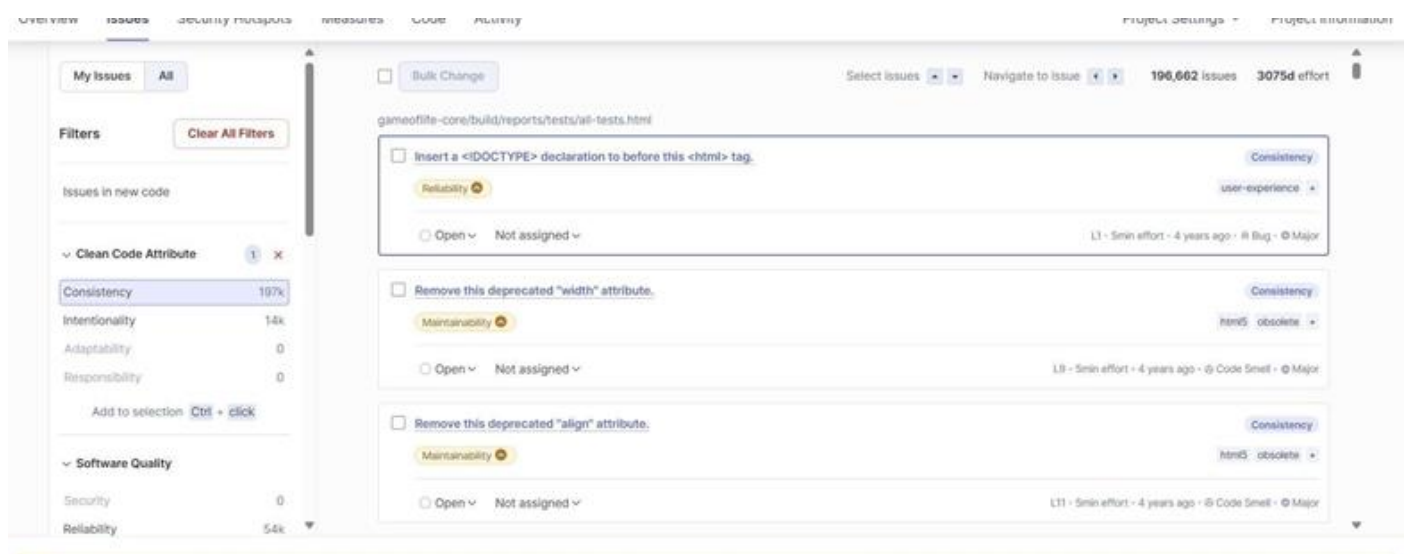
main   683k Lines of Code · Version **not provided** · ⌂ Set as homepage

✓ **Passed** Quality Gate ▾   Last analysis **18 minutes ago**

⚠ The last analysis has warnings. See details

| New Code | Overall Code |

Security

0 Open issues   A

| 0 H | 0 M | 0 L |

Reliability

68k Open issues   C

| 0 H | 47k M | 21k L |

Maintainability

164k Open issues   A

| 7 H | 143k M | 21k L |

Accepted issues

0

Valid issues that were not fixed

Coverage

On **0** lines to cover.

Duplications

50.6%

On **759k** lines.

10 .Consistency

| My Issues | All |

☐ Bulk Change   Select issues ◄ ► Navigate to issue ◄ ► **196,662** issues **3075d** effort

Filters Clear All Filters

gameoflife-core/build/reports/tests/all-tests.html

Issues in new code

☐ Insert a <!DOCTYPE> declaration to before this <html> tag.   Consistency

Reliability ●   user-experience ▾

∨ **Clean Code Attribute** 1 ✕

○ Open ∨ Not assigned ∨   L1 - 5min effort - 4 years ago - ℝ Bug - ● Major

Consistency	197k
Intentionality	14k
Adaptability	0
Responsibility	0

☐ Remove this deprecated "width" attribute.   Consistency

Maintainability ●   html5 obsolete ▾

Add to selection Ctrl + click

○ Open ∨ Not assigned ∨   L9 - 5min effort - 4 years ago - ⊘ Code Smell - ● Major

∨ **Software Quality**

☐ Remove this deprecated "align" attribute.   Consistency

Maintainability ●   html5 obsolete ▾

| Security | 0 |
| Reliability | 54k |

○ Open ∨ Not assigned ∨   L11 - 5min effort - 4 years ago - ⊘ Code Smell - ● Major

11. Intentionality

12. Bugs

13. Code smell

14. Cyclomatic Complexities