**Code Quality Module Practical Task**

**Necessary Tools**

Java Development Kit 11+

Apache Maven 3.6.0+

Git 2.24+

Docker

##Task

(1 star)

**1. Run Sonarqube docker container**

- Instruction: <https://docs.sonarqube.org/latest/>

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**2. Login to Sonarqube web interface**

- default password: admin

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**3. Configure a new project with token**

Top of Form

Analyze "etl" 1: **sqp\_2b193ce33b36bf32e3fb758755b488d1a5ad9b6b**

mvn clean verify sonar:sonar \

-Dsonar.projectKey=etl \

-Dsonar.projectName='etl' \

-Dsonar.host.url=http://localhost:9000 \

-Dsonar.token=sqp\_2b193ce33b36bf32e3fb758755b488d1a5ad9b6b

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**4. Analyse your pet project with SonarQube. Use generated token for it (you can get project from previous modules)**

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- Instruction: <https://docs.sonarqube.org/latest/analysis/scan/sonarscanner-for-maven/>

**5. If there are any issues, correct it**

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**6. Prepare .doc report with screenshot for every step**

(2-3 stars)

**7. Configure a new project with token**

**8. Create a new maven project with a few (10+) issues, e.x. :**

Analyze "userservice": **sqp\_84c0c748e59144b78caa57ae6e5c64dfaa711275**

mvn clean verify sonar:sonar -Dsonar.projectKey=userservice -Dsonar.projectName='userservice' -Dsonar.host.url=http://localhost:9000 -Dsonar.token=sqp\_48cacca71278c91612fee7ec366a35211e8e50f9

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- Don't use method reference

- Use switch operator. Define 'default' in the top of operator

- etc.

**9. Analyse your project**

**10. Try to skip all issues with @SuppressWarnings**

**Adding SupressWarning make the Quality Gate Fails**

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**11. Prepare .doc report with screenshot for every step**

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(4 stars)

mvn clean verify sonar:sonar -Dsonar.projectKey=final -Dsonar.projectName='final' -Dsonar.host.url=http://localhost:9000 -Dsonar.token=sqp\_6b3c5ad305d2890952bb90fc484303a543efae6c

**12. Remove @SuppressWarnings for project from previous section**

**13. Create a new Sonar java profile (copy it from default java profile)**

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**14. Deactivate rules for issues from previous section**

**A close-up of a computer screen

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**15. Link new profile to your project**

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**16. Analyse your project**

**Less issues due to deactivation the Use String builder rule**

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**17. Prepare .doc report with screenshot for every step**

(5 stars)

**18. Create a new Quality Gate with:**

- Duplicated code (> 10)

- Issues (> 20)

- Code smells (> 40)

- Bugs (> 35)

- Unit test succsess (< 40)

**19. Link it to your project**

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**16. Analyse your project**

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Description automatically generated**

**17. Prepare .doc report with screenshot for every step**

* Done Installing Sonar using Docker.
* Adding Maven profile to Maven setting under maven library.
* Done analyzing different projects, using different quality gates and sonar profiles.
* Done activating and deactivating several rules for experimenting purposes.
* Done screenshotting the steps as it is listed in this document.

**References**

* [Clean Code](https://www.amazon.com/Clean-Code-Handbook-Software-Craftsmanship/dp/0132350882)
* [Agile Software Development: Code Quality](https://www.linkedin.com/learning/agile-software-development-code-quality/why-code-quality-is-important?u=2113185)
* [11 Best Practices and Tools to Improve the Java Code Quality](https://www.romexsoft.com/blog/improve-java-code-quality/)
* [S.O.L.I.D](https://www.baeldung.com/solid-principles)