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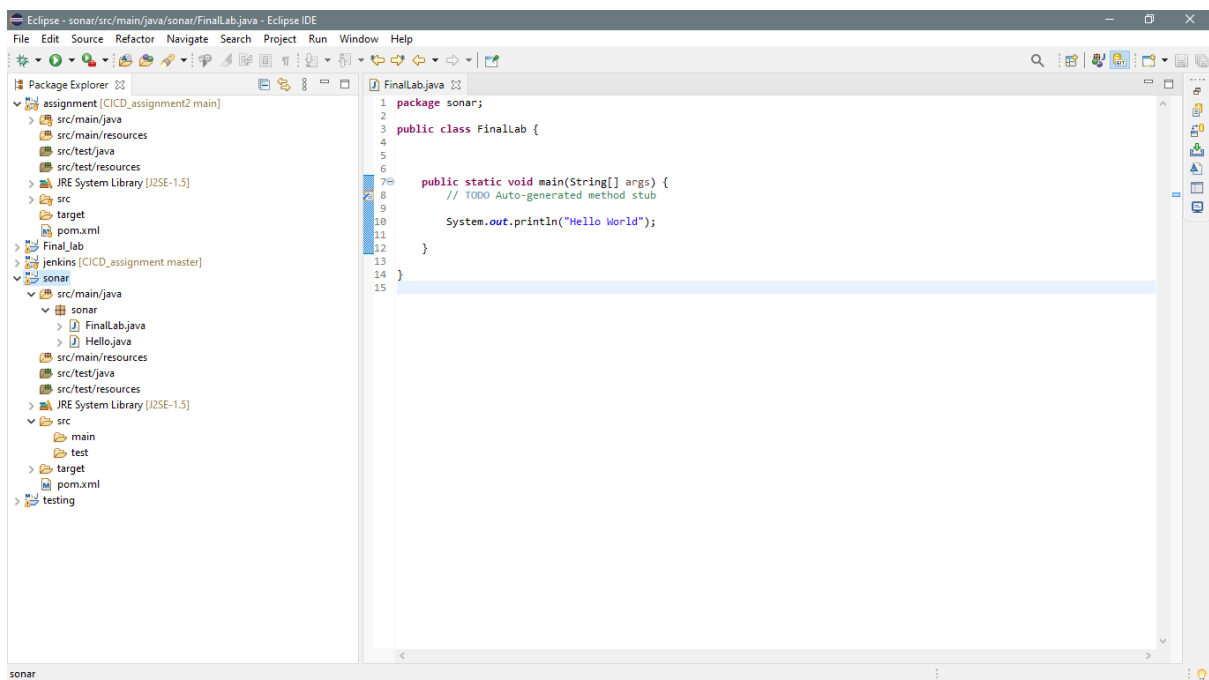
SAP ID: 500069061

ROLL NUMBER: R171218110

CICD LAB FINAL EXAM

## Static Code Analysis with SonarQube

Make a sample Maven Project. Here I have used Eclipse to make my project. It's a simple hello world program.



Go to the file location in cmd and execute the following command. Make sure you've started your SonarQube already by clicking on StartSonar.bat in the location where you have your SonarQube installed.

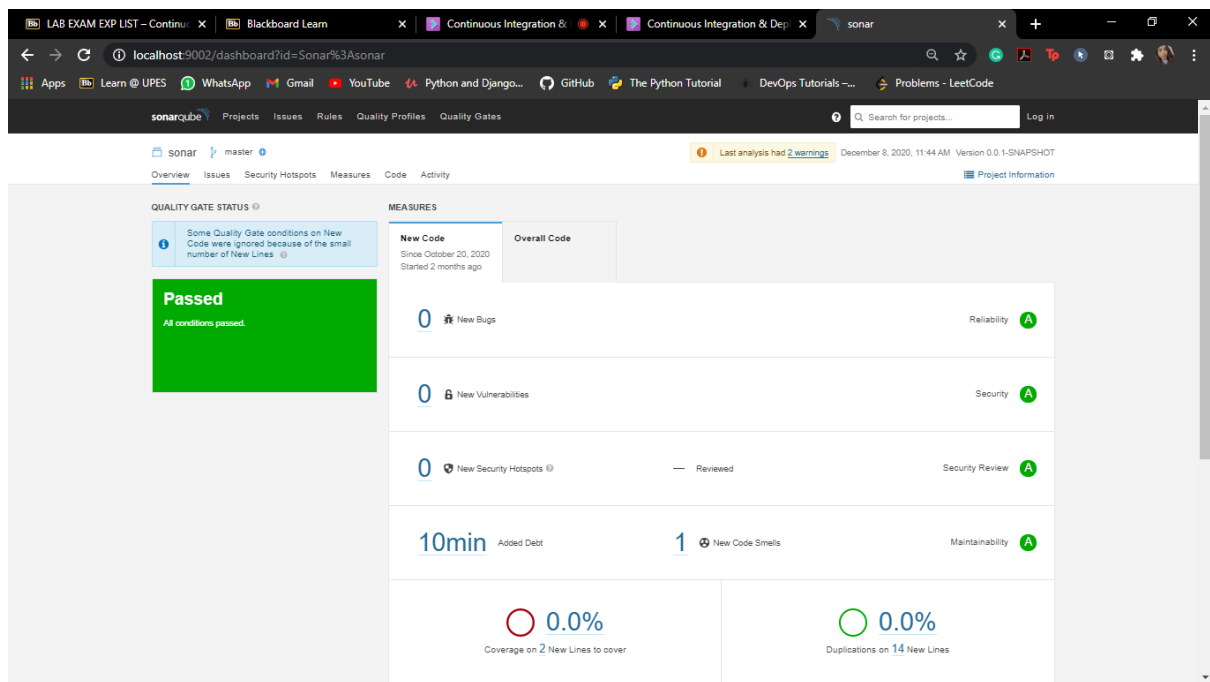
```
Command Prompt
D:\Eclipse\sonar>mvn clean install sonar:sonar -Dsonar.host.url=http://localhost:9002 -Dsonar.analysis.mode=publish
[INFO] Scanning for projects...
[INFO] -----< Sonar:sonar >-----
[INFO] Building sonar 0.0.1-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ sonar ---
[INFO] Deleting D:\Eclipse\sonar\target
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ sonar ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] Copying 0 resource
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ sonar ---
[INFO] Changes detected - recompiling the module!
[WARNING] File encoding has not been set, using platform encoding Cp1252, i.e. build is platform dependent!
[INFO] Compiling 1 source file to D:\Eclipse\sonar\target\classes
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ sonar ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] Copying 0 resource
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ sonar ---
[INFO] Nothing to compile - all classes are up to date
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ sonar ---
[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ sonar ---
[INFO] Building jar: D:\Eclipse\sonar\target\sonar-0.0.1-SNAPSHOT.jar
[INFO] --- maven-install-plugin:2.4:install (default-install) @ sonar ---
[INFO] Installing D:\Eclipse\sonar\target\sonar-0.0.1-SNAPSHOT.jar to C:\Users\Dell\.m2\repository\Sonar\sonar\0.0.1-SNAPSHOT\sonar-0.0.1-SNAPSHOT.jar
[INFO] Installing D:\Eclipse\sonar\pom.xml to C:\Users\Dell\.m2\repository\Sonar\sonar\0.0.1-SNAPSHOT\sonar-0.0.1-SNAPSHOT.pom
[INFO] -----< Sonar:sonar >-----
[INFO] Building sonar 0.0.1-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO] --- sonar-maven-plugin:3.7.0.1746:sonar (default-cli) @ sonar ---
[INFO] User cache: C:\Users\Dell\.sonar\cache
[INFO] SonarQube version: 8.4.2
[INFO] Default locale: "en_IN", source code encoding: "windows-1252" (analysis is platform dependent)
[INFO] Load global settings
```

```
Command Prompt
[INFO] Sensor XML Sensor [xml]
[INFO] 1 source files to be analyzed
[INFO] Sensor XML Sensor [xml] (done) | time=516ms
[INFO] 1/1 source files have been analyzed
[INFO] ----- Run sensors on project
[INFO] Sensor Zero Coverage Sensor
[INFO] Sensor Zero Coverage Sensor (done) | time=87ms
[INFO] Sensor Java CPD Block Indexer
[INFO] Sensor Java CPD Block Indexer (done) | time=35ms
[INFO] SCM Publisher No SCM system was detected. You can use the 'sonar.scm.provider' property to explicitly specify it.
[INFO] CPD Executor 1 file had no CPD blocks
[INFO] CPD Executor Calculating CPD for 0 files
[INFO] CPD Executor CPD calculation finished (done) | time=0ms
[INFO] Analysis report generated in 117ms, dir size=81 KB
[INFO] Analysis report compressed in 181ms, zip size=12 KB
[INFO] Analysis report uploaded in 237ms
[INFO] ANALYSIS SUCCESSFUL, you can browse http://localhost:9002/dashboard?id=Sonar%3ASonar
[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://localhost:9002/api/ce/task?id=AXZA_JVsHL6fPUqf0oxR
[INFO] Analysis total time: 19.223 s
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 25.432 s
[INFO] Finished at: 2020-12-08T11:44:24+05:30
[INFO] -----
D:\Eclipse\sonar>
```

### Quality Model

<b>Reliability</b> Bugs track code that is demonstrably wrong or highly likely to yield unexpected behavior.	<b>Security</b> Vulnerabilities are raised on code that can be exploited by hackers. Security Hotspots are raised on security-sensitive code that requires manual review to assess whether or not a vulnerability exists.	<b>Maintainability</b> Code Smells will confuse maintainers or give them pause. They are measured primarily in terms of the time they will take to fix.
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Everything apparently went well because of the “build success”



Navigate to you localhost and open sonarqube and  
this will the scenario displayed