Experiment No. 4

Static Code Analysis using SonarQube

Download sonarqube:

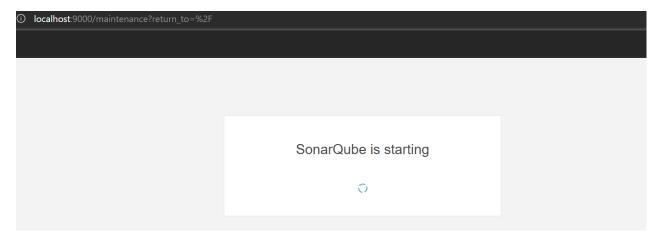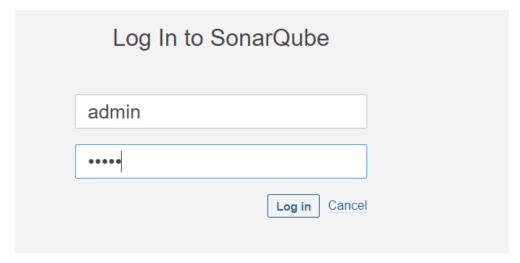|			
📁 sonarqube-8.4.1.35646	8/21/2020 2:39 PM	File folder	

Start sonarqube:

```
D:\A_semester_5\CICD\sonarqube-8.4.1.35646\bin\windows-x86-64>StartSonar.bat
wrapper  | --> Wrapper Started as Console
wrapper  | Launching a JVM...
jvm 1    | Wrapper (Version 3.2.3) http://wrapper.tanukisoftware.org
```

Default port for sonarqube is 9000

Open http://localhost:9000 on browser:

```
localhost:9000/maintenance?return_to=%2F
```

SonarQube is starting

Login to sonarqube admin user:

Log In to SonarQube

admin

•••••

Log in   Cancel

Create maven project and write code:

```java
package integration;

public class sonar_test1
{
    private int n=10;
    int num=30;
    public void f1(int n1)
    {
        n1=20;
    }
        public static void main(String[] args) {
            System.out.println("Hello sonarqube!");
            System.out.println("jenkins!");
        }
}
```

Run command "mvn clean install sonar:sonar -Dsonar.host.url=http://my.server:9000/sonar -Dsonar.analysis.mode=publish"

```
D:\A_semester_5\CICD\CICD LAB\sonarqube\CICD_Sonarqube>mvn clean install sonar:sonar -Dsonar.host.url=http://localhost:9000 -Dsonar.analysis.mode=publish
[INFO] Scanning for projects...
[INFO]
[INFO] ------------------------< CICD_Lab4:CICD_Lab4 >------------------------
[INFO] Building CICD_Lab4 0.0.1-SNAPSHOT
[INFO] --------------------------------[ jar ]---------------------------------
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ CICD_Lab4 ---
[INFO] Deleting D:\A_semester_5\CICD\CICD LAB\sonarqube\CICD_Sonarqube\target
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ CICD_Lab4 ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory D:\A_semester_5\CICD\CICD LAB\sonarqube\CICD_Sonarqube\src\main\resources
[INFO]
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ CICD_Lab4 ---
[INFO] No sources to compile
[INFO]
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ CICD_Lab4 ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory D:\A_semester_5\CICD\CICD LAB\sonarqube\CICD_Sonarqube\src\test\resources
[INFO]
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ CICD_Lab4 ---
[INFO] No sources to compile
[INFO]
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ CICD_Lab4 ---
[INFO] No tests to run.
[INFO]
[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ CICD_Lab4 ---
[WARNING] JAR will be empty - no content was marked for inclusion!
[INFO] Building jar: D:\A_semester_5\CICD\CICD LAB\sonarqube\CICD_Sonarqube\target\CICD_Lab4-0.0.1-SNAPSHOT.jar
[INFO]
[INFO] --- maven-install-plugin:2.4:install (default-install) @ CICD_Lab4 ---
[INFO] Installing D:\A_semester_5\CICD\CICD LAB\sonarqube\CICD_Sonarqube\target\CICD_Lab4-0.0.1-SNAPSHOT.jar to C:\Users\akkan\.m2\repository\CICD_Lab4\CICD_Lab4\0.0.1-SNAPSHOT\
[INFO] Installing D:\A_semester_5\CICD\CICD LAB\sonarqube\CICD_Sonarqube\pom.xml to C:\Users\akkan\.m2\repository\CICD_Lab4\CICD_Lab4\0.0.1-SNAPSHOT\CICD_Lab4-0.0.1-SNAPSHOT.pom
[INFO]
[INFO] ------------------------< CICD_Lab4:CICD_Lab4 >------------------------
[INFO] Building CICD_Lab4 0.0.1-SNAPSHOT
[INFO] --------------------------------[ jar ]---------------------------------
[INFO]
[INFO] --- sonar-maven-plugin:3.7.0.1746:sonar (default-cli) @ CICD_Lab4 ---
[INFO] User cache: C:\Users\akkan\.sonar\cache
[INFO] SonarQube version: 8.4.1
[INFO] Default locale: "en_US", source code encoding: "windows-1252" (analysis is platform dependent)
[WARNING] SonarScanner will require Java 11 to run starting in SonarQube 8.x
[INFO] Load global settings
[INFO] Load global settings (done) | time=296ms
[INFO] Server id: BF41A1F2-AXQXNybpFq__oIfYetul
[INFO] User cache: C:\Users\akkan\.sonar\cache
[INFO] Load/download plugins
```

```
[INFO] Sensor XML Sensor [xml]
[INFO] 1 source files to be analyzed
[INFO] Sensor XML Sensor [xml] (done) | time=125ms
[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=0ms
[INFO] SCM Publisher SCM provider for this project is: git
[INFO] SCM Publisher 1 source file to be analyzed
[INFO] SCM Publisher 1/1 source file have been analyzed (done) | time=79ms
[INFO] CPD Executor Calculating CPD for 0 files
[INFO] CPD Executor CPD calculation finished (done) | time=0ms
[INFO] Analysis report generated in 78ms, dir size=80 KB
[INFO] Analysis report compressed in 62ms, zip size=11 KB
[INFO] Analysis report uploaded in 2906ms
[INFO] ANALYSIS SUCCESSFUL, you can browse http://localhost:9000/dashboard?id=CICD_Lab4%3ACICD_Lab4
[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:9000/api/ce/task?id=AXUiLeQ5WPxPmMAix8we
[INFO] Analysis total time: 13.497 s
[INFO] ------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------
[INFO] Total time:  19.448 s
[INFO] Finished at: 2020-10-13T19:07:14+05:30
[INFO] ------------------------------------------------------------------
```

Code analysis on sonarqube: