

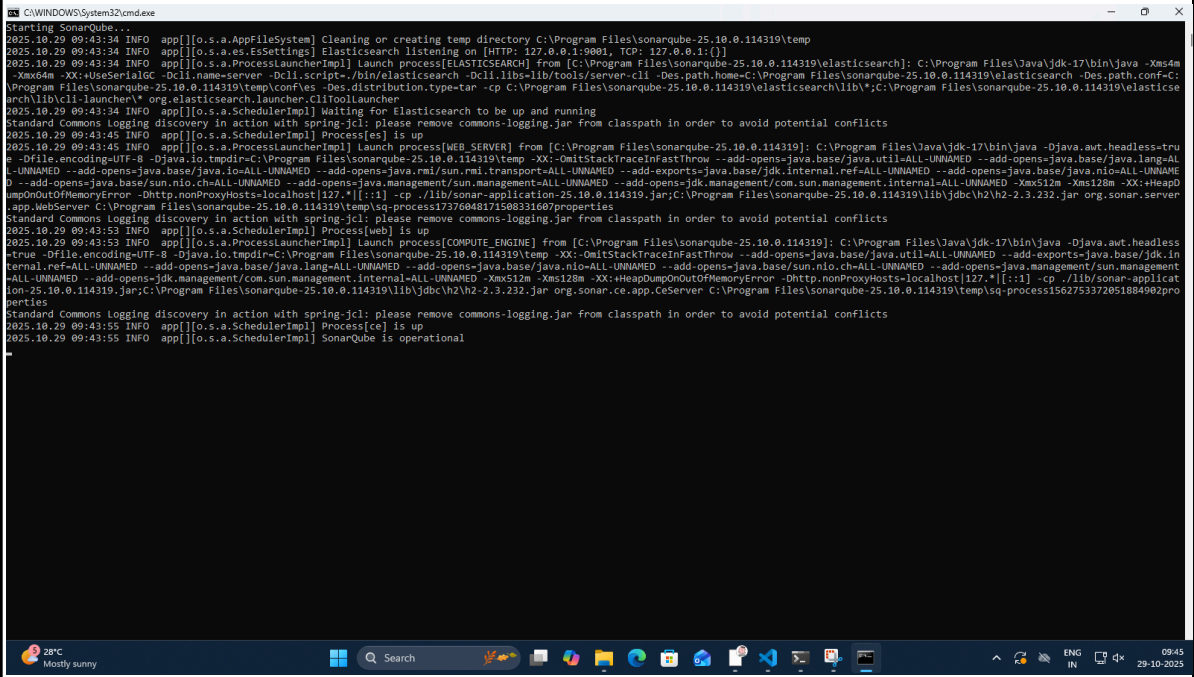
St. Francis Institute of Technology
Borivali (West), Mumbai-400103
Department of Information Technology
ADL Practical Exam

Name: Shaun Mascarenhas	Date: 29/10/2025
Class: TE INFT B	Exam seat no: -
PID: 231068	Time: 9.30 to 10.30
Roll No: 02	No. of Pages:
Duration: One Hour	

Sr No	Problem Statement (Type here): To use SonarQube on windows machine to test a JAVA file. Include passed and failed test scenarios.
1.	<p>Step 1 (creation/configuration/initial step(s)): (write step clearly) To create the java file on the windows machine</p> <p>In this step, a Java file was created and saved to "C:\Users\student\Desktop\Shaun\shaun.java"</p> <p>Screenshot 1:</p> <pre> 1 public class shaun { 2 public static void main(String[] args) { 3 System.out.println("Hello, I'm Shaun"); 4 System.out.println("I belong to class TE INFT B, batch B1"); 5 System.out.println("Welcome to my Mock Practical"); 6 } 7 } </pre>

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2.	<p>Step 2 (internal step 1): (write step clearly)</p> <p>Starting the SonarQube Service</p> <p>In this step, the SonarQube service was started. The file was located in "C:\Program Files\sonarqube-25.10.0.114319\bin\windows-x86-64\StartSonar.bat"</p> <p>Screenshot 2:</p>  <p>The screenshot shows a Windows command prompt window titled "C:\WINDOWS\System32\cmd.exe". The window displays the output of the "Starting SonarQube..." command. The logs show the following steps:</p> <ul style="list-style-type: none">2025-10-29 09:43:34 INFO app[[o.s.a.AppFileSystem] Cleaning or creating temp directory C:\Program Files\sonarqube-25.10.0.114319\temp2025-10-29 09:43:34 INFO app[[o.s.a.es.Elasticsearch] Elasticsearch listening on [HTTP: 127.0.0.1:9800, TCP: 127.0.0.1:9300]2025-10-29 09:43:34 INFO app[[o.s.a.ProcessLauncherImpl] Launch process[ELASTICSEARCH] from [C:\Program Files\sonarqube-25.10.0.114319\bin\windows-x86-64\StartSonar.bat]2025-10-29 09:43:34 INFO app[[o.s.a.SchedulerImpl] Waiting for Elasticsearch to be up and running2025-10-29 09:43:34 INFO app[[o.s.a.SchedulerImpl] Process[es] is up2025-10-29 09:43:34 INFO app[[o.s.a.ProcessLauncherImpl] Launch process[WEB_SERVER] from [C:\Program Files\sonarqube-25.10.0.114319\bin\windows-x86-64\StartSonar.bat]2025-10-29 09:43:34 INFO app[[o.s.a.SchedulerImpl] Process[web] is up2025-10-29 09:43:34 INFO app[[o.s.a.ProcessLauncherImpl] Launch process[COMPUTE_ENGINE] from [C:\Program Files\sonarqube-25.10.0.114319\bin\windows-x86-64\StartSonar.bat]2025-10-29 09:43:34 INFO app[[o.s.a.SchedulerImpl] Process[ce] is up2025-10-29 09:43:34 INFO app[[o.s.a.SchedulerImpl] SonarQube is operational <p>The taskbar at the bottom shows the date and time as 29-10-2025, 09:45.</p>

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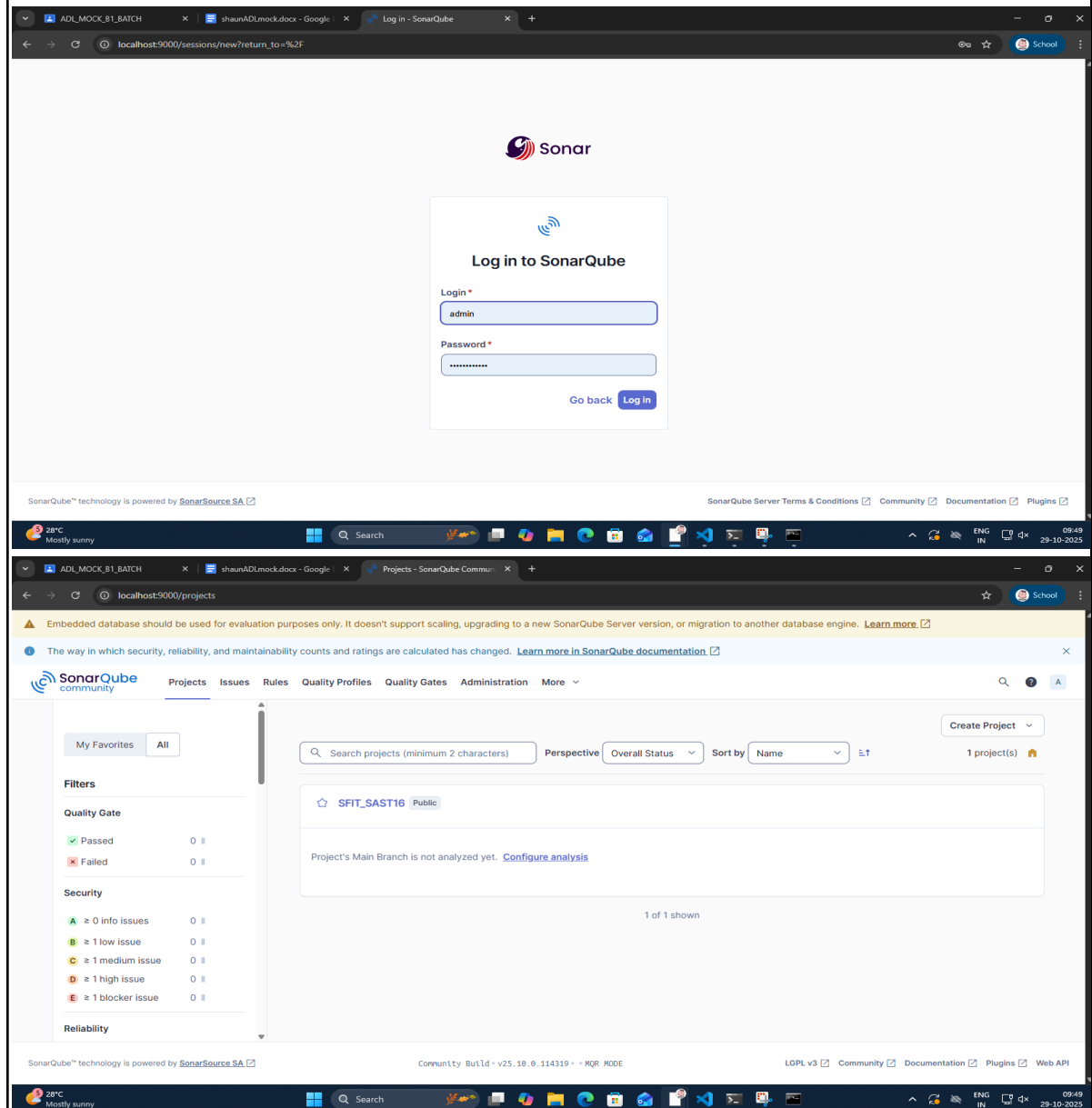
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3. Step 3 (internal step 2): (write step clearly)

Logging into SonarQube

In this step, we logged into the SonarQube service, located at localhost:9000

Screenshot 3:



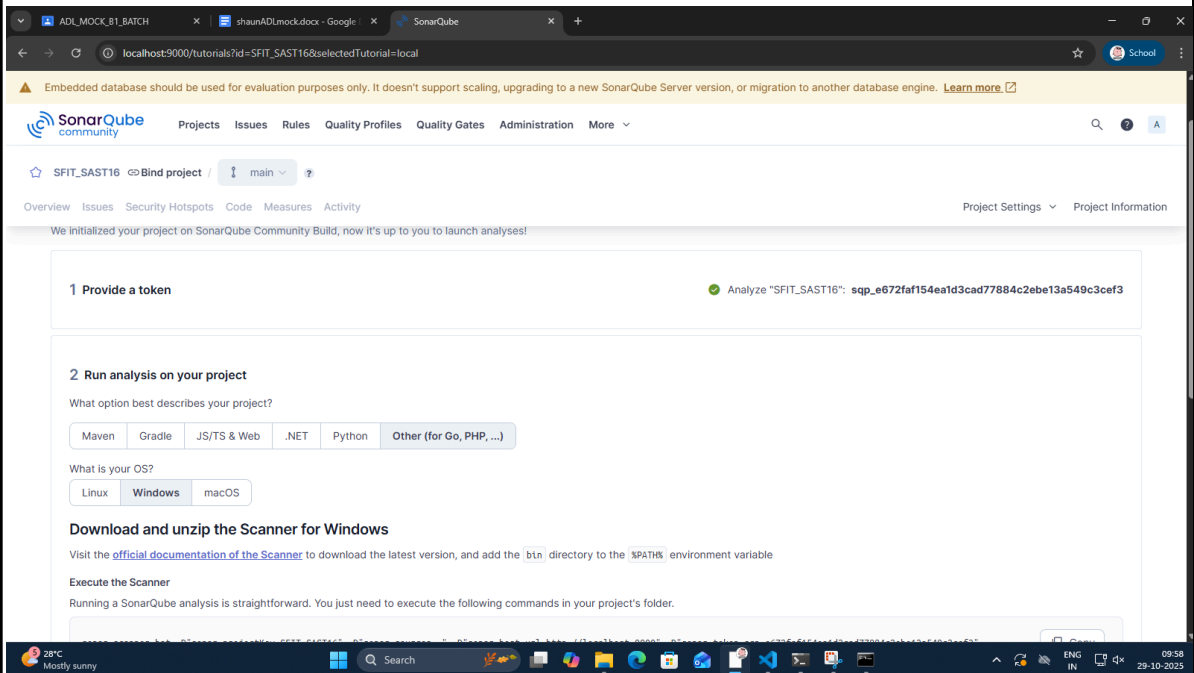
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4. Step 4 (internal step 3): (write step clearly)

To generate the analysis token on SonarQube

In this step, we generated the token to analyze the program on SonarQube
Screenshot 4:



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5. Step 5 (stop/delete step) : (write step clearly)

To run the analysis on the code

In this step, we run the command token and check the code quality

Screenshot 5:

```
C:\WINDOWS\system32\cmd
Microsoft Windows [Version 10.0.26100.6584]
(c) Microsoft Corporation. All rights reserved.

C:\Users\student>cd Desktop
C:\Users\student\Desktop>cd Shaun
C:\Users\student\Desktop\Shaun>javac shaun.java
C:\Users\student\Desktop\Shaun>java shaun
Hello, I'm Shaun
I belong to class TE INFT B, batch B1
Welcome to my Mock Practical

C:\Users\student\Desktop\Shaun>sonar-scanner.bat -D"sonar.projectKey=SFIT_SAST16" -D"sonar.sources=" -D"sonar.host.url=http://localhost:9000" -D"sonar.token=sqp_e672faf154eald3cad77884c2ebell3a549c3cef3"
10:01:45.318 INFO Scanner configuration file: C:\Program Files\sonar-scanner-7.2.0-5079-windows-x64\bin\..\.conf\sonar-scanner.properties
10:01:45.322 INFO Project root configuration file: NONE
10:01:45.332 INFO SonarScanner CLI 7.2.0.5079
10:01:45.333 INFO Windows 11 10.0 amd64
10:01:45.836 INFO Communicating with SonarQube Community Build 26.10.0.114319
10:01:45.837 INFO JRE provisioning: os[windows], arch[amd64]
10:01:47.310 INFO Starting SonarScanner Engine...
10:01:47.320 INFO Java 17.0.13 Eclipse Adoptium (64-bit)
10:01:47.957 INFO Load global settings
10:01:48.869 INFO Load global settings (done) | time=51ms
10:01:48.911 INFO Server id: 1478411E-A2nrgVAE6K138Clv8Hf5
10:01:48.916 INFO Loading required plugins
10:01:48.919 INFO Load plugins index
10:01:48.939 INFO Load plugins index (done) | time=21ms
10:01:48.940 INFO Load/download plugins
10:01:48.240 INFO Load/download plugins (done) | time=201ms
10:01:48.533 INFO Process project properties
10:01:48.540 INFO Process project properties (done) | time=15ms
10:01:48.567 INFO Project key: SFIT_SAST16
10:01:48.568 INFO Base dir: C:\Users\student\Desktop\Shaun
10:01:48.569 INFO Working dir: C:\Users\student\Desktop\Shaun\scannerwork
10:01:48.577 INFO Load project settings for component key: 'SFIT_SAST16'
10:01:48.594 INFO Load project settings for component key: 'SFIT_SAST16' (done) | time=18ms
10:01:48.621 INFO Load quality profiles
10:01:48.769 INFO Load quality profiles (done) | time=147ms
10:01:48.850 WARN SCM provider autodetection failed. Please use "sonar.scm.provider" to define SCM of your project, or disable the SCM Sensor in the project settings.
10:01:48.855 INFO Load active rules
10:01:49.284 INFO Load active rules (done) | time=429ms
10:01:49.289 INFO Load analysis cache
10:01:49.298 INFO Load analysis cache (90s) | time=8ms
10:01:49.489 INFO Preprocessing files...
10:01:49.490 INFO 1 language detected in 2 preprocessed files (done) | time=28ms
10:01:49.493 INFO Loading plugins for detected languages
10:01:49.493 INFO Load/download plugins
10:01:49.529 INFO Load/download plugins (done) | time=96ms
10:01:49.561 INFO Load project repositories
10:01:49.762 INFO Load project repositories (done) | time=112ms
10:01:49.774 INFO Indexing files...
10:01:49.775 INFO Project configuration:
10:01:49.788 INFO 2 files indexed (done) | time=13ms
10:01:49.789 INFO Quality profile for java: Sonar way
10:01:49.790 INFO Run sensors on module SFIT_SAST16
```

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```
C:\WINDOWS\system32\cmd. X + v
10:01:49.788 INFO 2 files indexed (done) | time=13ms
10:01:49.789 INFO Quality profile for java: Sonar may
10:01:49.790 INFO - Run sensors on module SFIT_SAST16
10:01:49.845 INFO Load metrics repository
10:01:49.865 INFO Load metrics repository (done) | time=20ms
10:01:50.496 INFO Sensor JavaSensor [java]
10:01:50.515 INFO Server-side caching is enabled. The Java analyzer will not try to leverage data from a previous analysis.
10:01:50.519 INFO Using ECJ batch to parse 1 Main Java source files with batch size 210 MB.
10:01:50.601 INFO Starting batch processing.
10:01:51.021 INFO The Java analyzer cannot skip unchanged files in this context. A full analysis is performed for all files.
10:01:51.207 INFO 100% analyzed
10:01:51.207 INFO Batch processing: Done.
10:01:51.208 INFO Did not optimize analysis for any files, performed a full analysis for all 1 files.
10:01:51.208 INFO No "test" source files to scan.
10:01:51.208 INFO No "coverage" source files to scan.
10:01:51.209 INFO Sensor JavaSensor [java] (done) | time=713ms
10:01:51.209 INFO Sensor JaCoCo XML Report Importer [jacoco]
10:01:51.209 INFO 'sonar.coverage.jacoco.xmlReportPaths' is not defined. Using default locations: target/site/jacoco/jacoco.xml,target/site/jacoco-it/jacoco.xml,build/reports/jacoco/test/jacocoTestReport.xml
10:01:51.210 INFO Sensor JaCoCo XML Report Importer [jacoco] (done) | time=1ms
10:01:51.210 INFO Sensor JaC Docker Sensor [jac]
10:01:51.210 INFO There are no files to be analyzed for the Docker language
10:01:51.210 INFO Sensor JaC Docker Sensor [jac] (done) | time=1ms
10:01:51.211 INFO Sensor JaC hadolint report Sensor [jac]
10:01:51.211 INFO Sensor JaC hadolint report Sensor [jac] (done) | time=1ms
10:01:51.211 INFO Sensor Java Config Sensor [jac]
10:01:51.211 INFO There are no files to be analyzed for the Java language
10:01:51.215 INFO Sensor Java Config Sensor [jac] (done) | time=3ms
10:01:51.215 INFO Sensor SureFirsSensor [java]
10:01:51.216 INFO Parsing [C:\Users\student\Desktop\Shaun\target\surefire-reports]
10:01:51.217 INFO Sensor SureFirsSensor [java] (done) | time=3ms
10:01:51.217 INFO Sensor TextAndSecretsSensor [text]
10:01:51.223 INFO Available processors: 20
10:01:51.223 INFO Using 24 threads for analysis.
10:01:51.475 INFO The property 'sonar.tests' is not set. To improve the analysis accuracy, we categorize a file as a test file if any of the following is true:
  * The filename starts with "test"
  * The filename contains "test" or "tests"
  * Any directory in the file path is named "doc", "docs", "test" or "tests"
  * Any directory in the file path has a name ending in "test" or "tests"
10:01:51.512 INFO Start fetching files for the text and secrets analysis
10:01:51.539 INFO Using JGit to retrieve untracked files
10:01:51.560 WARN Retrieving only language associated files, make sure to run the analysis inside a git repository to make use of inclusions specified via "sonar.text.inclusions"
10:01:51.560 INFO Starting the text and secrets analysis
10:01:51.562 INFO 1 source file to be analyzed for the text and secrets analysis
10:01:51.571 INFO 1/1 source file has been analyzed for the text and secrets analysis
10:01:51.572 INFO Sensor TextAndSecretsSensor [text] (done) | time=355ms
10:01:51.574 INFO Run sensors on project
10:01:51.601 INFO Sensor JavaProjectSensor [java]
10:01:51.603 INFO Sensor JavaProjectSensor [java] (done) | time=1ms
10:01:51.603 INFO Sensor Zero Coverage Sensor
10:01:51.606 INFO Sensor Zero Coverage Sensor (done) | time=3ms
10:01:51.607 INFO Sensor Java CPD Block Indexer
10:01:51.604 INFO Sensor Java CPD Block Indexer (done) | time=7ms
10:01:51.604 INFO Gather SCA dependencies on project
10:01:51.606 INFO Dependency analysis skipped
10:01:51.606 INFO SCM Publisher No SCM system was detected. You can use the 'sonar.scm.provider' property to explicitly specify it.
10:01:51.571 INFO 1/1 source file has been analyzed for the text and secrets analysis
10:01:51.572 INFO Sensor TextAndSecretsSensor [text] (done) | time=355ms
10:01:51.574 INFO Run sensors on project
10:01:51.601 INFO Sensor JavaProjectSensor [java]
10:01:51.603 INFO Sensor JavaProjectSensor [java] (done) | time=1ms
10:01:51.603 INFO Sensor Zero Coverage Sensor
10:01:51.606 INFO Sensor Zero Coverage Sensor (done) | time=3ms
10:01:51.607 INFO Sensor Java CPD Block Indexer
10:01:51.604 INFO Sensor Java CPD Block Indexer (done) | time=7ms
10:01:51.604 INFO Gather SCA dependencies on project
10:01:51.606 INFO Dependency analysis skipped
10:01:51.606 INFO SCM Publisher No SCM system was detected. You can use the 'sonar.scm.provider' property to explicitly specify it.
10:01:51.607 INFO CPD Executor 1 file had no CPD blocks
10:01:51.607 INFO CPD Executor Calculating CPD for 0 files
10:01:51.607 INFO CPD Executor CPD calculation finished (done) | time=0ms
10:01:51.728 INFO Analysis report generated in 57ms, dir size=209.7 kB
10:01:51.746 INFO Analysis report compressed in 13ms, zip size=39.8 kB
10:01:51.772 INFO Analysis report uploaded in 26ms
10:01:51.773 INFO ANALYSIS SUCCESSFUL, you can find the results at: http://localhost:9090/dashboard?id=SFIT_SAST16
10:01:51.773 INFO Note that you will be able to access the updated dashboard once the server has processed the submitted analysis report
10:01:51.774 INFO More about the report processing at http://localhost:9090/api/ce/task?id=3a7be149-1551-431b-8957-e554e6350219
10:01:51.782 INFO Analysis total time: 3.408 s
10:01:51.783 INFO SonarScanner Engine completed successfully
10:01:51.852 INFO EXECUTION SUCCESS
10:01:51.852 INFO Total time: 6.836s

C:\Users\student\Desktop\Shaun
```

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The screenshot displays a development environment with an IDE and a web browser. The IDE, in the background, shows a Java file named `shaun.java` with the following code:

```
1 public class shaunaaron[]  
2 {  
3     public static void main(String[] args) {  
4         System.out.println("Hello, I'm Shaun");  
5         System.out.println("I belong to class TE INFT B, batch B1");  
6         System.out.println("Welcome to my Mock Practical");  
7     }  
8 }
```

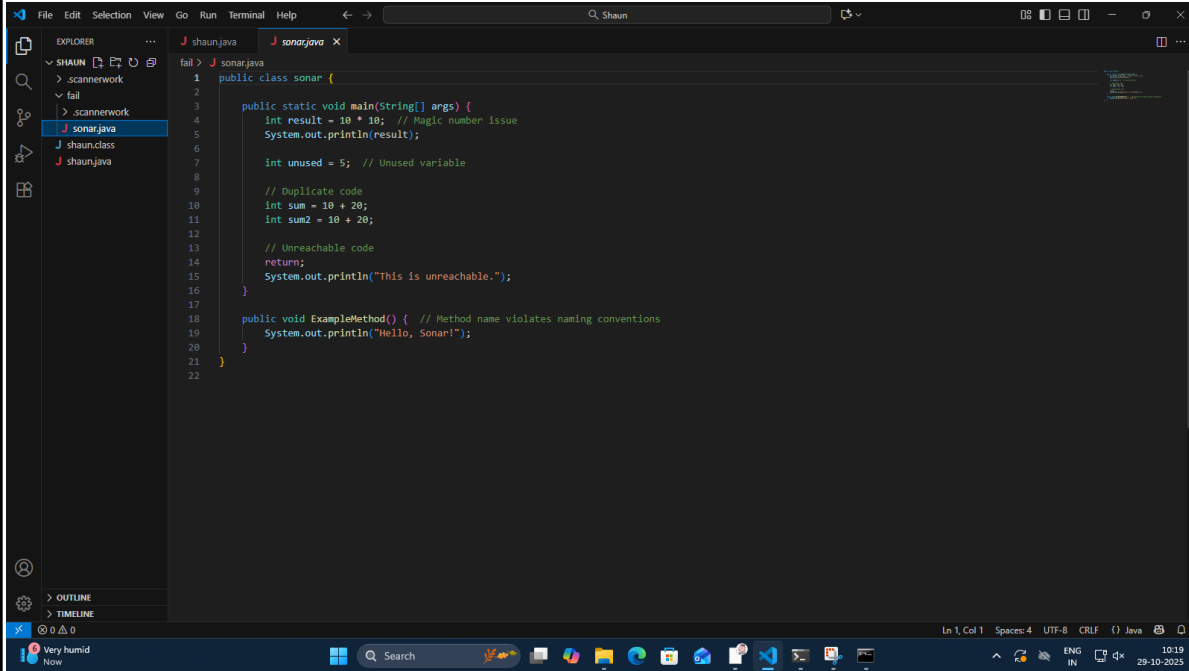
The web browser in the foreground shows the SonarQube dashboard for a project named `SFIT_SAST16`. The dashboard indicates that the code has passed the quality gate, with a message: "Passed". A warning states: "The last analysis has warnings. See details". The dashboard also shows various metrics:

- Security: 0 Open Issues (A)
- Reliability: 0 Open Issues (A)
- Maintainability: 5 Open Issues (D)
- Accepted issues: 0 (B)
- Coverage: 0.0% (On 4 lines to cover)
- Duplications: 0.0% (On 7 lines)
- Security Hotspots: 0 (A)

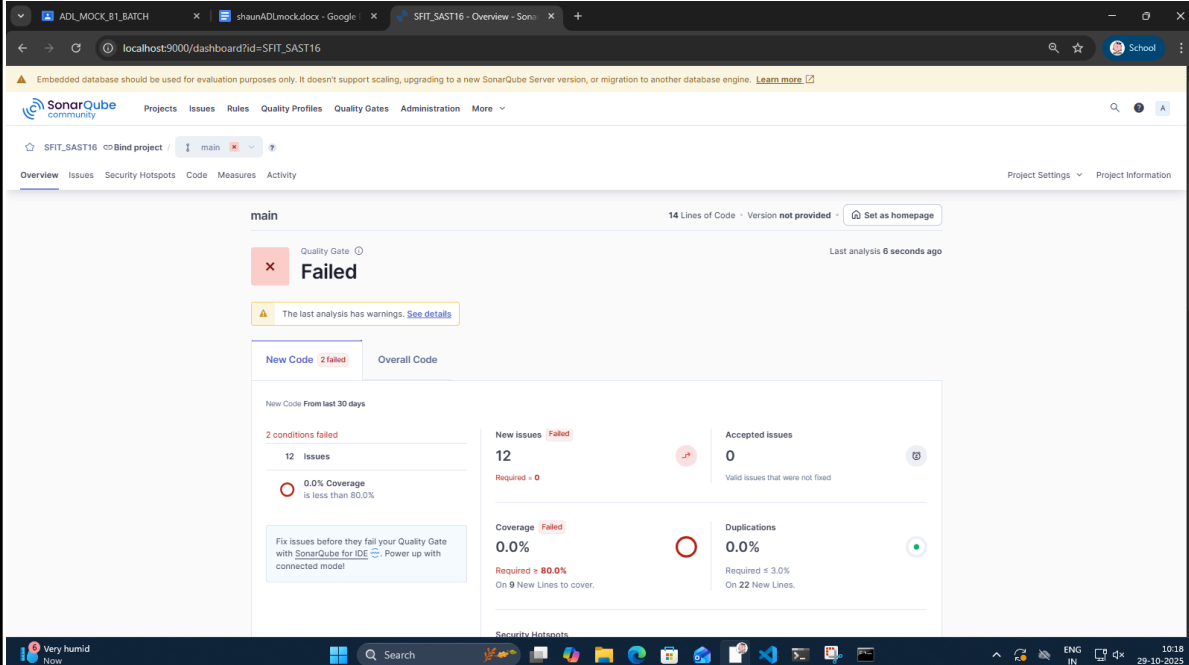
The dashboard also shows that the code is 7 lines long and the version is not provided. The last analysis was completed 2 minutes ago.

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```
1 public class sonar {
2
3     public static void main(String[] args) {
4         int result = 10 * 10; // Magic number issue
5         System.out.println(result);
6
7         int unused = 5; // Unused variable
8
9         // Duplicate code
10        int sum = 10 + 20;
11        int sum2 = 10 + 20;
12
13        // Unreachable code
14        return;
15        System.out.println("This is unreachable.");
16    }
17
18    public void ExampleMethod() { // Method name violates naming conventions
19        System.out.println("Hello, Sonar!");
20    }
21 }
22
```



ADL MOCK_BATCH | shaunADLmock.docx - Google | SFIT_SAST16 - Overview - SonarQube

localhost:9000/dashboard?id=SFIT_SAST16

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 engine. [Learn more](#)

SonarQube community

Projects Issues Rules Quality Profiles Quality Gates Administration More

SFIT_SAST16 Bind project main

Overview Issues Security Hotspots Code Measures Activity

Project Settings Project Information

main 14 Lines of Code - Version not provided - Set as homepage

Quality Gate Failed

The last analysis has warnings. [See details](#)

New Code 2 failed Overall Code

New Code From last 30 days

2 conditions failed

12 Issues

0.0% Coverage is less than 80.0%

Fix issues before they fail your Quality Gate with SonarQube for IDE. Power up with connected model.

New Issues Failed

12 Required 0

Coverage Failed

0.0% Required > 80.0% On 9 New Lines to cover.

Accepted Issues

0 Valid issues that were not fixed

Duplications

0.0% Required < 3.0% On 22 New Lines.

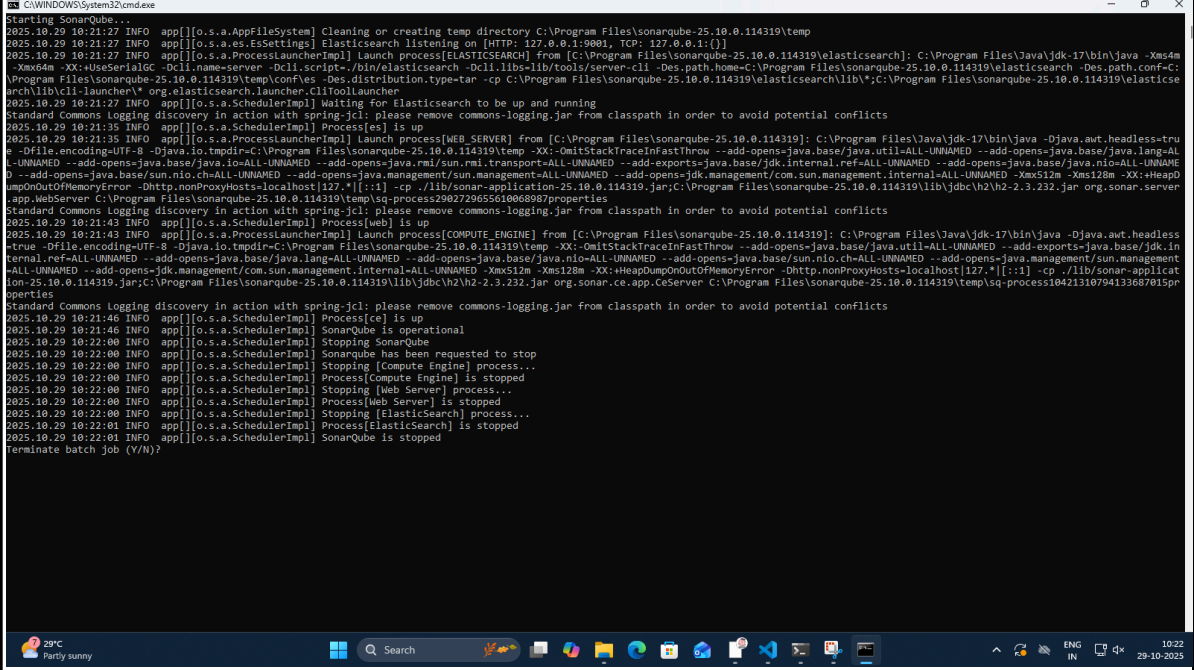
Security Hotspots

5. Step 5 (stop/delete step) : (write step clearly)
Stopping the SonarQube Service.

In this step, we stop the services and end the practical.

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<div><div>Screenshot 5:</div></div>	
Note: Adjust SS to fit in the table row. SS should include username and timestamp. Add rows if needed	