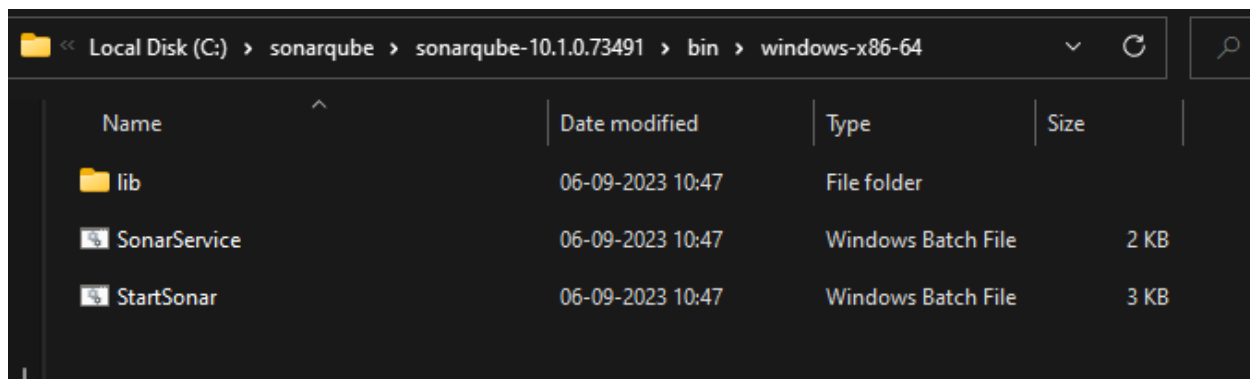
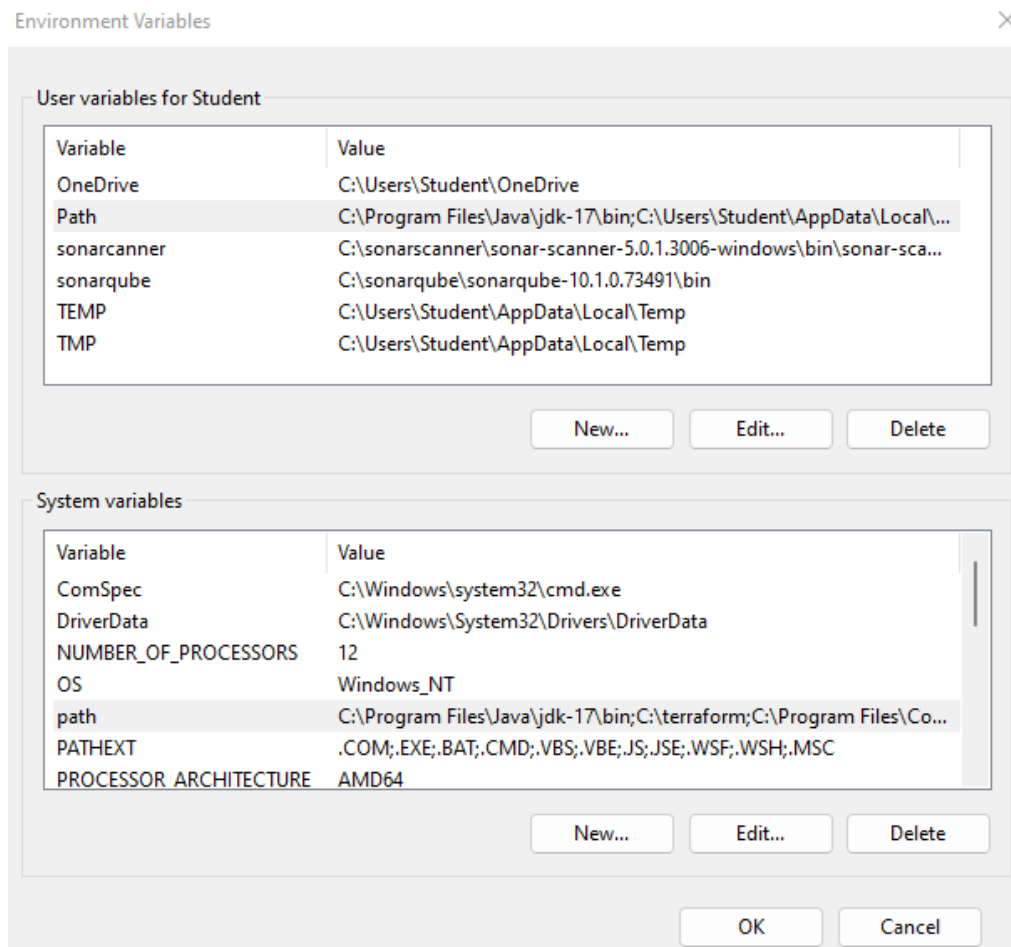
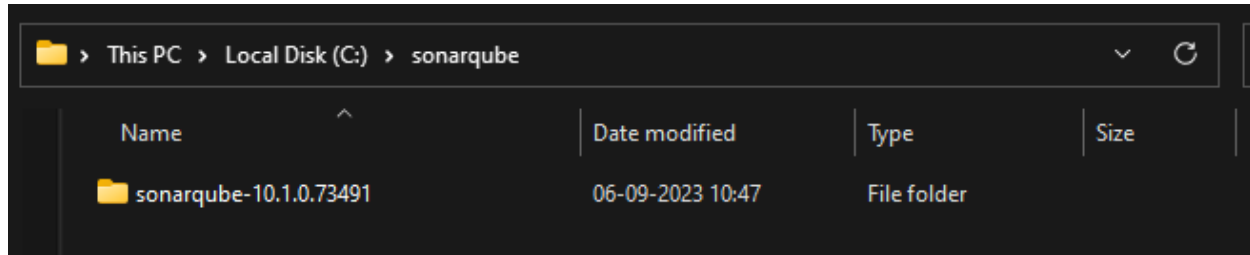


7. Laboratory Exercise

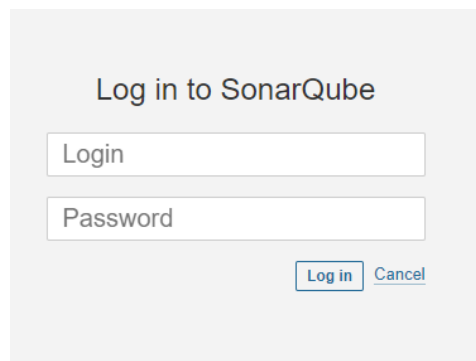
Step 1: StartSonar server from SonarQube folder



```
java.base/java.lang=ALL-UNNAMED --add-opens=java.base/java.io=ALL-UNNAMED --add-opens=java.rmi/sun.rmi.transport=ALL-UNNAMED --add-exports=java.base/jdk.internal.ref=ALL-UNNAMED --add-opens=java.base/java.nio=ALL-UNNAMED --add-opens=java.base/sun.nio.ch=ALL-UNNAMED --add-opens=java.management/sun.management=ALL-UNNAMED --add-opens=jdk.management/com.sun.management.internal=ALL-UNNAMED -Dcom.redhat.fips=false -Xmx512m -Xms128m -XX:+HeapDumpOnOutOfMemoryError -Dhttp.nonProxyHosts=localhost[127.*][:1] -cp ./lib/sonar-application-10.1.0.73491.jar;C:\sonarqube\sonarqube-10.1.0.73491\lib\jdbc\h2\h2-2.1.214.jar org.sonar.server.app.WebServer C:\sonarqube\sonarqube-10.1.0.73491\temp\sq-process15245618535309100088properties
WARNING: A terminally deprecated method in java.lang.System has been called
WARNING: System::setSecurityManager has been called by org.sonar.process.PluginSecurityManager (file:/C:/sonarqube/sonarqube-10.1.0.73491/lib/sonar-application-10.1.0.73491.jar)
WARNING: Please consider reporting this to the maintainers of org.sonar.process.PluginSecurityManager
WARNING: System::setSecurityManager will be removed in a future release
2023.10.05 15:23:39 INFO app[[[o.s.a.SchedulerImpl] Process[web] is up
2023.10.05 15:23:39 INFO app[[[o.s.a.ProcessLauncherImpl] Launch process[COMPUTE_ENGINE] from [C:\sonarqube\sonarqube-10.1.0.73491]: C:\Program Files\Java\jdk-17\bin\java -Djava.awt.headless=true -Dfile.encoding=UTF-8 -Djava.io.tmpdir=C:\sonarqube\sonarqube-10.1.0.73491\temp -XX:-OmitStackTraceInFastThrow --add-opens=java.base/java.util=ALL-UNNAMED --add-exports=java.base/jdk.internal.ref=ALL-UNNAMED --add-opens=java.base/java.lang=ALL-UNNAMED --add-opens=java.base/java.nio=ALL-UNNAMED --add-opens=java.base/sun.nio.ch=ALL-UNNAMED --add-opens=java.management/sun.management=ALL-UNNAMED --add-opens=jdk.management/com.sun.management.internal=ALL-UNNAMED -Dcom.redhat.fips=false -Xmx512m -Xms128m -XX:+HeapDumpOnOutOfMemoryError -Dhttp.nonProxyHosts=localhost[127.*][:1] -cp ./lib/sonar-application-10.1.0.73491.jar;C:\sonarqube\sonarqube-10.1.0.73491\lib\jdbc\h2\h2-2.1.214.jar org.sonar.ce.app.CeServer C:\sonarqube\sonarqube-10.1.0.73491\temp\sq-process15245618535309100088properties
WARNING: A terminally deprecated method in java.lang.System has been called
WARNING: System::setSecurityManager has been called by org.sonar.process.PluginSecurityManager (file:/C:/sonarqube/sonarqube-10.1.0.73491/lib/sonar-application-10.1.0.73491.jar)
WARNING: Please consider reporting this to the maintainers of org.sonar.process.PluginSecurityManager
WARNING: System::setSecurityManager will be removed in a future release
2023.10.05 15:23:42 INFO app[[[o.s.a.SchedulerImpl] Process[ce] is up
2023.10.05 15:23:42 INFO app[[[o.s.a.SchedulerImpl] SonarQube is operational
```

Step 2: : on browser chk <https://localhost:9000>

Step 3: By default Username and Password is admin. You can change the password here.



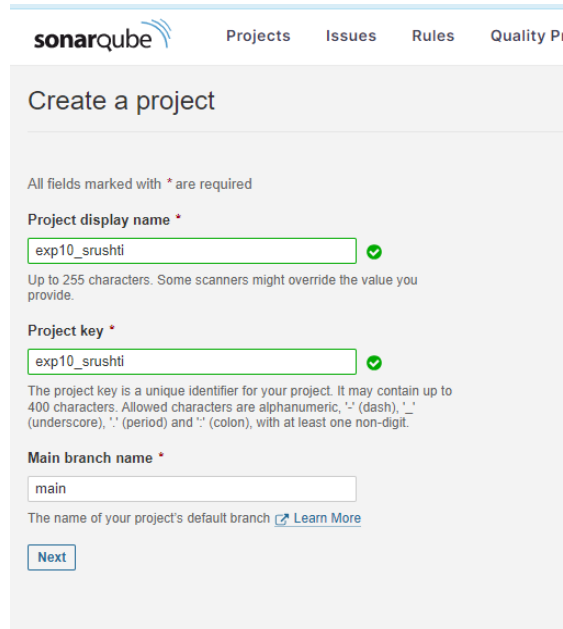
Log in to SonarQube

Login

Password

Log in Cancel

Step 5: Click on Manually. Create a Project with name



sonarqube Projects Issues Rules Quality Pr

Create a project

All fields marked with * are required

Project display name *

exp10_srushti ✓

Up to 255 characters. Some scanners might override the value you provide.

Project key *

exp10_srushti ✓

The project key is a unique identifier for your project. It may contain up to 400 characters. Allowed characters are alphanumeric, '-' (dash), '_' (underscore), '.' (period) and ':' (colon), with at least one non-digit.

Main branch name *

main

The name of your project's default branch [Learn More](#)

Next

Set up project for Clean as You Code

New Code

The new code definition sets which part of your code will be considered new code. This helps you focus attention on the most recent changes to your project, enabling you to follow the Clean as You Code principle.

Learn more: [Defining New Code](#)

What should be the baseline for new code for this project?

☒ Use the global setting

Previous version: Any code that has changed since the previous version is considered new code. Recommended for projects following regular versions or releases.

☐ Define a specific setting for this project

☐ Previous version

Any code that has changed since the previous version is considered new code.

Recommended for projects following regular versions or releases.

☐ Number of days

Any code that has changed in the last x days is considered new code. If no action is taken on a new issue, it will become part of the overall code.

Recommended for projects following continuous integration.


Step 6: Click on Locally and given token name

☆ exp10~_srushti / main ?


Overview Issues Security Hotspots Measures Code Activity

How do you want to analyze your repository?


Do you want to integrate with your favorite CI? Choose one of the following tutorials.




With Jenkins




With GitHub Actions



With Bitbucket Pipelines




With GitLab CI



With Azure Pipelines

Are you just testing or have an advanced use-case? Analyze your project locally.



Locally


Step 7: Give token name and continue

Analyze your project

We initialized your project on SonarQube, now it's up to you to launch analyses!

1 Provide a token

☒ Generate a project token

Token name 

Expires in

Analyze "exp10-_srushti"

30 days

Generate



Please note that this token will only allow you to analyze the current project. If you want to use the same token to analyze multiple projects, you need to generate a global token in your [user account](#). See the [documentation](#) for more information.

☐ Use existing token

The token is used to identify you when an analysis is performed. If it has been compromised, you can revoke it at any point in time in your [user account](#).

sqp_bdf215b01e63dd98e70b846ec366bfdd6c4077cb

Analyze your project

We initialized your project on SonarQube, now it's up to you to launch analyses!

1 Provide a token

Analyze "exp10-_srushti": sqp_bdf215b01e63dd98e70b846ec366bfdd6c4077cb 

The token is used to identify you when an analysis is performed. If it has been compromised, you can revoke it at any point in time in your [user account](#).

Continue

Step 8: Select what type of project you want to test

Step 9: Click on Other and select OS as Windows

2 Run analysis on your project

What option best describes your build?

Maven

Gradle

.NET

Other (for JS, TS, Go, Python, PHP, ...)

What is your OS?

Linux

Windows

macOS

Download and unzip the Scanner for Windows

Visit the [official documentation of the Scanner](#) to download the latest version, and add the `bin` directory to the `%PATH%` environment variable

Execute the Scanner

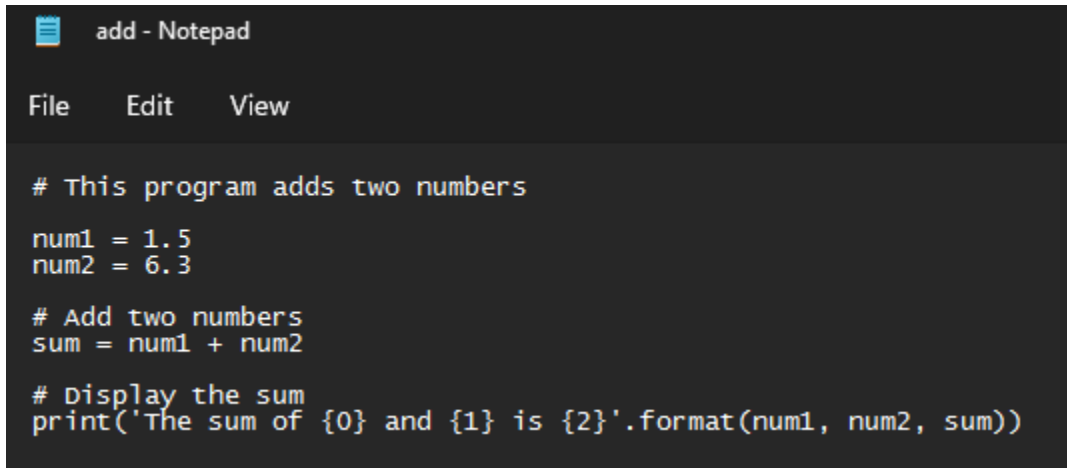
Running a SonarQube analysis is straightforward. You just need to execute the following commands in your project's folder.

```
sonar-scanner.bat -D"sonar.projectKey=exp10-_srushti" -D"sonar.sources=." -D"sonar.host.url=http://localhost:9000" -D"sonar.token=sqp_bdf215b01e63dd98e70b846ec366bfdd6c4077cb"
```

Copy

Please visit the [official documentation of the Scanner](#) for more details.

Write a python code



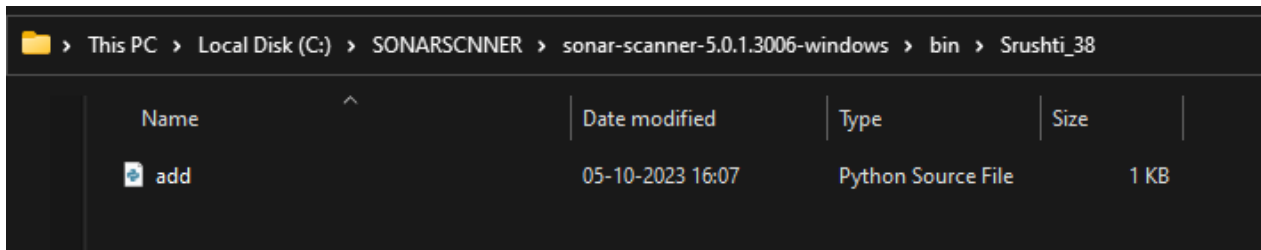
```
# This program adds two numbers

num1 = 1.5
num2 = 6.3

# Add two numbers
sum = num1 + num2

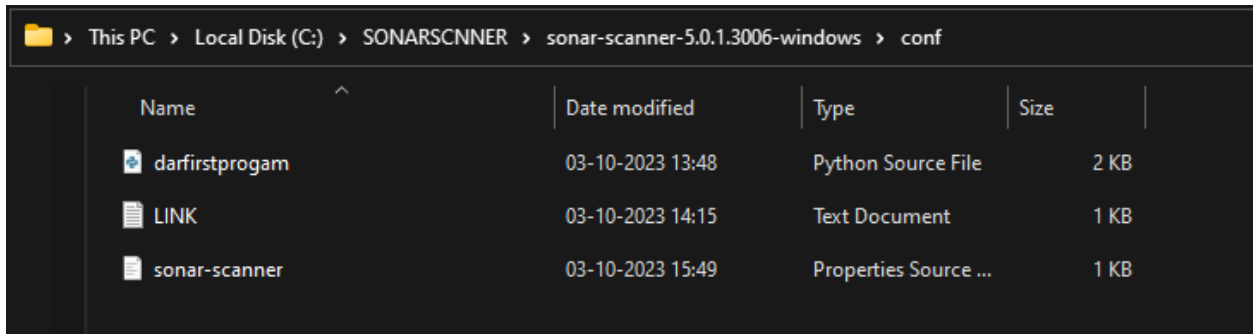
# Display the sum
print('The sum of {0} and {1} is {2}'.format(num1, num2, sum))
```

Step 10: Create a folder to keep python scripts



Name	Date modified	Type	Size
add	05-10-2023 16:07	Python Source File	1 KB

Step 11: Start configuration of the scanner. Add following lines to C:/SonarScanner/conf/Sonar-Scanner.properties



Name	Date modified	Type	Size
darfirstprogam	03-10-2023 13:48	Python Source File	2 KB
LINK	03-10-2023 14:15	Text Document	1 KB
sonar-scanner	03-10-2023 15:49	Properties Source ...	1 KB

```
sonar-scanner - Notepad

File Edit View

#Configure here general information about the environment, such as SonarQube
#No information about specific project should appear here

#----- Default SonarQube server
#sonar.host.url=http://localhost:9000

#----- Default source code encoding
#sonar.sourceEncoding=UTF-8

sonar.projectKey=exp10_srushti
sonar.projectName=exp10_srushti
sonar.projectVersion=1.0
C:\SONARSCNNER\sonar-scanner-5.0.1.3006-windows\bin\srushti_38
```

Step 12: Open new command prompt to Run and scan python files

sonar-scanner.bat -D"sonar.projectKey=exp10-_srushti" -D"sonar.sources=."

-D"sonar.host.url=http://localhost:9000"

-D"sonar.token=sqp_bdf215b01e63dd98e70b846ec366bfdd6c4077cb"

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\SONARSCNNER\sonar-scanner-5.0.1.3006-windows\bin> sonar-scanner.bat -D"sonar.projectKey=exp10-_srushti" -D"sonar.sources=.
localhost:9000" -D"sonar.token=sqp_bdf215b01e63dd98e70b846ec366bfdd6c4077cb"
INFO: Scanner configuration file: C:\SONARSCNNER\sonar-scanner-5.0.1.3006-windows\bin\..\conf\sonar-scanner.properties
INFO: Project root configuration file: NONE
INFO: SonarScanner 5.0.1.3006
INFO: Java 17.0.7 Eclipse Adoptium (64-bit)
INFO: Windows 11 10.0 amd64

INFO: CPD Executor CPD calculation finished (done) | time=0ms
INFO: Analysis report generated in 47ms, dir size=139.7 kB
INFO: Analysis report compressed in 93ms, zip size=23.3 kB
INFO: Analysis report uploaded in 32ms
INFO: ANALYSIS SUCCESSFUL, you can find the results at: http://localhost:9000/das
INFO: Note that you will be able to access the updated dashboard once the server
INFO: More about the report processing at http://localhost:9000/api/ce/task?id=AV
INFO: Analysis total time: 5.535 s
INFO: -----
INFO: EXECUTION SUCCESS
INFO: -----
INFO: Total time: 6.704s
INFO: Final Memory: 23M/80M
INFO: -----
PS C:\SONARSCNNER\sonar-scanner-5.0.1.3006-windows\bin>
```


Step 13: SonarQube command will give output on the dashboard. Command Prompt is showing Execution Success and dashboard will give Quality Gate Status : Passed

☆ exp10_srushti / ⓘ main ✓ ▾ ?


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

Overview Issues Security Hotspots Measures Code Activity Project Settings ▾

Quality Gate Status ?







Quality Gate
Passed



Enjoy your sparkling clean code!

Measures

New Code Overall Code

 Reliability 0 Bugs	A	 Maintainability 14 Code Smells
 Security 0 Vulnerabilities	A	 Security Review 0 Security Hotspots ?
Coverage 0.0% Coverage Coverage on 42 Lines to cover	F	Duplications 0.0% Duplications Duplications on 60 Lines

In Measures -> size

☆ exp10_srushti / ⓘ main ✓ ▾ ?

Overview Issues Security Hotspots

Size ▾

Lines of Code	60
Lines	111
Statements	42
Functions	6
Classes	2
Files	3
Comment Lines	26
Comments (%)	30.2%

exp10_srushti > Srushti_38 > add.py 

Lines of Code 4

Python  4

```
1      # This program adds two numbers
2
3      num1 = 1.5
4      num2 = 6.3
5
6      # Add two numbers
7      sum = num1 + num2
8
9      # Display the sum
10     print('The sum of {0} and {1} is {2}'.format(num1, num2, sum))
11
```

```
INFO: Note that you will be able to access the updated dashboard once the server h
INFO: More about the report processing at http://localhost:9000/api/ce/task?id=AYr
INFO: Analysis total time: 5.535 s
INFO: -----
INFO: EXECUTION SUCCESS
INFO: -----
INFO: Total time: 6.704s
INFO: Final Memory: 23M/80M
INFO: -----
PS C:\SONARSCNNER\sonar-scanner-5.0.1.3006-windows\bin> exit
```