

# 1 Introduction

Code Review is a systematic examination(also referred as Peer review) of the source code.The review process is performed to find the mistakes which was ignored in the initial development phase and arr usually performed to improve the overall quality of the software by improving internal code quality and maintainability, also find performance problems, security vulnerabilities etc [1].

## SonarQube

SonarQube is a free and open source static code analysis tool to detect bugs, code smells, security vulnerabilities. SonarQube supports more than 20 programming languages and it has inbuilt rules for most of the languages.I have hosted SonarQube on my system and used it to perform the code review and used the java rule-set(consisted of 351 active rules) to perform the analysis.

## Review Report

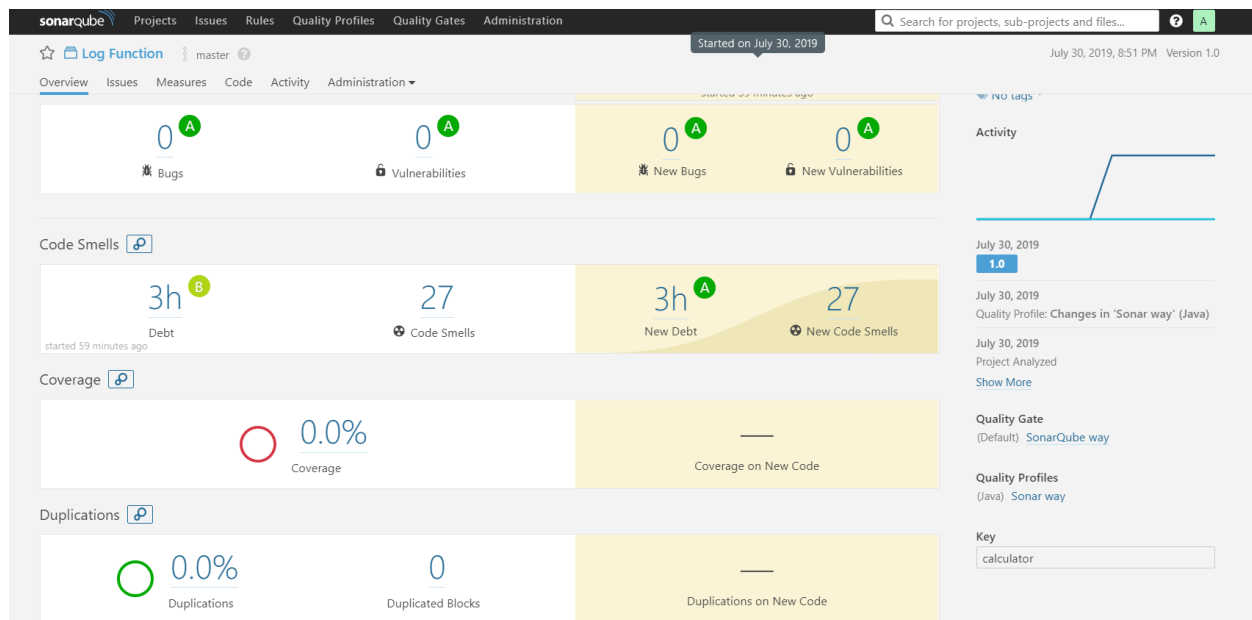


Figure 1: SonarQube Dashboard. (Log Function)

Log Function master July 30, 2019, 8:51 PM Version 1.0

Overview Issues Measures Code Activity Administration

Display Mode Issues Effort Bulk Change 1/2 issues

Type Bug 0 Vulnerability 0 Code Smell 2

Severity Blocker 0 Minor 10 Critical 2 Info 1 Major 14

src/Logfun.java

Define a constant instead of duplicating this literal "logarithm of (" 5 times. 36 minutes ago L129 Code Smell Critical Open Not assigned 12min effort Comment design

Define a constant instead of duplicating this literal " is " 5 times. 36 minutes ago L129 Code Smell Critical Open Not assigned 12min effort Comment design

2 of 2 shown

Figure 2: Critical Errors

Log Function master July 30, 2019, 8:51 PM Version 1.0

Overview Issues Measures Code Activity Administration

Display Mode Issues Effort Bulk Change 1/14 issues

Type Bug 0 Vulnerability 0 Code Smell 14

Severity Blocker 0 Minor 10 Critical 2 Info 1 Major 14

Resolution

Status

Creation Date

Rule

Tag

Module

Directory

File

Assignee

Replace this use of System.out or System.err by a logger. 37 minutes ago L31 Code Smell Major Open Not assigned 10min effort Comment bad-practice, cert

Replace this use of System.out or System.err by a logger. 37 minutes ago L38 Code Smell Major Open Not assigned 10min effort Comment bad-practice, cert

Replace this use of System.out or System.err by a logger. 37 minutes ago L46 Code Smell Major Open Not assigned 10min effort Comment bad-practice, cert

Replace this use of System.out or System.err by a logger. 37 minutes ago L58 Code Smell Major Open Not assigned 10min effort Comment bad-practice, cert

Replace this use of System.out or System.err by a logger. 37 minutes ago L62 Code Smell Major Open Not assigned 10min effort Comment bad-practice, cert

Replace this use of System.out or System.err by a logger. 37 minutes ago L69 Code Smell Major Open Not assigned 10min effort Comment bad-practice, cert

Replace this use of System.out or System.err by a logger. 37 minutes ago L77 Code Smell Major Open Not assigned 10min effort Comment bad-practice, cert

This branch's code block is the same as the block for the branch on line 95. 37 minutes ago L100 Code Smell Major Open Not assigned 10min effort Comment design, suspicious

Replace this use of System.out or System.err by a logger. 37 minutes ago L129 Code Smell Major Open Not assigned 10min effort Comment bad-practice, cert

Figure 3: Major Errors

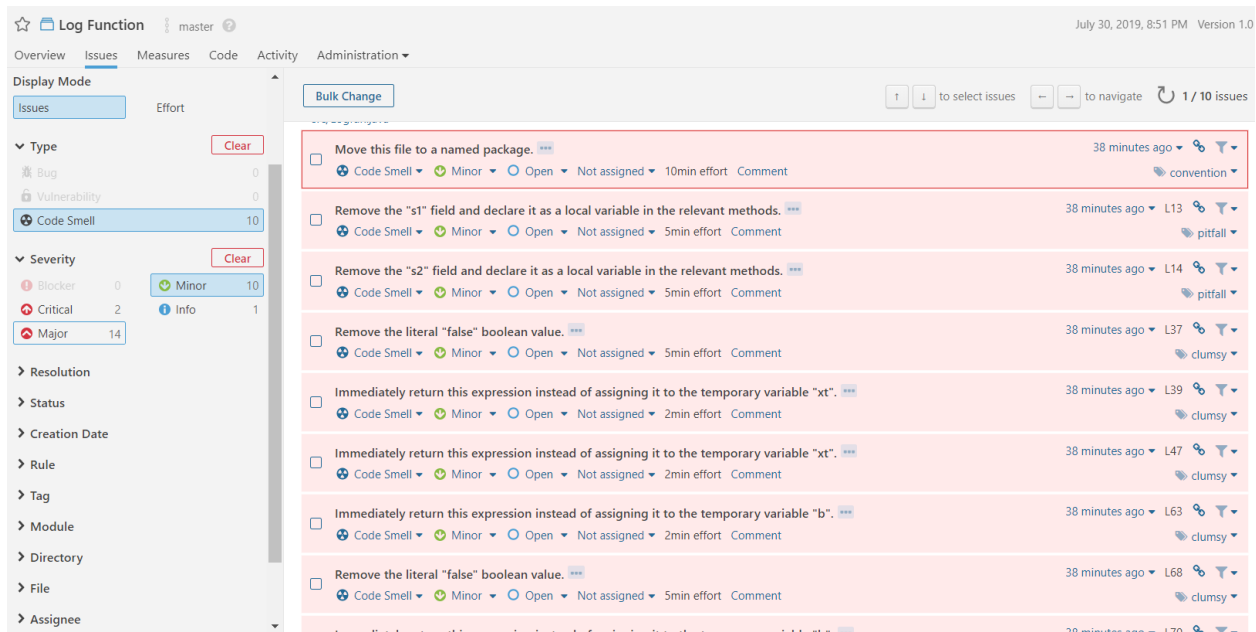


Figure 4: Minor Errors

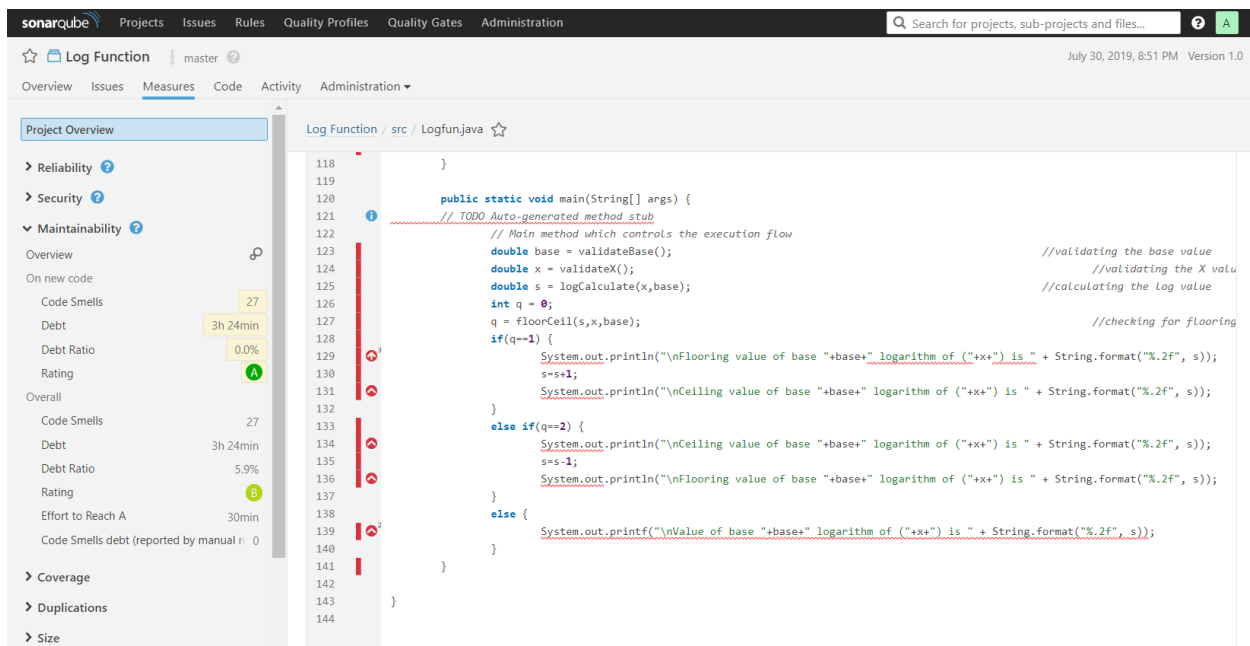


Figure 5: Function Main Method Implementation

## Github

This is the Link to my project repository : Source Code or you can go to the url : <https://github.com/Ruthvik-Shandilya/SOEN-6011>.

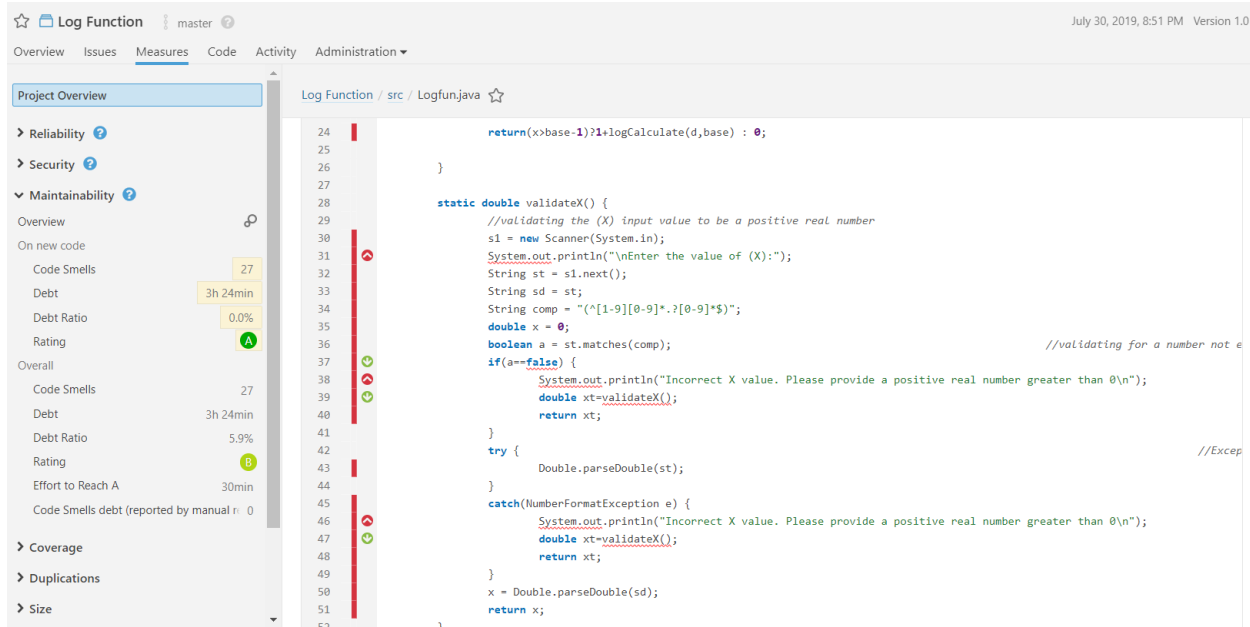


Figure 6: Function Method Implementation

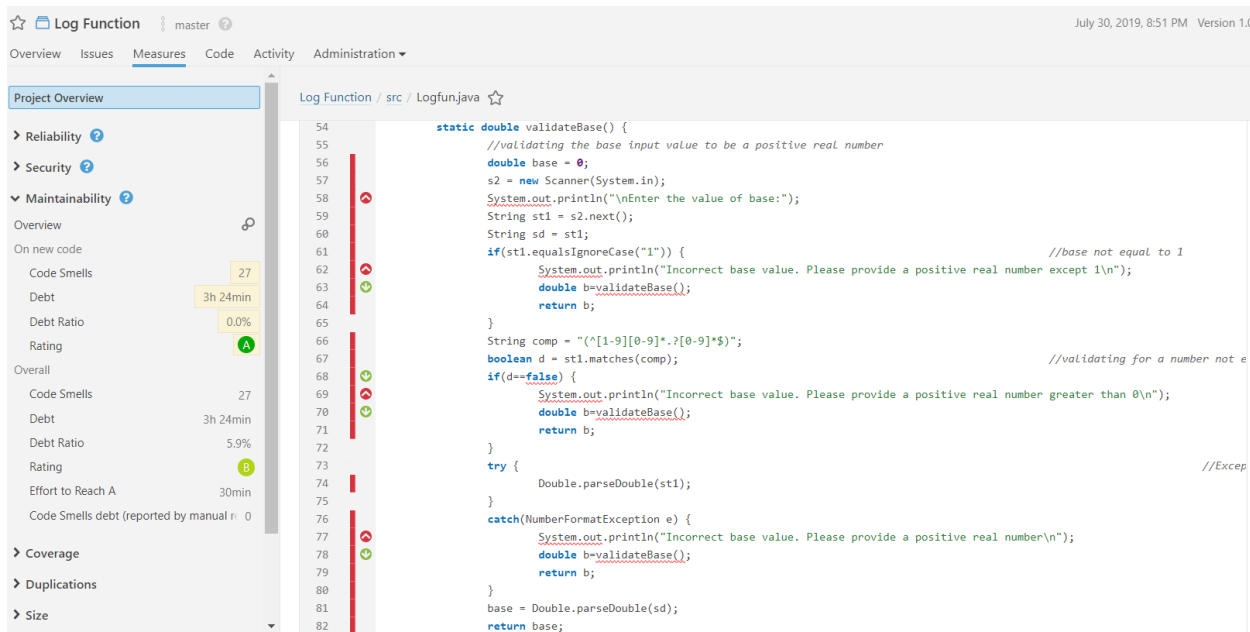


Figure 7: Function Method Implementation

This is the Link to the reviewed project repository : F4:  $\log_b(x)$  or you can go to the url : <https://github.com/manikandan-ms/SOEN6011>.

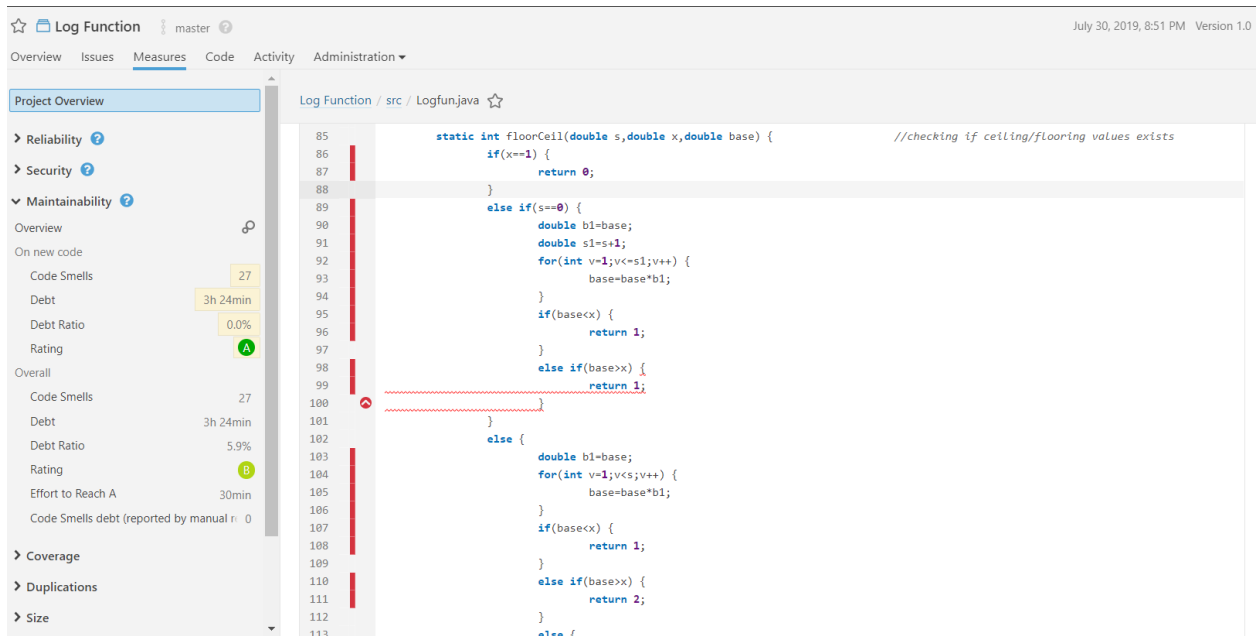


Figure 8: Function Method Implementation

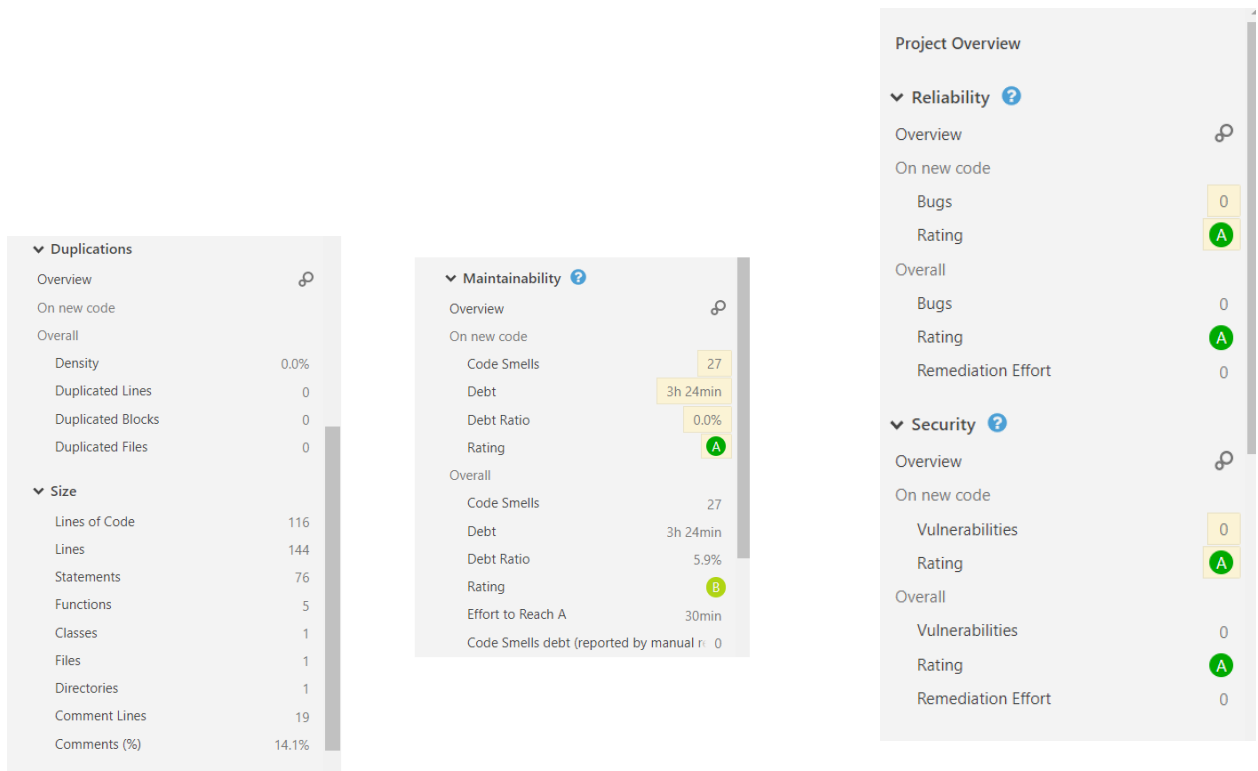


Figure 9: Quality Measures

Figure 10: Quality Measures

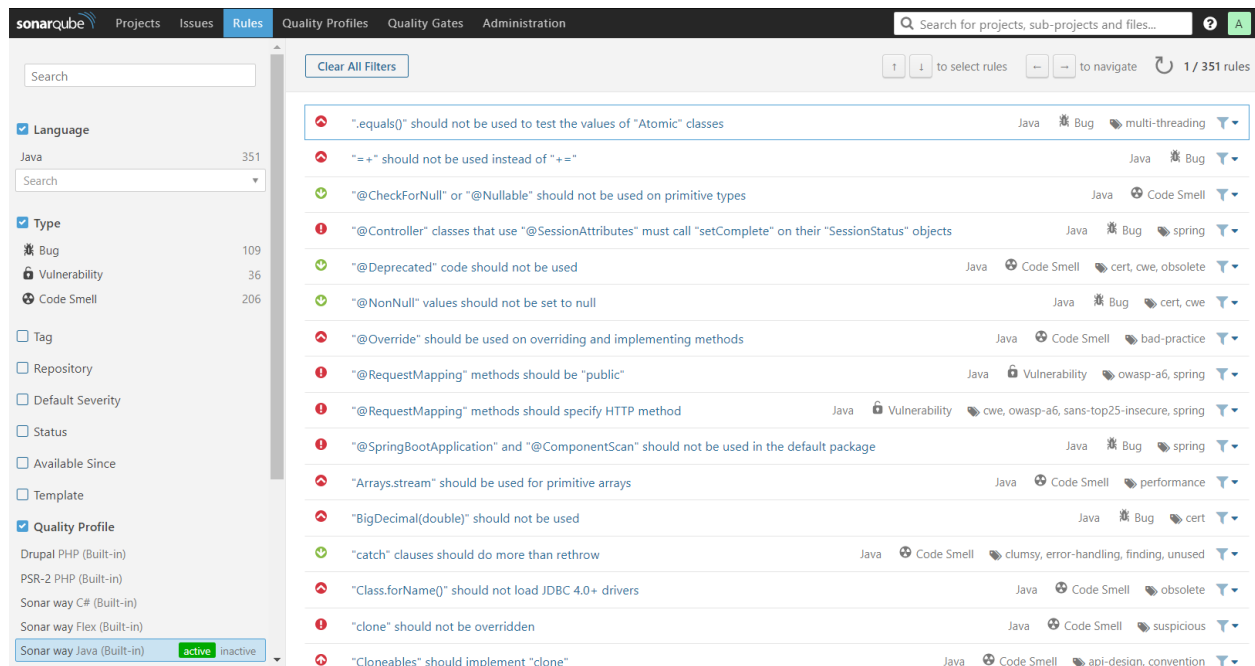


Figure 11: SonarQube Java Rules

## References

- [1] Code Review,  
<https://en.wikipedia.org/wiki/Codereview>