Concordia University
Engineering and Computer Science

Software Comprehension and Maintenance

Déjà Vu – Poster Presentation

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Project Objective

- ✓ Learning to make critical decisions through theory and practice of reengineering .
- ✓ A candidate R from five different repositories chosen by respective team members.
- ✓ The detailed analysis of the 'undesirables' in the repositories using **TeamScale** before tapering down to the candidate R.
- ✓ The chosen candidate R provides us with the opportunity to reengineer the software program thus improving its maintainability.

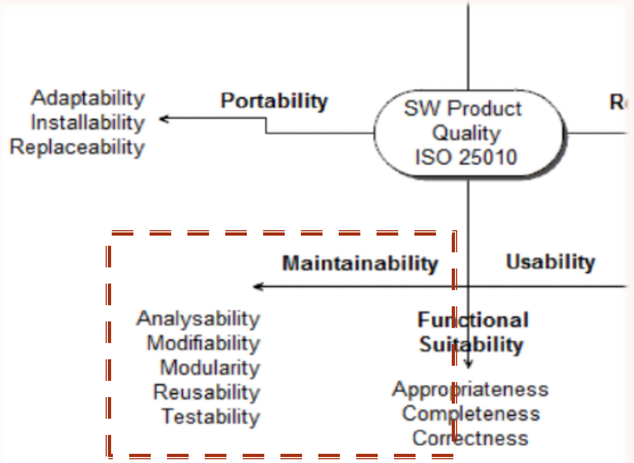
Critical Decisions Made

- ✓ Maintaining control over software modification.
- ✓ Perfecting existing functions.
- ✓ Identifying security threats and fixing security vulnerabilities.
- ✓ Preventing software performance from degrading to unacceptable levels.

Metrics used to Review

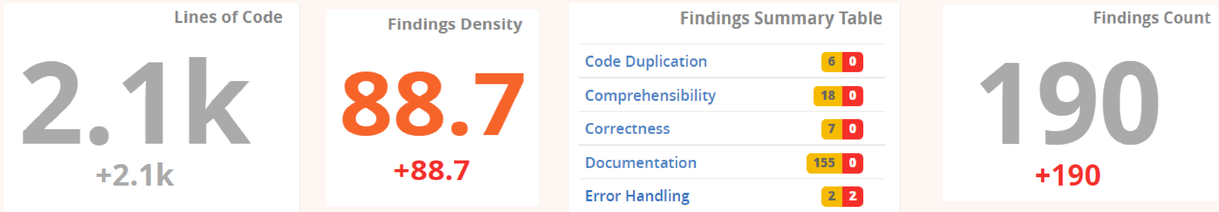
- ✓ Files
- ✓ Lines of Code
- ✓ Source Lines of Code
- ✓ Change Count
- ✓ Number of Findings
- ✓ Number of Findings (Red)
- ✓ Number of Findings (Yellow)
- ✓ Findings Density
- ✓ Findings Density (Red)
- ✓ Findings Density (Yellow)

Software ISO/IEC 25010

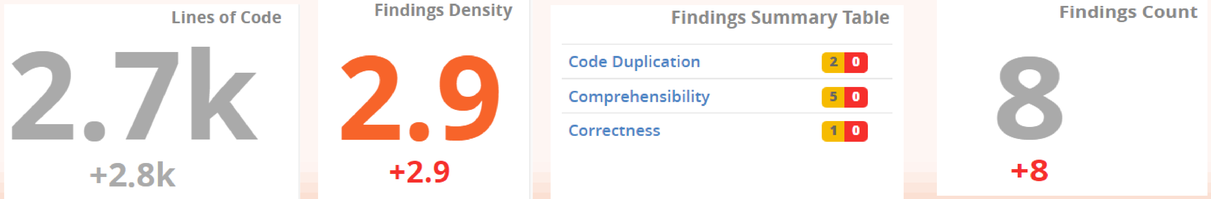


Refactoring Results

Before Refactoring



After Refactoring



Software Metrics	Before Refactoring	After Refactoring
Files	37	37
Lines of Code	2.1k	2.8k
Source Lines of Code	1.6k	1.2k
Longest Method Length	21	23
Last Change Date	Jul 27 2022 01:53	Jul 27 2022 02:30
Number of Findings	190	8
Findings Density	88.7	2.9