Investigating the impact of software complexity on software code reviews and inspections

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Abstract

The process of software development is complex and requires thorough quality control measures to ensure that software products adhere to the required standards. The primary goal of this study was to investigate the correlation between the complexity of a software code-base and the efficiency of software code reviews and inspections. The study used a hybrid approach, utilizing automated static code analysis tools and manual code reviews to detect potential code quality concerns. Additionally, we used cyclomatic complexity and other metrics to measure code complexity. Criteria were decided on to select technical personnel from industries for the purpose of conducting a code review and a feedback survey. Afterward, the responses obtained from the survey were used to determine the impact caused by the complexity of the code base on the efficiency of software code reviews and inspections.

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