

CODE QUALITY ANALYSIS ON MY SCHOOL'S WEB CMS USING SONARQUBE

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ABSTRACT

My School CMS is an open-source platform designed to support schools in managing content-based websites and the New Student Admission (PPDB) process. Ensuring the quality of its source code is essential for maintaining security, performance, and system stability. This study evaluates the code quality of the Sekolahku CMS using SonarQube, a continuous inspection tool that performs static analysis to identify bugs, vulnerabilities, code smells, and duplication. The analysis covered three primary project folders. The results show that all projects achieved a Quality Gate status of “Passed,” indicating that minimum quality standards were met. Regarding security, Projects 1 and 2 earned an A rating with no open issues, while Project 3 received an E rating with four unresolved vulnerabilities. For reliability, Projects 1 and 2 reported 408 and 423 open issues, and Project 3 recorded 740, resulting in D ratings. All projects obtained an A rating for maintainability, despite the high number of issues. Each project recorded 0 Accepted Issues and 0.0% Coverage, demonstrating the absence of automated testing. Code duplication rates were 10.8%, 10.7%, and 6.7%. Security hotspots reached 123, 129, and 211, each receiving an E rating. Overall, improvements are needed in reliability, duplication control, and automated testing processes.

Keywords: *My School CMS, SonarQube, Code Quality Analysis, Security, Performance, System Stability*