

Abstract

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Risk-based code smells detection tool

In order to maintain quality of software products, we need to perform refactoring regularly. Code smells detection is an important step to be able to successfully conduct software refactoring. In this paper, we propose to use risk concept in assessing code smells detected in the code. As a proof of concept, we developed an automated risk based code smells detection tool. We use the tool to identify problems in a C# case study. Code smells, such as Long Method, Long Parameter list, Message Chain and Empty Catch have been detected in the case study. Furthermore, risk factor level has been qualitatively associated (hi, low, Medium) with each code smell based on the frequency of occurrence and the severity of each code smell.