Abstract

Code clone is a kind of software recycling that has a greater influence on the maintenance of huge software systems. The business services are provided by web applications that employ a combination of page design and language code scripting. Usually, code redundancy in applications result from copy and paste practices called code clones. Searching for software clones is the key objective of this research. The clone identification procedure which is introduced in this paper is a hybrid approach that depends on template conversion and metrics comparison. There are four phases involved in the proposed scheme, namely, input and pre-processing, template conversion, metrics computation and clone type detection. File integration, elimination of white noise and statement normalization are the steps involved in the pre-processing stage. The metrics that are calculated includes numerous lines of code, arguments, looping statements, return statements and conditional statements. The pairs that have identical characteristics during textual evaluation are termed as the clones. This method of clone detection seems to be less complex with better accuracy and efficiency in contrast to other existing methods. The performance analysis is made against the prevailing systems to show efficiency improvement obtained through this method. The implementations are carried out with the help of JAVA.
An Efficient Software Clone Detection System based on the Textual Comparison of Dynamic Methods and Metrics Computation

References


- Ekwa Duala-Ekoko, Martin Robillard. Tracking Code Clones in Evolving Software. In
An Efficient Software Clone Detection System based on the Textual Comparison of Dynamic Methods and Metrics Computation


Index Terms

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Keywords

Clone detection  Template conversion  Metrics computation  File integration  Normalization.