

Simplification of source code with graph structure expression

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Abstract: This paper deals with abstraction of a source code. It is possible to express source code like a graph. This abstraction is suitable for easier understanding the source codes with more complex syntax. Two structures will be introduced on Java source code: an abstract syntax tree and a program dependence tree. Next, its properties and advantages will be introduced. Although its possibilities are wide, some of them will be mentioned. Moreover, the area with successful graph usages will be described. Clone detection, refactoring, or plagiarism could be as an example. The examples in this paper are introduced in one of the most popular language – Java. For most of readers will be probably easy to understand it.

Keywords: Java, abstract syntax tree, program dependence graph, clones detection, source code, refactoring

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