

Source code analysis extractive approach to generate textual summary

ABSTRACT

Nowadays, obtain program features becomes a hot issue in source code comprehension. A large amount of efforts spent on source code understanding and comprehension to develop or maintain it. As a matter of fact, developers need a solution to rapidly detect which program functional need to revise. Hence, many studies in this field are concentrating on text mining techniques to take out the data by source code analysis and generate a code summary. However, in this paper, we attempt to overcome this problem by propose a new approach (Abstract Syntax Tree with predefined natural language text Template (AST-W-PDT)) to generates human readable summaries for Java methods role. This paper describes how we developed a tool that the java source code can be summarized from the methods role. In evaluating our approach, we found that the automatically generated summary from a java class 1) is helpful to the developers in order to understand the role of the methods and will be useful, and 2) the automatically generated summary is precise.

Keyword: Source code summarization; Program comprehension; Source code maintenance; Abstract syntax tree

