Code Clones Detection in Websites using Hybrid Approach

Abstract

Code Clone is a pathological form of software reuse because of its effects on the maintenance of large software systems. Probably the existing web applications use a mixture of Designing page and scripting language code as the front-end to business services. Analogously to traditional applications, redundant code is introduced by copy-and-paste practices called ‘Code Clones’. This paper proposes the detection of all types of clones by identifying cloned functions within scripting code of web applications using Hybrid approach with the combination of textual and metric analysis. Various metrics had been formulated and their values were utilized during the detection process. Compared to the other approaches, this method is considered to be the least complex and is to provide a most accurate and efficient way of Clone Detection. The results obtained had been compared with an existing tool for the open source of web applications.

References

- Boldyreff, C. and Kewish, R. Reverse Engineering to Achieve Maintainable WWW Sites. in EightWorking Conference on Reverse Engineering (WCRE'01), (Stuttgart, Germany, 2001). 249-257.
- Fioravanti, F., Migliarase, G. and Nesi, P. Reengineering Analysis of Object-Oriented Systems via Duplication Analysis. in International Conference on Software Engineering, (Florence, Italy, 2001); 577-590.
- http://www. w3. org/DesignIssues/Principles. html

**Index Terms**

Computer Science                       Web Technology

**Keywords**

Clone Detection  Code Duplication  Functional Clones  Hybrid Approach  Refactoring

And Web Applications