Literature Survey of Clone Detection Techniques

Abstract

Code clones are the codes which have same code in the system and so it is difficult to locate all the same codes in the system when any change is to be done. Researchers have proved that almost 70% of the effort done during maintenance is just because of the occurrence the clones in the system. A number of approaches had been given earlier to detect various types of clones [39]. This paper presents the systematic literature review of all the detection approaches researched so far. Along with it this paper also gives the advantages to implement them and also all the defects due to which they were not able to completely detect the clones. It also gives a novel approach to automatically detect the clones irrespective of the matter that whether the code is in same order or any statement has been inserted, deleted or modified in the code fragment.

References

Literature Survey of Clone Detection Techniques

- Keith Gallagher, Lucas Layman. Are Decomposition Slices Clones? In Proceedings of
the 11th IEEE International Workshop on Program Comprehension (IWPC'03), pp. 251-256 Portland, Oregon, USA, May 2003.


- Chao Liu, Chen Chen, Jiawei Han and Philip S. Yu. GPLAG: Detection of Software Plagiarism by Program Dependence Graph Analysis. In the Proceedings of the 12th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD'06), pp. 872-881, Philadelphia, USA, August 2006.


Literature Survey of Clone Detection Techniques


Index Terms

Computer Science
Algorithms
Keywords
Clones maintenance  Program dependence graph  tree-based approach  false positives  and hybrid approach