Abstract

Testing has become an essence part of the software development life cycle. Structural testing is a testing type, which focuses on the control flow of the program. Basis path testing is a kind of structural testing which derives a set of basis paths from control flow graph. These basis paths ensure that every statement of the program under test has been executed at least once. This paper studies the different techniques used by different researchers for the prioritization of
these paths. The optimization and prioritization of the paths increases the probability of finding more errors within the limited resources.

References

- Y. Chan, Y. Z. and T. S. (2009). Comparison of Two Fitness Functions for GA-based Path-Oriented Test Data Generation; Fifth International Conference on Natural Computation.
- Zhang Zhonglin, Mei Lingxia (2010). An Improved Method of Acquiring Basis Path for software testing; ICCSE; 10 (pp. 1891-1894).
- Du Qingfeng, Dong Xiao (2009). An improved algorithm for basis path testing; IEEE (pp. 175-178).
- Minjie Yi (2012). The Research of path-oriented test data generation based on a mixed ant colony system algorithm and genetic algorithm; IEEE.

**Index Terms**

Computer Science  
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**Keywords**

Basis Path Testing  
Control Flow Graph  
Cyclometric Complexity