Abstract

One of the effective techniques for testing is mutation testing. Mutant can be created by changing the syntax of a program. To distinguish the mutant from the original program, an effective test suite is required. The Mutation testing is a testing method aimed at improving the adequacy of test suites and estimating the number of faults present in systems under test. The mutations can be applied to the source code and the semantics of the language. The mutations of the semantics of the language signify possible misunderstandings of the description language and thus capture a different class of faults. As the possible misunderstandings are highly context reliant, this context should be used to determine which semantic mutants should be
formed. The approach is illustrated through examples and code in PHP. In addition, a semantic mutation testing tool for PHP is proposed.

References

Survey on Different Approaches for Mutation Testing

(ICST'10), (Paris, France), pp. 45-54, Apr 2010.

Index Terms

Computer Science
Information Sciences

Keywords

Mutation Testing  Semantic Mutation Testing  Scripting Language Php