Test Path Selection of Polymorphic Call-sites

Abstract

The paper proposes System Dependence Graph (SDG) based algorithm to select different test paths for testing polymorphic call-sites. SDG, includes control and data dependencies, helps both the testers and developers of object-oriented programs to better understand the polymorphic interactions within the software. In addition, the algorithm considers only the method bindings of a polymorphic call-site having different definition sets. As a result, the number of test paths for testing polymorphism gets reduced. Also, the algorithm has been implemented in a prototype Graphical User Interface (GUI) based tool. The results are obtained by using the tool, which demonstrate the proposed technique.

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