Abstract

Logic expressions are widely used in specifications and in programs. Testing criteria which covers logic expressions implies a high probability of detecting faults. Fault-based test suite prioritization of test cases has been considered in this study. Test cases are generated from logic expressions in irredundant normal form (IDNF) derived from specifications or source code by applying Minimal-MUMCUT. The proposed approach directly utilizes the theoretical knowledge of fault-detecting ability of test cases. The effectiveness of prioritization techniques has been validated by an empirical study done on benchmark expressions using two different metrics APFD, and FATE.

References

Fault based Test Suite Prioritization based on Minimal MUMCUT Strategy

- Kaminski, G. , & Ammann, P. , 2009, "Using a fault hierarchy to improve the efficiency of DNF logic mutation testing"; In Software Testing Verification and Validation, ICST'apos;09. International Conference on (pp. 386-395). IEEE


Index Terms

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Keywords
MUMCUT MUTP MNFP CUTPNFP Fault detection APFD FATE.