Fault based Test Suite Prioritization based on Minimal MUMCUT Strategy

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 bench mark expressions using two different metrics APFD, and FATE.

References

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Index Terms

Computer Science Information Sciences
Keywords

MUMCUT  MUTP  MNFP  CUTPNFP  Fault detection  APFD  FATE.