Abstract

Regression testing is the process of validating modified software to detect errors that have been introduced into previously tested code. As the software is modified, the size of the test suite grows and the cost of regression testing increases. In this situation, test case prioritization aims to improve the effectiveness of regression testing by ordering the test cases so that most
beneficial test cases are executed first. In this research paper, a new genetic algorithm is introduced that will prioritize regression test suite within a time constrained environment on the basis of total fault coverage. The proposed algorithm has been automated and the results are analysed. The results representing the effectiveness of algorithm are presented with the help of Average Percentage of Faults Detected (APFD).

Reference

- Cernic, S., Jezierski, E., Britos, P., Rossi, B. and García Martínez, R. “Genetic algorithm applied to robot navigation controller”.
A Genetic Algorithm for Fault based Regression Test Case Prioritization


Index Terms

Computer Science
Software Engineering

Key words
Genetic Algorithm
Test Case Prioritization
Regression Testing