Abstract

Software evolution is a natural phenomenon. As the software undergoes changes, it needs to be tested for the changes made along with the unchanged parts for consistency. This activity gradually increases the size of the test suite and becomes a challenging task for a software engineer to perform regression testing in a constrained environment of limited time. The activities of test case selection, test case prioritization or test suite minimization assists software engineers in regression testing by reducing the number of test cases. This paper presents a regression testing tool called 'RegressAid' to support software engineers in regression testing by minimizing the test suite while ensuring maximum code coverage and minimum execution time. This paper describes the tool along with its features. The efficacy of the tool is also demonstrated on two real world applications.

Index Terms

Computer Science
Software Engineering

Keywords
Multi-objective optimization Regression testing Test suite minimization