Regression Testing based on Hamming Distance and Code Coverage

Abstract

A software testing process that tries to uncover new bugs for an existing system from the previous test suite due to expansion of the software is known as Regression Testing. The test suite will hold the same test cases that were tested for the system in its earlier version. For regression testing, prioritizing the test cases is always a complex as well as challenging task. In fact researchers have been proposing many approaches to arrange the test cases so that the cost of the software can be reduced in terms of human labor, time, and money as well. Many such approaches have shown quite good results too. In this paper, we have proposed a new approach of prioritizing the test cases that extends hamming distance based prioritization with code coverage based techniques. Our proposed method helps to unfold the previous bugs as well as the newly arrived bugs at the early cycle of the regression testing.

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