Role of Test Case Prioritization based on Regression Testing using Clustering

Abstract

Software testing is the most important part of software development life cycle. There are various types in software testing which have their own different functionalities. Among them regression testing is most useful functional type of testing which is done in the software maintenance phase. This testing is used to check the errors when any change is made in the existing system. To make system efficient and effective, techniques of test case prioritization are used. The reduction in the cost of testing and fault detection capabilities of testing should be done by test case prioritization. This technique is also applied on different algorithms to improve their efficiency. Many clustering algorithms may also use test case prioritization method to increase the efficiency in code coverage. Prioritization techniques that incorporate a clustering approach and utilize code coverage, code complexity to increase the effectiveness of the prioritization.
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**Index Terms**

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**Keywords**

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Test case prioritization  
Clustering  
DBKmeans clustering.