Abstract

Test case prioritization techniques schedule test cases to reduce the cost of regression testing and to maximize some objective function. Test cases are prioritized such that those test cases which are more important under some criteria are executed earlier in regression testing process. The various objective functions are applicable as a metric of how rapidly faults are discovered during the testing process like rate of fault detection. Therefore, prioritization techniques are effective when implemented for specific instances. In this paper, a novel classification for test case prioritization is made which may cover every concept or measure and contribute for improvement of regression testing process.

References

- [tutorialpoint. Online]. www.tutorialspoint.com/software_testing
Aditya P. Mathur, Foundation of software testing, 1st ed. : Pearson.
W. Wong, J. Horgan, S. London, H. Agrawal, "A study of effective regression
Gregg Rothermel, Rolan H. Untch, Mary Jean Harrold, "Prioritizing Test Cases For
Regression Testing," IEEE TRANSACTIONS ON SOFTWARE ENGINEERING, vol. 27,
no. 10, October 2001.
Sebastian Elbaum, Alexey G. Malishevsky, Gregg Rothermel, "Prioritizing Test
Cases for Regression Testing," International Symposium of Software Testing and
Gregg Rothermel, R. H. Untch, C. Chu, and M. J. Harrold, "Test case
prioritization: An empirical study," in IEEE International Conference on Software
Maintenance, UK, 1999, pp. 179-188.
Alexey G. Malishevsky, Gregg Rothermel, Sebastian Elbaum, "Modeling the
Cost-Benefits Tradeoffs for Regression Testing Techniques," in International Conference
on Software Maintenance, 2002.
Jung-Min Kim, Adam Porter, Gregg Rothermel, "An Empirical Study of Regression
Hema Srikanth, Laurie Williams, Jason Osborne, "System Test Case Prioritization
of New and Regression Test Cases," in 4th International Symposium on Empirical
M. Thompson, D. Richardson, L. Clarke, "An information flow model of fault

**Index Terms**

Computer Science  
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**Keywords**

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