Abstract

A software system is composed of multiple modules. These modules and procedures are integrated via some user friendly environment such as graphical interface. End User is very much interested in the effective working of this graphical interface. To satisfy the user in terms of available graphical options, it is required to optimize the GUI Testing. GUI Testing plan includes two main stages. First is to identify the cost of individual testing in terms of time or effort. Once the cost is identified, the next work is to generate the optimal test sequence so that the cost effective test sequence is identified. In this present work, a genetic approach based solution is provided to generate the optimal test sequence. The work is implemented in matlab environment. The obtained results show the effective cost estimation and sequence generation.

References

- D. Richardson, O. Malley and C. Title, "Approaches to specification-based testing.
- Akira K. Onoma, Wei-Tek Tsai, Mustafa H. Poonawala, and Hiroshi Suganuma
Generate Optimized GUI Test Sequence using GA and Fuzzy Logic

- "Regression Testing in an Industrial Environment".
- Elbaum, Malishevsky, Rothermel
- "Test case prioritization: a family of empirical studies".
- David Leon, Andy Podgurski
- "A Comparison of Coverage-Based and Distribution-Based Techniques for Filtering and Prioritizing Test Cases".
- Mark Last, Shay Eyal, and Abraham Kandel proposed a new
- "Effective Black-Box Testing with Genetic Algorithms".
- Xiaofang Zhang, Changhai Nie, Baowen Xu, Bo Qu
- "Test Case Prioritization based on Varying Testing Requirement Priorities and Test Case Costs".
- Gaurav Duggal, Bharti Suri
- "UNDERSTANDING REGRESSION TESTING TECHNIQUES".
- Gul Q, Tang B
- "Optimal Regression Testing based on Selective Coverage of Test Requirements".
- Tao C.
- "An Approach to Regression Test Selection Based on Hierarchical Slicing Technique".
- Chen L., Wang Z., Xu L.
- "Test Case Prioritization for Web Service Regression Testing".
- Bo Yang, Ji Wu, Chao Liu, Luo Xu
- "A Regression Testing Method for Composite Web Service".
- Emelie Engstrom
- "Regression Test Selection and Product Line System Testing".
- Wei Jin and Alessandro Orso
- "Automated Behavioral Regression Testing".

Index Terms

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Keywords
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