Abstract

Testing guarantees the quality of software to be developed in terms of presence of errors. A difficult part of software testing entails the generation of test cases. A good test case should have the quality to cover more features of test objective. There are number of methods for test case generation. The use of a model to describe the behavior of a system is a proven and major advantage to test. In this paper, various test case generation techniques based on UML (Unified Modeling Language) are explained. The focus will be on effective use of UML techniques and test-case generation in order to make suitable executions.

References

UML based Test Case Generation Methods: A Review

- Prasanna, M. et al, &quot;A survey on automatic test case generation,&quot; Acad. open Internet J., 2005.
- Jirapun Daengdej, &quot;A Test Case Generation Process And technique,&quot; Academic Journals Inc. , 2010.
- Neelam Gupta, Aditya P. Mathur, Marry Ion Soffa, &quot;Generating Test Data for Branch Coverage,&quot; Pittsburgh, 2000.
- Chen Mingsong, Qiu Xiaokang, and Li Xuandong, &quot;Automatic Test Case Generation for UML Activity Diagrams.&quot; Debasish Kundu, Debasis Samanta, &quot;A Novel Approach to Generate Test Cases from UML Activity Diagrams,&quot; vol. 8, no. 3, 2009.
- R. Mall et al, &quot;Test Case Generation Based on Use case and Sequence Diagram.&quot;
- Jeff Offutt, Aynur Abdurazik, Andrea Baldini, Supaporn Kansomkeat, &quot;A Comparative Evaluation of Tests Generated from Different UML Diagrams.&quot;
- Santosh Kumar Swain, Durga Prasad Mohapatra, Rajib Mall, &quot;Test Case Generation Based on State and Activity Models,&quot; 2010.
- Yiwen Wang, Mao Zheng, &quot;Test Case Generation from UML Models.&quot;
- J. Offutt, Y. Xiong, S. Liu, &quot;Criteria for Generating Specification based Tests.&quot;
- Saru dhir, &quot;IMPACT OF UML TECHNIQUES IN TEST CASE GENERATION,&quot; vol. 2, no. 2, 2013.
- Mohammad Reza Keyvanpour, Hajar Homayouni, Hossein Shirazee, &quot;Automatic Software Test Case Generation: An Analytical Classification Framework,&quot; vol. 6, no. 4.
2012.
- Zhanqi Cui, Linzhang Wang, Xuandong Li, "Modeling and Integrating Aspects with UML Activity Diagrams".
- Raluca Lefticaru, Florentin Ipate, "Automatic State-Based Test Generation Using Genetic Algorithms".

Index Terms

Computer Science

Software Testing

Keywords

Test case; test case generation; UML Diagrams