Accessing and Evaluating AspectJ based Mutation Testing Tools

Number 1 - Article 1

Year of Publication: 2011

Authors:

Mayank Singh
Shailendra Mishra
Rajib Mall

Abstract

Software testing plays a crucial role in software development life cycle. Without testing, quality of software product is questionable. Mutation testing, widely accepted fault based testing technique. Aspect Oriented Programming is a new methodology that introduces the concept of modularization. AspectJ is an aspect oriented programming language that provides the concept
of pointcut and advice. With new features, AOP introduces new faults that can be easily handled by mutation testing. In this paper, we evaluate the available AspectJ based mutation testing tools and identify the basic requirements that must be satisfied by any developed tool.

Reference

- Jeff Offutt, Yu-SeungMa and Yong-Rae Kwon, “The Class-LevelMutants of MuJava”, Workshop on Automation of Software Test (AST 2006). pages 78-84, Shanghai, China, May 2006,
- S. C. P. F. Fabbri, J. C. Maldonado, P. C. Masiero, and M. E. Delamaro, “Proteum/FSM:

Index Terms

Computer Science
Software Engineering

**Key words**

- Mutation testing
- Automated Mutation Testing tool
- Fault based mutation testing tool
- Mutation testing tool for AspectJ
- AOP based Mutation testing tool