Analyzing the Comprehensibility of Aspect-Oriented Modelling and Design of Software System

Abstract

Implementing any big software system is a complex task. One of the major reasons for this is that, there one would like to modularize but for which the implementation would be spread out. Such concerns are more commonly known as Aspects. For example security aspect has to be taken care irrespective of the fact, whatever business logic is being implemented. These concerns cannot be modelled appropriately using traditional Object-oriented approach as these Aspects, manifest themselves as behaviours that are tangled and scattered across a system. Due to this fact, it affects the comprehension capabilities of modelling artefacts of the system also these issues lead to problems achieving traceability of aspects throughout the development lifecycle. Aspect-oriented Analysis and Design (AOAD) has been accepted as an alternative approach to tackle such concerns in an effective manner. This paper presents a comparative study of effectiveness of Aspect-oriented Analysis and Design versus Object-oriented Analysis and Design approach and analyses the results of both of these approaches on the comprehensibility of software systems' knowledge.

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Index Terms

Computer Science

Software Designing

Keywords

Aspect Oriented  Aspect-Oriented UML  Object-Oriented Analysis and Design
Aspect Oriented Software Development  Unified Modelling Language