Software Evolution Based Activity Diagrams

Authors : Zine-Eddine Bouras, Abdelouaheb Talai

Abstract : During the last two decades, the software evolution community has intensively tackled the software merging issue whose main objective is to merge in a consistent way different versions of software in order to obtain a new version. Well-established approaches, mainly based on the dependence analysis techniques, have been used to bring suitable solutions. These approaches concern the source code or software architectures. However, these solutions are more expensive due to the complexity and size. In this paper, we overcome this problem by operating at a high level of abstraction. The objective of this paper is to investigate the software merging at the level of UML activity diagrams, which is a new interesting issue. Its purpose is to merge activity diagrams instead of source code. The proposed approach, based on dependence analysis techniques, is illustrated through an appropriate case study.

Keywords : activity diagram, activity diagram slicing, dependency analysis, software merging

Conference Title : ICCSEA 2016 : International Conference on Computer Science, Engineering and Applications **Conference Location :** Paris, France

Conference Dates : May 16-17, 2016