Analysis and Evaluation of Software Artifact Reuse Environments

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ABSTRACT

Software reuse enables the development of software that is of better quality and at lower cost. Software reuse environments are sought to enhance the reuse of software artifacts especially when done at early-stage of the software life cycle. A number of software reuse environments have been proposed, however, there is no framework that helps in analyzing and evaluating such environments. In this paper the authors provide an attribute-based framework to analyze, evaluate, classify and compare the reuse environments in order to aid practitioners and researchers to select the appropriate reuse environments for their use. The authors first present a survey of existing reuse environments for systematic reuse of software artifacts. Then, they use the framework to analyze those reuse environments. The evaluation of existing environments provides an understanding of current reuse approaches and identifies gaps for future research.

Keywords: Analysis Framework, Reuse Environment, Software Artifacts, Software Reuse, UML Artifacts