Design of Dynamic Component Reuse and Reusability Metrics Library for Reusable Software Components in Context Level

Abstract

Reusability is about building a library of frequently used components based on the functional requirements of the reuser. A well organized component reuse library is the key for successful reusability in terms of economics benefits. Reusability metrics is a set of guidelines to help reuser to judge the quality of the component that is to be reused. Reusability metric library is an essential ingredient of a successful reuse in context level. In this paper, we outline architecture for reusability driven methodology in context level and we also design dynamic libraries for qualitative analysis of the components. These libraries have to be designed for reusing efficient and quality reusable software components. Our approach for identifying and qualifying of reusable software components is based on functional coverage report, extraction time and reuse frequency of the component. In this paper we describe some case studies to validate our experimental approach. This architecture will be a base to develop efficient searchable, reuser-friendly, useful and well organized dynamic libraries. Component reuse percentage is measured by the percentage of qualified components for reuse. So, the proposed architecture and the dynamics libraries can be used to improve the productivity and quality of reusability.

References

Index Terms

Computer Science
Software Engineering

Keywords
Reusable Software Components Reusability Reuse Metrics Extraction Time Component Identification
Component Qualification

Reuse libraries.