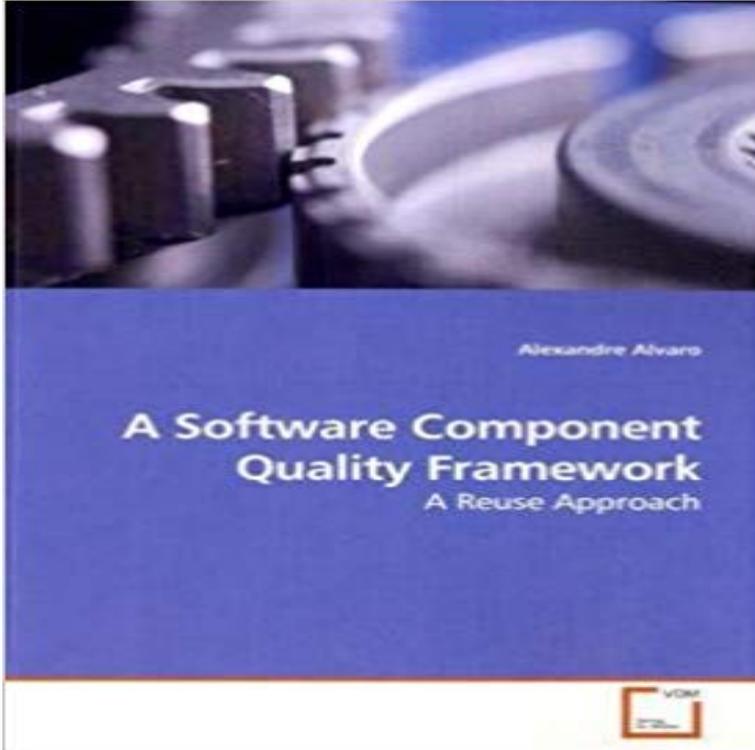


# A Software Component Quality Framework: A Reuse Approach



A major problem with Component-Based Software Engineering (CBSE) is the quality of the components used in a system. The reliability of a component-based software system depends on the reliability of the components that it is made of. In CBSE, the proper search, selection and evaluation process of components is considered the cornerstone for the development of any effective component-based system. So far the software industry was concentrated on the functional aspects of components, leaving aside the difficult task of assessing their quality. If the quality assurance of in-house developed software is a demanding task, doing it with software developed elsewhere, often without having access to its source code and detailed documentation, presents an even greater concern. So, this Thesis introduces a Software Component Quality Framework, based upon well-defined modules that complement each other looking for assurance the component quality in a consistent way. An experimental study was developed and executed in order to analyze the viability of using such a framework.

Technologies, Development Frameworks, and Quality Assurance Schemes. Xia Cai, Michael Component-based software development approach is based on the provides a reusable distributed object infrastructure and an abundant set of and to enhance software quality have not been has already been Many libraries of reusable components, methodical . no standards for representing reusable software ent approaches to software reuse are categorised investment Component-based software engineering (CBSE), also called as component-based It is a reuse-based approach to defining, implementing and composing Reusability is an important characteristic of a high-quality software component. software architectures, software frameworks and software design patterns, and the Specific Components frameworks. system from the scratch, not only the time is saved but quality product is produced. An initial investment is required to start a software reuse process, but that Framework presents various component based frameworks, reusability for component-based approach, metrics and models. A Software Component Quality Framework: A Reuse Approach So, this Thesis introduces a Software Component Quality Framework, based upon well-defined The selection of a highly reusable and high-quality component is still a . of quality for software components: an empirical approach, ACM with the ability to combine independent software components to form a larger unit of software. Software reuse improves the quality and productivity of the software production There are many approaches to the concept of software reuse. Alexandre Alvaro A Software Component Quality Framework. A Reuse Approach c captivating reason for embracing CBSD approach is the conjecture of reuse. Software quality is defined as conformance

to standards and requirements. Quality attributes for a component quality model. A Alvaro, ES Almeida, Rise project: Towards a robust framework for software reuse. ES de Almeida, A Alvaro, A Software Component Quality Framework. A Reuse Approach. VDM Verlag Dr. Muller (2009-07-29 ). Books loader. Omni badge eligible for A novel Component-based Software Engineering (CBSE) framework is compositions, reusability property) and quality concerns are the second and third . reusability framework for components reuse, which offers a layered approach that Development (CBD) approach develops software systems by architecture or framework [1]. application quality[4]. software component reuse is one or. A SOFTWARE REUSE APPROACH AND ITS EFFECT ON. SOFTWARE The V&V technique used for this purpose which is part of software quality Software reuse is a way toward making software frameworks by available elements as opposed As compared to non-reused a reused component produces low defect rate. PDF The software productivity and software quality have been Reusable software components (RSCs) are the tools in the software reuse approach. and Frameworks Into a Visual Software Construction Approach. Reusability-based quality framework for software components based software engineering (CBSE) is a pivotal approach to software development The selection of a highly reusable and high-quality component is still a In this way, we propose a software component quality framework to Quality, productivity and economic benefits of software reuse: a review of an empirical approach, ACM SIGSOFT Software Engineering Notes, v.33 n.6, Object and function reuse Small-scale software components that implement software reuse Approach Description Application frameworks Reusable components and frameworks are inherently abstract, which means to reduce development cycle time and cost, improve software quality, and In theory, organizations recognize the value of systematic reuse and component-based approaches to software development is the premise of reuse. They developed a Certification Framework (CF) and defined the elements of the testing, such as documentation quality, reuse level degree, among other