Refactoring UML models

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Abstract. Over the last twenty years refactoring advanced to a commonly known and used techniques in modern software engineering. We present an overview from the beginning of refactoring in source code to its actual application in model-driven software development. Furthermore we discuss methods that ensure that refactored source code is sill correct.

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1 Refactoring in the beginning

In his thesis [1] Opdyke "defines a set of program restructuring operations" that "preserve the behavior of a program" to increase software quality. This technique became known as refactoring.

The issue he addressed in his work is the problem of changing parts of source code from an object oriented system, grounded in a possibly large code base while also maintaining all the references and dependencies manually. He described this process as "time consuming, difficult and error prone". As a solution he proposes "an approach for providing automated support for the restructuring", plans to reorganize the source code on an intermediate level without changing the behavior of the program.

References

1. Opdyke, W. F. Refactoring object-oriented frameworks. Master's thesis, University of Illinois, 1992.