

# Princípios e Padrões de Projeto

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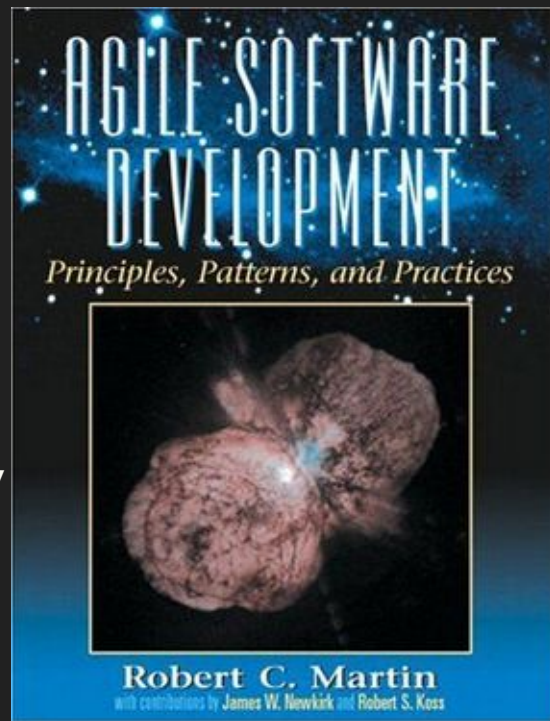
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<http://www.cs.cmu.edu/~liskov/papers/fv/fv-abstract.html>

## Family Values: A Behavioral Notion of Subtyping

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### Abstract

The use of hierarchy is an important component of object-oriented design. Hierarchy allows the use of type families, in which higher level supertypes capture the behavior that all of their subtypes have in common. For this methodology to be effective, it is necessary to have a clear understanding of how subtypes and supertypes are related. This paper takes the position that the relationship should ensure that any property proved about supertype objects also holds for its subtype objects. It presents two ways of defining the subtype relation, each of which meets this criterion, and each of which is easy for programmers to use. The subtype relation is based on the specifications of the sub- and supertypes; the paper presents a way of specifying types that makes it convenient to define the subtype relation. The paper also discusses the ramifications of this notion of subtyping on the design of type families.

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