Objects, Views, and *F-logic*

Master in Science, 1994

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Abstract

Object-oriented databases are used mainly in new application domains that are not covered efficiently by past-generation systems. However, requiring all users to work on the same information model limits the extensibility of the system, and introduces difficulties when, for instance, considering data restructuring and database integration. This thesis, presents a view mechanism that confronts these problems by allowing programmers to restructure the class hierarchy and modify the behaviour and structure of objects.

A view is a *virtual* schema graph created by importing data from the database, and then restructuring the imported data. The programmer derives new, *virtual* classes by populating them with existing objects, or with newly created objects. These classes are classified according to their subsumption relationships with the existing classes. Two subsumption testing techniques are presented. We specify our view mechanism by means of a deductive object-oriented language, namely *F-logic*, and address the arising issues.