Abstract

Modeling of application domains that include requirements with vague terms may be a complex process because existing modeling tools are not conceived for that. Nevertheless, many real life applications and systems information requirements might involve natural language vague terms for the expression of user preferences. Some previous works in the field of databases add fuzzy logic for preferences expression in querying. In this work, we define a UML profile that allows visual modeling of information requirements involving vague linguistics terms, i.e., fuzzy requirements. The proposed profile is based on stereotypes and fuzzy logic extended to OCL. This profile has a formal semantic to avoid ambiguity, moreover it provides diagram representation. We illustrate our profile by means of a real-world case study showing the potential and simplicity of this proposal.

Keywords

Fuzzy queries, UML, OCL, UML profile, formal specifications.