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## Abstract

Disjunctive Logic Programming (also known as Answer Set Programming) is a declarative programming approach which has been widely recognized as an essential tool for knowledge representation and common-sense reasoning. While many application areas necessitate *semantic technologies*, logic programming is not yet the language of choice for real-world applications of knowledge management. We aim at overcoming such limitation: We introduce linguistic constructs and systems features enhancing logic programming for real-world applications. We define a rich language for Ontology specification, and implement it in a cross-platform development framework for knowledge representation and reasoning. We present a language/system for straightforwardly embedding logic programming within the Java programming language, thereby augmenting it with specifications of executable logical reasoning tasks. Finally, as practical evidence of the effectiveness of our work, we report on two successful industrially-developed knowledge management application, based on the technologies we propose.

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