Abstract

One of the challenges of the semantic Web is to integrate the information already available on the standard Web, usually stored in relational databases. We propose in this paper a transformation process from existing relational database schema defined by a set of tables into OWL ontologies using XSLT. This process allows us to mapping some constraints on columns such as primary key, foreign key, unique, not null. Our approach start by translate the database schema into a XML document validate by a suitable XML schema. Since our process is based on XSLT stylesheets, its transformation rules can be modified in a very flexible manner in order to consider different mapping strategies and requirements.

References

- J. Feng, F. Pang, C. Bloor &quot;Converting Relational Database into XML Document&quot;: DEXA Workshop, pp 61-65. 2001
- N. GHERABI, K. ADDAKIRI, M. BAHAJ &quot;Mapping relational database into OWL Structure with data semantic preservation&quot;. CoRR abs/1205.5922. 2012
- M. Arnoux, T. Despeyroux &quot;Multi-représentation d'&apos;une ontologie : OWL, bases de données, systèmes de types et d'&apos;objets&quot;. CoRR abs/1104.2982. 2011
- L. Zhang et al &quot;Automatic Generation of Ontology Based on Database&quot;
Mapping Process of Relational Schema to OWL Ontologies using XSLT

Journal of Computational Information Systems 7:4 1148-1154. 2011
- IRINA ASTROVA, AHTO KALJA "Mapping of SQL Relational Schemata to OWL Ontologies" Proceedings of the 6th WSEAS International Conference on Applied Informatics and Communications, Elounda, Greece, August 18-20, 2006 (pp375-380)

Index Terms

Computer Science Software Engineering

Keywords
Relational databases schema XML XSD XSLT Ontology OWL