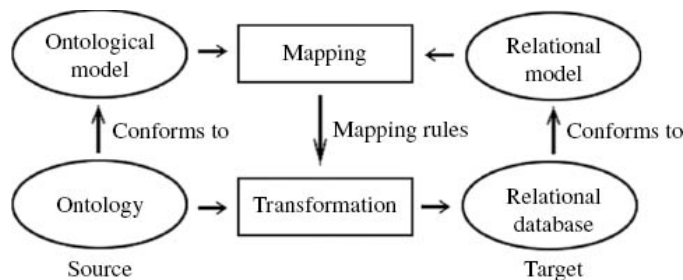# Databases - SQL or NoSQL?
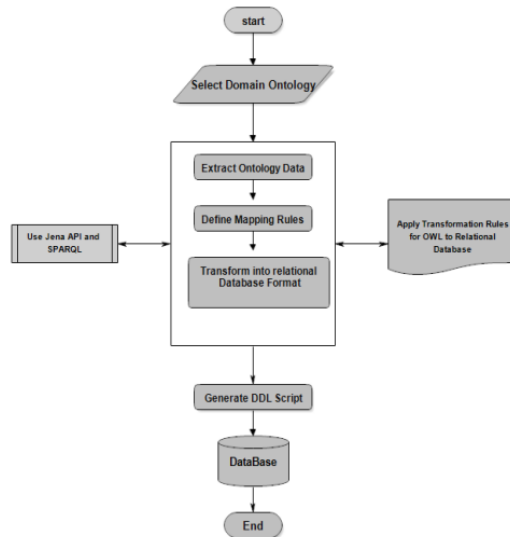
- **How can I map a database to ontology?**

  - Relevant answers

- H**ow to create a database from owl files in protege?**

  - Relevant answers

Relational Databases:

- **Transformation of Ontologies to Relational Databases**

  - Link

- **OWLMap: Fully Automatic Mapping of Ontology into Relational Database Schema (Interesting!)**

  - Link

  - **Jena Ontology API**

- **The Ontop Framework for Ontology-Based Data Access**

  - Link

  - Ontop is a Virtual Knowledge Graph system. It exposes the content of arbitrary relational databases as knowledge graphs. These graphs are virtual, which means that data remains in the data sources instead of being moved to another database.

  - Features

  - **Learning to use Ontop from Protege**

  - **Ontop: Answering SPARQL queries over relational databases**

- **Preserving Semantics of Owl 2 Ontologies in Relational Databases Using Hybrid Approach (Interesting!)**

  - Link

  - For representing ontology in a relational database, the ontology should meet certain quality **requirements.** However, existing methods for transforming OWLontologies into relational databases rarely analyze such requirements.

- **[Protege] Working with the Database Backend in OWL**

  - Link

  - Script for converting an OWL file to the DB backend

- **Ontology Storage Models and Tools: An Authentic Survey**

  - Link

  - To achieve efficient information retrieval, ontologies need to be stored in a format that is efficient for retrieval, correct, scalable, and consistent. There is a need for an efficient ontology storage model or tool to store and manage ontologies.

  - The ontology storage methods and tools are compared with respect to their features
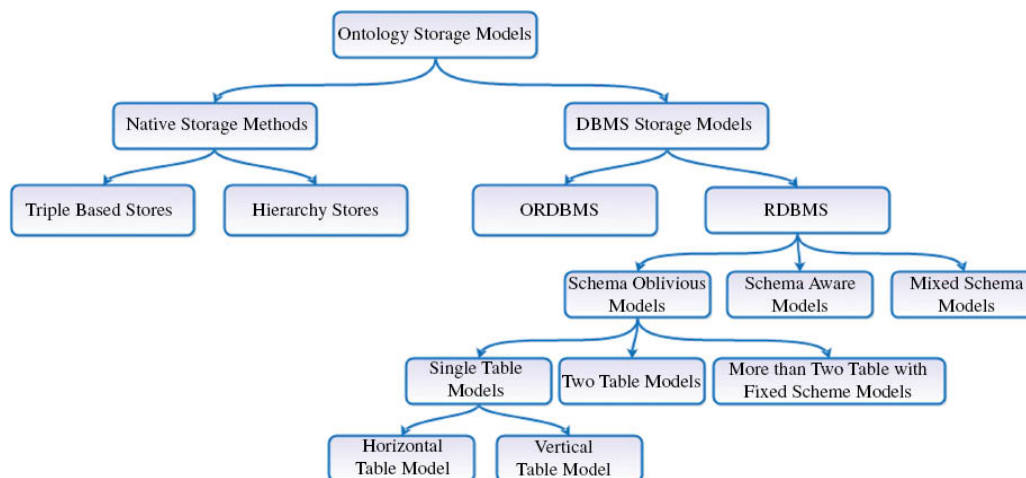
- **Automatic Generation of Relational to Ontology Mapping Correspondence**

  - Link

- **<u>Ontology on PostgreSQL - is there something?</u>**

Generating/building ontologies from Relational Databases

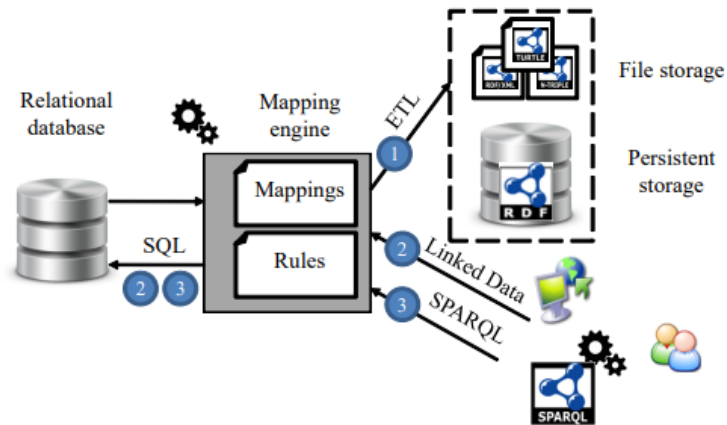- **Bringing Relational Databases into the Semantic Web: A Survey**

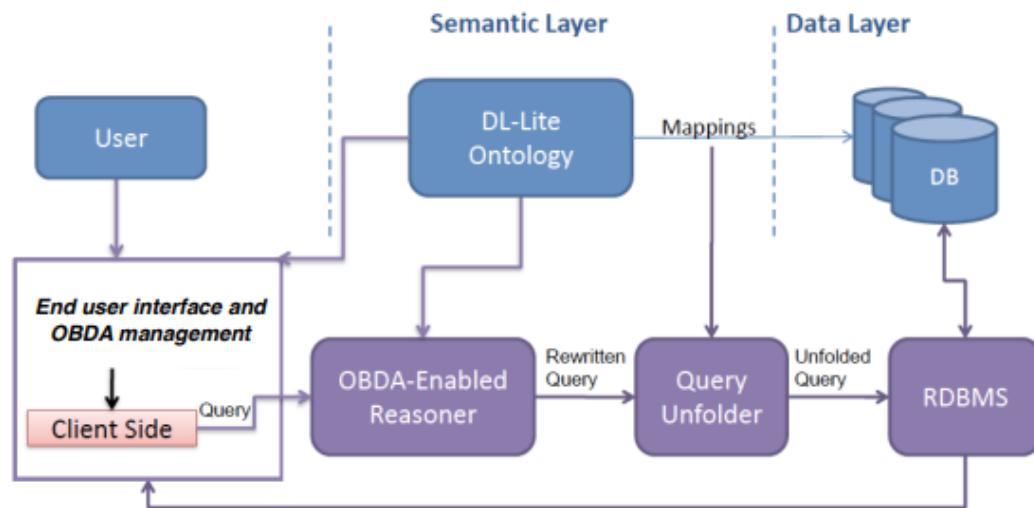 - Link

Fig. 3. Generation of ontology from a relational database.

- **Reverse engineering the database (The Book p142)**

  - **OBDA approach**

- **Building ontologies from relational databases using reverse engineering methods**

  - Link

- **A novel approach for learning ontology from a relational database: from the construction to the evaluation**

- Link

NoSQL | Graph databases

- **GraphDB**
  - GraphDB allows us to link diverse data, index it for semantic search, and enrich it via text analysis to build big knowledge graphs.
  - **Fundamentals**
- **UMLtoGraphDB: Mapping UML to NoSQL Graph Databases**
  - Link

Other resources:

- Ontology-Based Semantic Data Integration in the Domain of IT Benchmarking