

Some applications of data processing in database systems work with hierarchically structured data. Information of such kind is often present in biological data, but it can be also found in another scope. An efficient execution of queries specific for hierarchy needs proper representation of graph structures in a relational database. This thesis deals with a description of known methods for storing of hierarchical data into a relational database. It aims particularly to distinct properties of separate methods and examines fitness of usage for various hierarchies. The thesis includes experiments with real collections of biological data, which are used to compare effectiveness of particular methods in practical way.