

In the present work we study the indexing methods for large XML databases and their time efficiency when evaluating path queries.

There are several ways of indexing XML data but we focus on indexing root-to-leaf paths and grouping them according to the common criteria, path labels.

We study the existing methods and combine them in order to create the iXUPT, a novel native indexing concept using path templates, which leverages advantages of current approaches. We provide two variations of our solution depending on the way of handling ancestor-descendant relationships. The first one uses the proposed numbering scheme, while the second one relies on the Rho-Index structure. Furthermore, we prove the feasibility of our concept by the implemented prototype and by evaluating sample regular path expressions represented by XPath queries. We compare the variations between each other and also with other solutions.