

This thesis will address the problems of indexing XML datasets and finding effective searching methods for indexed data. Defining data structures and algorithms that take highly parallel approach to the searching problem is considered to be main objective, therefore the implementation may benefit from the power of multicore CPUs. Prototype of such implementation will be presented with the thesis. Internal query model will be developed as a common layer. Multiple front-ends representing different query languages will be able to operate on the top of this model, thus the engine will not be dependent on any particular language. Sample front-end for a subset of XPath will be implemented along with the prototype.