

Generating nested XML documents from unnormalized relational views using a statistically approach

ABSTRACT

Converting relational database into XML is increasing daily for publishing and exchanging the business applications data on the Web. Most of the current approaches and products convert the unnormalized relational views to XML documents using flat-based that causes data redundancy which leads to generate a massive data. This paper proposes an approach to generate nested XML documents with full automatic from flat relational views. The proposed approach includes two steps: the first is extracting the nested view from the flat relational view using a statistically approach for counting and removing the data redundancy. The statistically approach is based on the analysis of functional dependency taking into account the frequency of the data values for the columns of the relational views. The second step is converting the nested view into nested XML. The columns of the nested view are also divided into groups to achieve the nesting for XML document. The proposed approach generates nested XML documents from the unnormalized relational views with full automatic. The generated nested XML document by the proposed approach has good features such as minimal redundancy and less size of storage.

Keyword: XML documents; Relational database; Unnormalized relational views; XML