The Research on Portable Relational Database Based on XML Schema

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ABSTRACT

Due to its extensibility and self-definability, XML is becoming the de facto standard for data exchange on the Internet. Since it is a fairly new descriptive language for data structures, it lacks some utilities, such as indexing and querying tools, normally found in existing relational database environment. As a result, new users of this language may face the difficulties in querying XML data. To lessen the burden of learning the query language, XQuery, for XML, we develop a system that uses the querying technique of relational database and on the XML data. In our research, we first convert the schema of the XML data to a relational schema and the data are fed into the relational database. The users then have the ability of using various relational techniques to query the data. To ensure the outcome fulfills at least the standard of second normal form, we develop a set of rules to remove the duplicity of XML data and maintain the integrity of the output data. Our experimental results are positive and we believe the system can largely reduce the efforts of querying XML data.

Keywords : relational database、cardinality、XML Schema、normalization

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