Storing data as XML vs MS-ACCESS in ASP.NET

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ABSTRACT

When the author first learned the powerful features related to XML supported by ASP.NET, a question naturally raised, why do we use database if XML is so convenient? Two follow-up questions are when should we use database and when should we use XML files? This is not an isolated situation; the author has got many similar questions from students. It is worth to investigate these questions deeply. This poster reports the author's effort on finding answers to these questions. The main methodology used here is experiment.

Key words: database, MS Access, XML, experiment, ASP.NET

Database has a long history as a data storage, configuration and manipulation tool in various software applications. Recent years, XML files have been widely used for the same purposes. Particularly in ASP.NET, several objects have been built to support XML, which tremendously simplifies reading, writing, transforming or displaying XML data. This makes XML files much more practical. A typical ASP.NET application can easily be implemented by using either database or XML. If an XML file can perform the same functions as a database without introducing the overhead caused by database, e.g. calling ADO objects to construct connections. What are the reasons for us to continue to use database? This question is particularly obvious for MS Access database. Since MS Access lacks many data management functions provided by other data management systems (DBMS) such as Oracle or MS SQL server, and these functions cannot be easily provided by XML files.

The author experiments on several small ASP.NET applications. Each of them has two versions: one using XML, and another using MS Access. The author exams the performance of both versions in following categories:

♦ Queryability

♦ Integrity

♦ Storage and Retrieval

♦ Ease of Presentation and Interchange

♦ Repository Functionality

This poster analyses the experiments results and discusses the merits for both versions.