DATA EXCHANGE MODEL USING WEB SERVICE FOR HETEROGENEOUS DATABASES

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ABSTRACT

In this paper, we have proposed a method to exchange the data between the various databases that are not having the same formats, due to the heterogeneous structure of the databases. Now in the information technology field, there is fast development. Due to that people are using different networks, operating systems, and applications of heterogeneous platforms. So in order to sharing of information between the various databases, we have proposed a model using web service to exchange the data between the heterogeneous databases. This model is used to exchange data of various databases using some functions of databases, SOAP, XML, WSDL and UDDI.

Key words: Web Service, SOAP, WSDL

1. INTRODUCTION

Service Oriented Architecture (SOA) is used by web service for exchanging data. It has 3 components like service consumer, service registry, and service provider. Service Oriented Architecture use SOAP, XML, WSDL and UDDI for exchanging data from the various databases. Service consumer search the service in the service registry. Service registry is registered the service which can be access by the consumer and publish by the publisher. Service provider bind their service with service registry.
Web Service is an instance of Service Oriented Architecture which is used SOAP, WSDL an XML to transfer the data from the one database format to another database format. Web service play critical role in the integration of databases.

Web service use data exchange model that needs some data from another system, at the same time; also offers some data to another system. Web service is an interface that describes a collection of network accessible operations. It is described using a service description language, published by making this service description available to users, Found by sending queries to a registry matching the service description. Finally we can say web service objective is to make applications accessible via standardized internet protocols using XML for exchange of data, describing services, discover and plan them to enable a service-oriented architecture.

SOAP stands for Simple Object Access Protocol, standardizes a XML-based data exchange format for exchanging data, communication protocol, designed to communicate via internet, platform independent, and language independent, Client sends a valid SOAP XML request to a server and server processes the request invoking the requested service and send a SOAP response back to the client.

Universal Description, Discovery and Integration (UDDI) is a directory service where businesses can register and search for Web services, provides a simple framework for describing any kind of Web services, platform-independent framework for describing services and discovering, integrating business services by using the Internet, directory of web service interfaces described by WSDL and UDDI communicates via SOAP.

WSDL stands for Web Services Description Language, written in XML, is an XML document and is used to describe Web services.

2. PROBLEM OF DATA CONVERSION

In this section we mainly concentrate on explaining the problem of different format of databases. Here, we take example of different branches of organization which stored the data in the database which is having different format.
In the Fig. 2 we see the various organization stored the data in different databases format, so due to heterogeneous database we are not able to exchange the data from the one format to another format.

So in order to solve the problem of heterogeneous database we have purposed web service model which is used to convert the one data base format to another database format. In this model we have used web service which is use for exchanging database of different format.

3. PURPOSED WEB SERVICE MODEL

We have purposed web service model for data exchange between the heterogeneous databases. Our purpose model perform the following steps to exchange the data of different database.

1) It will ask you to select the database which you are going to convert into specified format.
2) Window will display dialog box form which you can select database that you want to convert in a specific format.
3) You have to select existing database.
4) Select the format of the new database.
5) Press Convert button to process the conversion of database.
In our web service model we are going to develop the interface in Visual Studio using C# and back-end database as SQL Server. The data of schema database is extracted from system tables of SQL Server.

Also we are going to use the some of the system table of the database as well as functionalities that are available in visual studio. Our purpose model also going to preserved the constraint that are available in the database.

4. CONCLUSION

Data exchange between the heterogeneous databases is recent issue because people are using various platforms, operating system and applications. So in this paper we have purposed one web service model which is going to use to exchange the data between the databases. First we are going to implement only with SQL Server and MySQL databases then after it will implement for the other database. Once it will exchange the database we are also going to maintain the constraint of the database. Our work is going to formulate web service model which is used for data exchange.

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