CSCI : 3901 SOFTWARE DEVELOPMENT AND CONCEPTS

ASSIGNMENT - 5

Objective : Access SQL through Java. Gain some exposure to XML.

Classes and Approach:

- MainClass: This class contains main method and we extract data from database using queries and generate xml file from the data. Created the XML file using DOM parser.Constructed a DOM(Document Object Model) object with tree structure and then using the transformer wrote this DOM object on XML file.
  Approach : Extracted the data from database using sql queries. Then created connections and executed query in java. After extracting result of query in Result set, used these values and created elements and child and using the DOM parser and transformer created the XMl file.

- MyIdentity: This class contains credentials for connection to data base(took code from lab 6 (git))

Libraries Used :

- `import java.sql.*`
- `import javax.xml.*`
- `import org.w3c.dom.Document;`
- `import org.w3c.dom.Element;`
- .:mysql-connector-java-8.0.19.jar

Argument:

1.My solution helps to create the XML as per customer requirement and in proper readable format. Document Object Model provides API that helps to create, modify, delete and rearrange nodes as needed.It loads XML content into a tree structure.As there are lot of tables and a large dataset is there, so using DOM makes it easy to access widely separated parts. So as we have to display a lot of fields, so using DOM makes it easy to create XML file and my solution makes it easy to store data in a structured way and is easy to view various fields

2. As if fields get increased still we can generate xml file . So my sol provides scalability.There is no hardcording for query and data processing so any new field can be accessed.We can also add more queries to enhance the result.

3. Also if we want to add new fields we can add those fields, if we want to add new information in a table then we have to just add that column in the code which is easy to understand and as it follows a similar structure so it is easy to add new data and create XML file

4. However, as when the requirement for XML changes, the code will require some changes which is a limitation of code but at the moment it creates the required file by the customer.

References:

[1]“Courses / 2020-Winter / CSCI 3901 / lab 6 / singh4,” GitLab, 2020. [Online]. Available: https://git.cs.dal.ca/courses/2020-winter/csci-3901/lab-6/singh4. [Accessed: 20-Mar-2020].

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Nikos Maravitsas, “Create XML File in Java using DOM parser example,” Examples Java Code Geeks, 10-Mar-2013. [Online]. Available: https://examples.javacodegeeks.com/core-java/xml/parsers/documentbuilderfactory/create-xml-file-in-java-using-dom-parser-example/. [Accessed: 21-Mar-2020].