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Assignment 5

Problem 2:

Overview

The program extracts the information related to manager and product lines. It will fetch the data from the sales database and report it back into an xml file given a particular period of time. This file can hence be reviewed by the Mini-Me Toy Car company.

Files and External Data:

This solution contains 3 java files along with the connection to the sales database. The java files are:
1. Main.java - This class is the main class where the main method is present that calls the implementation methods.
2. DBConnection.java - This class acts as a util class for all the database operations. It has functions to create a connection to the sales database, read data, update data and close the connection.
3. XMLWriter.java - This class acts as a util class for all the xml operations. It writes the data received from the database in a resultset to an xml file using buffered reader and writer.
4. DataExport.java - The implementation of the solution where the data is gathered by running the query is covered in this class. This class further sends the data to the XMLWriter class to write the information in an xml file.

Database Design and Connection:

The solution requires an active connection to the sales database. To achieve this, I have used jdbc driver and sql connector in a DBConnection utilityl class. I have designed my database connection in my code in such a way that only one instance of connection is created for the entire solution. The benefit of using the singleton design pattern is that it is more efficient and is more easy to handle.

Assumptions:

● The database schema is ready to be used with all the necessary information, where the solution is executed.
● The dates (start date and end date) are given in a proper format : yyyy-mm-dd.

- Full path of the file where the file should be saved must be given as user input along with the extension (.xml).

Code ready for deployment argument:

The Mini-Me Toy Car company's requirement stated the need of the company's operation over a period of time as a human readable report in a xml file. The designed solution fetches the required information from the sales database and structures it in a well designed human readable xml file. The data is reported keeping in mind the human readability with proper spacing and tabs where required. The results can be easily analysed and inferred upon.

The information that is fetched from the database contains various details on the database however the report is limited to only the required information on the manager - manager's name, manager's work location, manager's staff, the number of customers served by the manager's staff and the total sales by staff reporting to the manager. It also contains details on the product line - its name, description, customers who ordered some items of the product line, customer's name and the total value of the product lines. The information can be

The code quality is upto the standards and is following the SOLID principles. The efficiency and performance of the solution is good as well because of the design pattern chosen to achieve this solution. Each issue, error and exceptions are handled in the code and the code is now ready to be deployed.