

Assignment 6 – Problem 2

Overview

This program takes in InventoryControl as reference to perform inventory operations for a partially built Northwind database.

Files and external data

User then also need to provide name of output file to contain retrieved data. It requires external properties file which contains database name, username and its password. MySQL JDBC connector jar is also required to be referenced to run the project.

Data structures and their relations to each other

Program basically uses ArrayList, LinkedHashMap and simple Java classes to hold properties of retrieved information of objects like Supplier, Customer, Products, Category.

Assumptions

- VPN is connected.
- Database has all the required permissions already.
- Config.properties file is already present in the working directory.
- For ReorderLevel = 0, I have taken Reorderlevel as 20 in inventory and history part
- User has the required privileges to make changes in database.

Key algorithms and design elements

Database connection forms central part of data retrieval.

To build History products are iterated in descending order of their shipped date and looked for their fields in Products table. According to the data holded by products the history is built backward in time and the dates for purchase of products are exported in txt file as output. It's achieved by categorizing fields of products in 3 categories and applying inventory logic.

For shipOrder method given Order if found to be not shipped then, it's shipped as per current date. In incorporate all the work needed to indicate that order has left company and products are out of inventory.

For IssueReorder method, orders which are already shipped are looked for any products to reorder and are reordered if required.

For recieveorder method, orders from suppliers are received.

To achieve it JDBC connection is established using mysql-jdbc connector jar.

Limitations

- Queries are hard coded.
- Database must contain some data to realise change made by program.
- Any change in queries require a lot changes to be incorporated in the logic.