

## **EXTERNAL DOCUMENTATION**

### **Overview**

The task of this assignment was to create a java program which will take start date, end date, and a xml filename where the summary of the Northwind food distribution company will be stored in a human readable format i.e. XML.

### **Files**

There are three files for the program:

1. **AllQueryPerform.java** – It is the class which will perform all the three queries and will write the data into the provided xml file in human readable form.
2. **DBCredentials.java** – It is the class which will connect to the database.
3. **MyMain.java** – It consists of main method that will ask user to enter 1 to get the summary.

### **Query Implementation**

Firstly, I tried the query on MySQLWorkbench by providing a fixed starting and ending date. And manually checked the output whether it is showing me the correct output or not. I designed my query by using the idea of subquery by which I break down my query into parts and connected together. Once, I was sure about my queries I started to design my java program.

### **Classes and Methods Implemented**

- **DBCredentials.java** is the class which is used to connect to the database by creating object of properties class so that we can access the attributes stored inside the file. This class contains **myConnection()** method which will actually connect to database.
- **AllQueryPerform.java** is the class which will perform all the three query and will write the output in human readable form in xml format. This class contains a default constructor which will instantiate object of **DBCredentials** class and call the **myConnetion()** method which will allow us to connect to the database. Further, it contains **queryOperations()** method which call the three different methods which perform the individual query by passing start date, end date and the filename. Furthermore, it contains **initialTags()** method which will append the starting tags required into the file. In addition, it contains **getIndent()** method which will add indentation to the file by using a loop and \t. Moreover, it contains three methods

**queryOp1(), queryOp2() and queryOp3()** which contains the SQL query and the query is executed using **createStatement()** and using printwriter to write into file.

- **MyMain.java** is the class which consists of menu driven program that allows users to choose options and it is implemented using switch case. Also, this class will instantiate **AllQueryPerform** class and will validate the date and file format.

### **Assumptions**

There are few assumptions for this program:

- You need to provide your credentials using a properties file.
- Need to import mysql connector jar file to connect to database and java program.

### **Limitations**

There is a limitation in my program:

- If the database contains any special characters or \n in different attributes, then the indentation may get disturb and it may not be in proper indentation.
- I have executed the query using createStatement() which means my code does not prevent SQL injections.
- The code is limited to three queries that are asked in the assignment. It can be possible where user can provide any query and will generate XML file for it.

### **Why my code is ready to deploy**

The code is ready to deploy because the program does not contain hard coding of values i.e. if it is required to change the code then we can further increase the number of columns by using ResultSetMetaData. In addition, we do not need to hard code the columns and thus, it becomes very easy to add more fields.