**External Documentation**

**Overview**

Manager is interested in knowing the summary of how the company is operating over a period of time. This period of time will be entered in by the keyboard in the form of start date and end date. For summarizing information, I have written SQL query that extracts the information of the customer, product and store over a period of time. This extracted information will be stored in an XML file in a specified format.

**Files and External Data**

I have just used one file named as summary.java. It computes the all the SQL query related code and also stores the code related to xml file format.

Output is automatically stored in the new file that automatically gets created.

**SQL Queries and their relation to each other.**

I have used the following SQL Queries

1. Customer Information

For retrieving the customer information, I am concatenating the customers first and lastname using concat keyword, and then selecting street, city, state, zip\_code from the customers table, brand\_name from the brand table and I am counting all the bicycles purchased by counting all the order id of the orders table and computing ordervalue by multiplying listprice from orderitems table and quantity from order\_items table and then taking a sum of it. I am joining the customers table with orders on customer\_id then joining the orders table with order\_items on order\_id and then joining the order\_items table with products on product id and then joining the products table with brand on brandid and applied where clause to filter the rows so that the rows are in the inputted date range.

2. Product Information

For retrieving product information, many tables are joined and specific columns are selected from each table. Many conditions are added in the where clause to filter the results.

3. Store Information.

For retrieving the store information, I am selecting the column of store\_name, store\_city, counting the staff members by counting the staff\_id, counting how many customers are served by counting the no. of customerid in orders table, and using the sub-query to select the name of the customer who has placed the order and also to concatenate first name and last names in the customers’ table and have computed sales using the formula ( quantity \* price \* ( 1- discount )) and I have done left join with staff, orders and order\_items table.

For storing the query result into xml format, I have manually constructed the nodes and elements. For doing so, I have used the javax parsers to create a DOM object.

On that DOM Object, I have created new nodes and elements using its factory and builder methods.

First – I have created an element using document.createElement. Then I am appending the created Element to the parent element using append Child() method. For extracting the output in the xml query, I am using createTextNode to create a text node and in that method, I am passing the value returned from the sql query with the help of the resultSet.getString() or resultSet.getInt() or resultSet.getDouble() method.

**Assumptions**

None

**Choices**

I am taking in the username and password from the keyboard.

**Limitations**

External Documentation is not complete. Will revise it in future versions.

XML file format is maintained but it’s not readable enough. Will revise it in future versions.

As of now, file is limited to just 1 class. Will expand it in future versions.

It’s **mandatory** for now for a user to enter the date in yyyy-mm-dd format from keyboard. Will revise it in future versions in such a way that if the user enters incorrect format, then it won’t the user to proceed or if the user enters incorrect format, then it internally automatically changes the format to the desired format ( yyyy-mm-dd).

Input validations are missing. Will revise it in future versions.