Lab Four

Simple Queries

Learning Outcomes

At the conclusion of the lab, students should be able to

1. Read ER Diagrams
2. Build SQL SELECT statements involving joining tables and WHERE clauses with simple expressions.

Setup

MySQL Workbench provides a console to remotely connect to our MySQL server (cs1103.cs.unb.ca). You'll recall that you received your credentials during our first lab. To use the remote console, create a MySQL Connection. You can of course stick with the command line access from Lab 1 – *your choice*

1. Define a Connection

In the main window, click on the plus-sign-circle beside "MySQL Connections"

- o Name the connection
- o Fill in the hostname (cs1103.cs.unb.ca)
- o Fill in the Username (your FCS id), but not the password
- o Test the Connection (button)

You may get a connection warning. Proceed anyways.
Congratulations, you now have connection to use to the database server. Access from the (potential) list of connections

2. The Query Console

The query console lists the databases available on the DB server on the left and gives you an edit window to compose and execute SQL statements. We're using the CH07_SaleCo database. Hover over the icons along the top of the editor to see what they do.

> **Remember to structure your queries by clause so that your marker can assign the marks easily e.g.:**
> **SELECT ***

Exercise

Using the Ch07_SaleCo database (ER Diagram attached), use SQL queries to answer the following questions. For each question, show the query and some evidence (screen shot, copy of the output) of your query's success.

1. For all customers, list the full customer name.
2. For all customers with non-zero balances in the 615 area code, list the full customer name.
3. For products with fewer than 15 items in stock (P_QOH), list the product description and price. Relabel the report columns with more understandable headings.
4. Assuming that the discount column in the product table is available to preferred customers, report the discounted price of products for all products with a before discount price of more than $100.

Note that questions 5,6 and 7 require use to manually "glue" tables together. This will change in the next lab so that we use SQL joins.

5. Customer Anne Farriss has called, asking for a listing of her invoice numbers and dates.
    a. What is her CUS_CODE?
    b. Using this, find the Invoice numbers and dates for her CUS-CODE
6. Corporate Management would like a list of all products sold by companies located in Florida.
    a. List the V_CODE for all vendors located in Florida.
    b. List all products sold be these vendors.
7. Customer Anne Farriss called back and would like a complete account of her activities.
    a. This listing will need her name, phone number and balance
    b. invoice information for her from the appropriate table
    c. items associated with those invoices
    d. product description and prices for those items.
    You may wish to create a report in the word processor.

Submission

Before the due date for this lab, students should submit online to the lms

- A compressed (zip or tar) file containing
    1. a text file of the SQL queries as well as
    2. a word-processor report as a pdf file containing the requested information (SQL Queries and results).

CUSTOMER
- 🔑 CUS_CODE INT(11)
- 🔹 CUS_LNAME VARCHAR(15)
- 🔹 CUS_FNAME VARCHAR(15)
- 🔹 CUS_INITIAL CHAR(1)
- 🔹 CUS_AREACODE CHAR(3)
- 🔹 CUS_PHONE CHAR(8)
- 🔹 CUS_BALANCE DECIMAL(9,2)

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PRODUCT
- 🔑 P_CODE VARCHAR(10)
- 🔹 P_DESCRIPT VARCHAR(35)
- 🔹 P_INDATE DATETIME
- 🔹 P_QOH INT(11)
- 🔹 P_MIN INT(11)
- 🔹 P_PRICE DECIMAL(8,2)
- 🔹 P_DISCOUNT DECIMAL(4,2)
- 🔶 V_CODE INT(11)

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VENDOR
- 🔑 V_CODE INT(11)
- 🔹 V_NAME VARCHAR(35)
- 🔹 V_CONTACT VARCHAR(15)
- 🔹 V_AREACODE CHAR(3)
- 🔹 V_PHONE CHAR(8)
- 🔹 V_STATE CHAR(2)
- 🔹 V_ORDER CHAR(1)

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INVOICE
- 🔑 INV_NUMBER INT(11)
- 🔴 CUS_CODE INT(11)
- 🔹 INV_DATE DATETIME

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LINE
- INV_NUMBER INT(11)
- 🔑 LINE_NUMBER DECIMAL(2,0)
- 🔴 P_CODE VARCHAR(10)
- 🔹 LINE_UNIT DECIMAL(9,2)
- 🔹 LINE_PRICE DECIMAL(9,2)

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