Lab 1: SQL Practice

**Due date:** Wednesday, January 4, end of lab period.

# Lab Assignment

## Oracle and Oracle accounts

You all have your Oracle accounts from your prior stints in CSC 365. If you did not have an Oracle account, one was issued to you prior to this lab. Your Oracle account Id is the same as your Cal Poly login Id.

This assignment is best completed using sql*plus, Oracle's command-line environment for communicating with the database back-end. Instructions on the use of sql*plus can be found here:

http://www.csc.calpoly.edu/~dekhtyar/365-Spring2011/lectures/lec05.365.pdf

## Assignment Preparation

This is an individual lab. Each student has to complete all work required in the lab, and submit all required materials **exactly as specified** in this assignment.

The assignment uses a modified version of one of the datasets I used in CSC 365 in Spring and Fall of 2011. The new dataset, `EXTENDED BAKERY` removes the portion of the old `BAKERY` dataset, and replaces it with some new structures.

The full description of the dataset is distributed as a separate document. The `EXTENDED BAKERY` dataset consists of the following files:

| Filename | Explanation |
|---|---|
| `EB-setup.sql` | database setup script (`CREATE TABLE` statements) |
| `EB-cleanup.sql` | `DROP TABLE` statements |
| `EB-insert.sql` | runs all other `...-insert.sql` scripts |
| `EB-build-employee.sql` | inserts data into the `Employees` table |
| `EB-build-goods.sql` | inserts data into the `Goods` table |
| `EB-build-items.sql` | inserts data into the `Items` table |
| `EB-build-location.sql` | inserts data into the `Location` table |
| `EB-build-receipts.sql` | inserts data into the `Receipts` table |
| `EB-verify.sql` | reports tuple counts in all database tables |

These files can be downloaded one-by-one, or as a single zip file from the following URL:

http://wiki.csc.calpoly.edu/datasets/wiki/ExtendedBakery1000

Please make sure you read the README file for the EXTENDED BAKERY dataset (available from http://wiki.csc.calpoly.edu/datasets/wiki/ExtendedBakery) carefully before you start your work. To set up your database, run the following commands:

```
> $ORACLE_HOME/bin/sqlplus  <yourAccount>@ora10g

SQL> start EB-setup.sql

...

SQL> start EB-insert.sql
```

Note, the last command, may take some time. You can run `start EB-verify.sql` command to verify that all data is there (Tuple counts are available in the EXTENDED BAKERY description document).

## SQL queries

Write an SQL script `lab1.sql` containing SQL statements answering the following information requests.

**Note.** Write as many queries as you can. To successfully pass the lab, you **do not need** to complete all ten queries.

1. Find all goods that cost between $7.00 and $11.00. For each good report its full name (flavor, food) and its price. Report the goods in the ascending order by their price.
2. List all sales that occurred on January 12 ('12-JAN-00') in Washington ('WA') stores. For each sale, output the receipt number, the store number, the city, state and street adress of the store. Sort the output by store.

3. Find all items purchased on the receipt number 800. For each item report its full name (Flavor, Food), price and quantity purchased.

4. Find the total cost of the purchase for the receipt number 800.

5. For each store report how many sales of Lemon Cookies occurred. Report the store Id, its city and state, and the number of lemon cookie sales. Sort the output in descending order by the number of sales.

6. Report how many distinct types of pastries/drinks were sold in each California store between January 10 and January 14 (`'10-JAN-00'` and `'14-JAN-10'`) inclusively. For each store report its store Id and the city it is in. Sort the output in descending order by the variety of sales.

7. List the least expensive items on the menu. Output full name (food, flavor) and type.

8. Report average number of sales per day for the Monterey store.

9. For each Calfornia store report the most popular (by the total count of purchased items) item. Output the store number, the city, the item description (Food, Flavor), its price and the total number purchased. Sort output by store number.

10. Find all stores that never reported a sale of a `Lemon Cookie`. For each store report its number, city and state.

### Submission Instructions

Put all the queries in a single file. Name the file `lab1.sql`.

Submit the file using `handin` as follows:

```
handin dekhtyar lab01-366  lab1.sql
```