Lab 0: SQL Practice

Due date: Thursday, April 2, end of lab period.

Lab Assignment

Oracle and Oracle accounts

For this course, an Oracle account with the same userId as your CalPoly loginId will be used. If you had this account issued for prior coursework, it persists without changes. If you did not have this account before, one was created for you. The default password is

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-Fall2007/lectures/lec05.365.pdf

(this handout is linked to from the course web page)

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.

Dataset

The assignment uses a dataset called `Extended BAKERY`. This is a modification of the BAKERY dataset that is sometimes used in CSC 365 and in some other classes.

The assignment uses a modified version of one of the datasets I used in CSC 365 last academic year. 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).

Submission Instructions

You will use the handin tool to submit your queries. All queries must be submitted in a single file named `lab0.sql`. The file must contain a header comment with your name and short comments identifying each SQL statement (comments like `rem Query 1` are acceptable). All queries must be submitted in the order in which they are specified in the assignment. If you have not attempted a query, include a `rem Query X: not attempted` comment in your submission.

To submit use the following command:

```
 $ handin dekhtyar lab0-466 lab0.sql
```

SQL Queries

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

1. Find all items purchased on the receipt number 100. For each item report its full name (Flavor, Food), price and quantity purchased.
2. Find the total cost of the purchase with the receipt number 100.
3. Report all sales of Opera Cakes that occurred in the San Luis Obispo store. For each sale (receipt), report the sale date, receipt number and the quantity purchased. Report sales in chronological order.
4. Report all sales of Opera Cakes that occurred in California stores between January 21, 2000 (`"20-JAN-00"`) and January 28 (`"28-JAN-00"`) inclusively. For each sale specify sale date, store number, city and street address, as well as the quantity purchased. Report sales in chronological order.
5. List the most expensive items on the menu. Output full name (food, flavor) and type.
6. Report average number of sales per day for the San Luis Obispo store.
7. For each California bakery report the average number of sales per day. For each store output its store number, city and street address.
8. Find the store(s) with the largest number of employees. Report store number(s), city, state and the number of employees.
9. Report the number of company employees in California branches by each position. Sort output in ascending order by the number of employees.
10. Report the employee position type that leads in overall number of generated sales. Output the name of the position and the total number of sales generated.