CIS4331 Spring 2019 Lab 5
N-Table SELECT: OUTER JOIN, SELF JOIN, SQL Set Operators

1. Objectives

This lab will help you to learn

- How to retrieve data from two or more tables using outer join and self join
- How to combine query results from multiple SELECT statements using SQL set operators
- How to use the tool Oracle SQL Developer

2. Tasks to Complete

Complete the questions about 1-table SELECT and N-Table SELECT queries on the **MGS Database** included in the later part of this document. These queries use the tables in **user mgs**. This lab is **required to submit by 11:50pm, Tuesday, Feb. 19**.

NOTE: the links to online Oracle SQL Language references are available in the Modules\Resources folder on Canvas.

NOTE: The scripts you need in this practice can be downloaded from the item "*Murach Book Example Code*" in the Modules\Resources folder on Canvas.

3. Submission Requirements

Please place your SQL statements in a text file with the extension .sql. Mark each query based on the question number. Write your FULL name on the first page.

Then submit this SQL script file by attaching it to the link **Lab 5** in folder **Assignments\Labs** on Canvas.

Remember that only the last task is **required to submit by 11:50pm, Tuesday, Feb. 19**.

N-Table SELECT queries on MGS Database

1. Print the product code, name, and discount percentage of each product that has the same discount percentage as another product. Do not print a product more than once. Sort the query result in the increasing order of product code.
   HINT: need to use a self join.

2. For each category that has at least one product, print its id, name, and the id and name of each product in that category.
   Sort the result in the increasing order of category id.
   HINT: need to use an inner join.

3. For each product category, print its id, name, and the id and name of each product in that category. Include categories without any product in the query result.
   Sort the result in the increasing order of category id.
   HINT: need to use an outer join.

4. Print the id and name of each category to which no product currently belongs. Sort the result in the increasing order of category id.
   HINT: need to use an outer join.

5. Print the id, first name, and last name of each customer who has a gmail account and uses one address for shipping and billing. Sort the result in increasing order of customer id.
   HINT: need to use a SQL set operator.

6. Print the id, first name, and last name of each customer who uses one address for shipping and billing, but does not have a gmail account. Sort the result in increasing order of customer id.
   HINT: need to use a SQL set operator.

7. Print the id, first name, and last name of each customer who has a gmail account or uses one address for shipping and billing. Sort the result in increasing order of customer id.
   HINT: need to use a SQL set operator.

8. Print the order id, customer id, shipping status, and order date of each order. If an order has a specific ship date, the shipping status is Shipped. Otherwise, the shipping status is Not Shipped. Sort the result in increasing order of order date.
   HINT: need to use a SQL set operator.