CIS4331 Spring 2019 Lab 10
Views and PL/SQL

1. Objectives

This lab will help you to learn

- How to work with views
- How to write basic PL/SQL code

2. Tasks to Complete

Complete the questions about views and PL/SQL programming on the **MGS Database** included in the later part of this document. The coding uses the tables in **user mgs**. This lab is **required to submit by 11:59PM, SUNDAY, March 31.**

Note that the due date is Sunday, NOT Tuesday.

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

NOTES:

- **TO EARN ANY CREDIT, you MUST SUBMIT YOUR WORK TO CANVAS.**
- **YOU MUST WRITE your FULL NAME on the first page.**

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

Then submit this SQL script file by attaching it to the link **Lab 10** in folder **Assignments\Labs** on Canvas.

Exercises about Views on MGS Database

1. Create a view named customer_addresses that shows the shipping and billing addresses for each customer.

   This view should return these columns from the Customers table: customer_id, email_address, last_name and first_name.

   This view should return these columns from the Addresses table: bill_line1, bill_line2, bill_city, bill_state, bill_zip, ship_line1, ship_line2, ship_city, ship_state, and ship_zip.

   The rows in this view should be sorted by the last_name and then first_name columns.

2. Write a SELECT statement that returns these columns from the customer_addresses view that you created in exercise 1: customer_id, last_name, first_name, bill_line1.

3. Create a view named order_item_products that returns columns from the Orders, Order_Items, and Products tables.

   This view should return these columns from the Orders table: order_id, order_date, tax_amount, and ship_date.

   This view should return these columns from the Order_Items table: item_price, discount_amount, final_price (the discount amount subtracted from the item price), quantity, and item_total (the calculated total for the item).

   This view should return the product_name column from the Products table.

Exercises about PL/SQL on MGS Database

1. Write a script that uses an anonymous block of PL/SQL code to declare a variable and set it to the count of all products in the Products table. If the count is greater than or equal to 7, the block should display a message that says, "The number of products is greater than or equal to 7". Otherwise, it should say, "The number of products is less than 7".

2. Write a script that uses an anonymous block of PL/SQL code to declare two variables to store (1) the count of all of the products in the Products table and (2) the average list price for those products. If the product count is greater than or equal to 7, the stored procedure should display a result set that displays the values of both variables. Otherwise, the procedure should display a result set that displays a message that says, "The number of products is less than 7".

3. Write a script that uses an anonymous block of PL/SQL code that calculates the common factors between 10 and 20. To find a common factor, you can use the modulo function (MOD) to check whether a number can be evenly divided into both numbers. Then, this procedure should display a string that displays the common factors like this:

   ```
   Common factors of 10 and 20: 1 2 5
   ```