# CSC 352/452: DATABASE PROGRAMMING
# ASSIGNMENT # 1 (100 Points) Due Date 7/26 11:59pm
# Review and Refresh

## ***CONNECT into ORACLE via ORACLE Developer or SQL*PLUS, and perform the following:***

**Part a:(25 Points)**
Create the following tables by using a script file named ***prog1a.sql***:

STUDENT(student_id, std_name, home_phone, total_credits, gpa, advisor_id)
COURSE(course#, credit_hours, time, location, faculty_id)
ENROLLMENT(student_id, course#, grade)
FACULTY(faculty_id, fac_name, office, salary)
***where:***
student_id, std_name, advisor_id(faculty_id), office, location and fac_name are strings of maximum length of 25 characters (VARCHAR)
home_phone, and course# are strings of size 12 characters (CHAR)
total_credits, time and credit_hours are integers (NUMBER)
grade, gpa and salary are real numbers, with a maximum decimal of 2 (NUMBER)

Test/run your script file in Oracle Developer or SQL*Plus command line(please make sure you downloaded the client version based on the Oracle Instructions pdf file posted on D2L) as follows:

```
% sqlplus                          /* get into sqlplus */
SQL> start prog1a (or @prog1a)     /* execute prog1a */
```

**Part b: (25 Points)**
Populate each table with at least 15 records of your choice by using a script file named ***prog1b.sql***. The ENROLLMENT table, however, should be populated with at least 30 records of your choice.

***Note***: You may want to ensure that the queries in Part (4) of this assignment are met, when you populate these tables.

Test/run your script file as follows:

```
% sqlplus                          /* get into sqlplus */
SQL> start prog1b (or @prog1b)     /* execute prog1a */
```

**Part c: (25 Points)**
Display the structure and the contents of each of the above tables by using a script file named ***prog1c.sql***.

Test/run your script file as follows:

```
% sqlplus                          /* get into sqlplus */
SQL> start prog1c (or @prog1c)     /* execute prog1a */
```

**Part d: (25 Points)**
Issue the SQL statements necessary to answer the following queries:

- **(a)** For each faculty list the faculty's name and the names of his/her student advisees
- **(b)** Give the names and phone numbers of students who are not enrolled in any courses
- **(c)** Give the student name and the gpa for the student with the highest gpa than all colleagues with a similar (exact) total number of credit hours
- **(d)** For each student name, list the course numbers(s), the student took, where the student obtained the lowest grade
- **(e)** Give the names of faculty who do not advise any students

Create a script file named ***prog1d.sql*** for all the above queries.

Test/run your script file as follows:

```
% sqlplus                          /* get into sqlplus */
SQL> start prog1d (or @prog1d)     /* execute prog1a */
```

Note: There are four parts to this assignment; each part may requires you to submit a file. So please create a folder for this assignment and submit an electronic copy of your solution files of every question/part, all in one folder zipped and named "LastName HW1" and must be submitted to your D2L/Assignment 1 Submission page. I will give you one submission locations on the course web site.

**Again:** For example, for assignment #1, you need to create a folder named your **LastName HW1** under your c: home directory and save the script files **prog1a.sql, prog1b.sql, prog1c.sql,** and **prog1d.sql** under this folder. Then zip the folder and then submit the zipped file to your D2L/Assignment 1 Submission page

**SUBMIT YOUR HW1 FOLDER AS ZIP FILE TO YOUR D2L ASSIGNMENT 1 SUBMISSION LINK FOR GRADING. Make sure only one copy submitted.**