COMP 3311: Database Management Systems

Lab 3 Exercise: Basic SQL Statements

WHAT TO DO

1. **Download** the zipped folder Lab3Exercise.zip from the **Basic SQL Statements** entry of the Lab Schedule course webpage to the desktop and unzip it. The folder contains two SQL script files Lab3DB.sql and Lab3Queries.sql. The Lab3DB.sql script file drops (deletes) the Student table previously created, if any, and creates two tables Student and Department.

2. **Place** your InsertMyself.sql script file constructed in the previous lab <u>inside</u> the Lab3Exercise folder.

3. **Execute** the Lab3DB.sql script file in SQL Developer. The last line with the @ symbol in the Lab3DB.sql script file causes the referenced InsertMyself.sql script file to be executed.
   IMPORTANT: A referenced script file <u>must</u> reside in the same folder as the script file that references it.

4. **Modify** the Lab3Queries.sql script file by constructing the following five SQL queries in the specified locations in the script file.
   Query 1. Find the student id, first name, last name, email and cga of the students who are not in the COMP or BUS departments. Order the result by cga from highest to lowest cga.
   Query 2. Find the last name and first name of the students whose last name contains the letter 'u' as the 2nd character.
   Query 3. Find the last name and first name of the students whose first name and last name contains a double letter (e.g., "ee", ll", "mm", etc.).
   Query 4. Find the last name and first name of the students who have the three lowest cgas.
   Query 5. Find the student id, last name, first name, cga and department name of the students who are in the COMP or the BUS departments and whose CGA is in the range 3.0 to 4.0. Order the result by last name ascending.
   Note: Your query results should show the same column headers as those shown in Figure 1.

5. **Execute** the Lab3Queries.sql script file in SQL Developer <u>after</u> you have constructed the queries.
   Note: You can test each of your queries individually, before executing the completed script file, by placing the cursor anywhere within the query and selecting the Run Statement button.

Note: The following SQL*Plus commands are used in theLab3DB.sql and Lab3Queries.sql script files.

clear screen	clears the Script Output pane.
set feedback off	suppresses the display of the number of records processed by a SELECT, DELETE, UPDATE or INSERT statement.
set heading off	hides the query result column headers of subsequent SQL statements.
set heading on	shows the query result column headers of subsequent SQL statements.

WHAT TO SUBMIT

1. Your modified Lab3Queries.sql script file containing your SQL queries.
2. A jpg/jpeg or PDF file with file name Lab3 that shows the result of executing the Lab3Queries.sql script file as shown in Figure 1.

HOW TO SUBMIT

By 11:00 p.m. today, upload your modified Lab3Queries.sql script file and SQL Developer screenshot file to Canvas by selecting *Lab 3* in the Assignments section of Canvas, and then selecting the Submit Assignment button. To check your submission, select the Submission Details button on the right side of Canvas. For help, select the Help button at the top-right of Canvas.

Query 1: Find the student id, first name, last name, email and cga of the students who are
         not in the COMP or BUS departments. Order the result from highest to lowest cga.

Id	First name	Last name	Email	CGA
28918856	Alan	Turing	maturing	3.56
29873381	Nikola	Tesla	eetesla	3.37
13556789	Legolas	Greenleaf	magreenleaf	3.36
13782973	Edith	Clarke	eeclarke	3.15
28834512	Isaac	Newton	manewton	2.98
16789012	Robert	Redford	maredford	2.57
26184624	Bruce	Wayne	eewayne	2.47
14567890	Julius	Caesar	eecaesar	1.9

Query 1 result

Query 2: Find the last name and first name of the students whose last name
         contains the letter "u" as the 2nd character.

LASTNAME	FIRSTNAME
Buffet	Warren
Bueller	Ferris
Turing	Alan
Musk	Elon

Query 2 result

Query 3: Find the last name and first name of the students whose first name
         and last name contains a double letter (e.g., "ee", "ll", "mm", etc.).

LASTNAME	FIRSTNAME
Potter	Harry
Buffet	Warren
Bueller	Ferris

Query 3 result

Query 4: Find the last name, first name and cga of the students who have the three
         lowest cgas.

LASTNAME	FIRSTNAME	CGA
Trump	Donald	1.49
Bueller	Ferris	1.64
Caesar	Julius	1.9

Query 4 result

Query 5: Find the student id, last name, first name, cga and department name of
         the students who are in the COMP or the BUS departments and whose CGA
         is in the range 3.0 to 4.0. Order the result by last name ascending.

Your information should be shown in Query 5.

STUDENTI	LASTNAME	FIRSTNAME	CGA	DEPARTMENTNAME
26186666	Buffet	Warren	3.42	Business
15085942	Gates	Bill	3.4	Computer Science
15000655	Jobs	Steve	3.45	Computer Science
18792018	Musk	Elon	3.25	Business
11111111	Student	Typical	3.64	Computer Science

Query 5 result

Figure 1: Example SQL Developer Script Output tab showing the result of executing the five queries.