Lab 01  
name: Pavneet Kaur  
date: 15 January, 2022  
section: DBS211 ZEE  
student id: 128287216  
email: pavneet-kaur1@myseneca.ca

# Objectives:

The purpose of the first lab of DBS211 is to familiarize yourself with the User Interface, SQL Developer, that we will be using throughout the course to communicate with the Oracle server. By the end of this lab you should be able to:

* Successfully establish a connection with and login to the Oracle database server using SQL Developer
* Run the sample database creation script
* Navigate SQL Developer to view the tables created, their structure and the data contained within them.

# Preface:

If you have not already done so, you will need to download the sample database creation script from blackboard and run it. These instructions are included in the W01 - Getting Started with SQL Developer document.

# SUBMISSION

Answer the following questions in the SQL Developer Worksheet area saving the file as “DBS211\_Lab01\_<yourlastname>” where you put your actual last name in the file name.

Make sure that your file has an appropriate comment header that includes your name, the date, the title of the document, and a description of the contents. Use comment blocks for answers that are not running code and ensure that all answers are clearly labelled for which question or step they referring to. I have provided a starter file that you may use or use as an example to go by.

**Save the file and Submit it to Blackboard.**

# Tasks – Explore the Database and the Development Environment

In the connections window, expand **Tables.**

1. How many tables have been created? List the names of the created tables.  
   => 8 tables have been created and their names are as follows:  
   1. CUSTOMERS  
   2. EMPLOYEES  
   3. OFFICES  
   4. ORDERDETAILS  
   5. ORDERS  
   6. PAYMENTS  
   7. PRODUCTLINES  
   8. PRODUCTS
2. Click on table **customers**. Click on the Data tab near the top of the worksheet. How many rows are there in the table **customers**?  
   => There are 122 rows in the table ‘customers’.
3. What SQL statement would return the same results. Write the statement in the .sql file and execute it.   
   You will learn how to select rows and columns from a table by writing SQL select statements later in this course.  
   =>’ SELECT\*FROM CUSTOMERS’ statement returned the same result as data saved in table ‘customers’. After creating a .sql file and entering this statement in that worksheet and running it the result of the query was same as ‘customers’ table.
4. How many columns does the **customers** table have? List the column names.  
   => There are 13 columns in the table ‘customers’, and there names are as follows:  
   1. CUSTOMERNUMBER

2. CUSTOMERNAME  
3. CONTACTLASTNAME  
4. CONTACTFIRSTNAME  
5. PHONE  
6. ADDRESSLINE1  
7. ADDRESSLINE2  
8. CITY  
9. STATE

10. POSTALCODE

11. COUNTRY  
12. SALESREPEMPLOYEENUMBER  
13. CREDITLIMIT

1. What is the value of each column in the first row in table **customers**? Write the column name and the column data type in addition to the value.  
   => COLUMN NAME: COLUMN VALUE: COLUMN DATA TYPE:

1. CUSTOMERNUMBER 103 NUMBER (38,0)

2. CUSTOMERNAME Atelier graphique VARCHAR (50 BYTE)

3. CONTACTLASTNAME Schmitt VARCHAR (50 BYTE)

4. CONTACTFIRSTNAME Carine VARCHAR (50 BYTE)

5. PHONE 40.32.2555 VARCHAR (50 BYTE)

6. ADDRESSLINE1 54, rue Royale VARCHAR (50 BYTE)

7. ADDRESSLINE2 (null) VARCHAR (50 BYTE)

8. CITY Nantes VARCHAR (50 BYTE)

9. STATE (null) VARCHAR (50 BYTE)

10. POSTALCODE 44000 VARCHAR (50 BYTE)

11. COUNTRY France VARCHAR (50 BYTE)

12. SALESREPEMPLOYEENUMBER 1370 NUMBER (38, 0)

13. CREDITLIMIT 21000 NUMBER (10,2)

1. Write the number of rows and columns for the rest of the tables in your schema. Format it something like the following.

Table Name Rows Column

EMPLOYEES 23 8

OFFICES 7 9

ORDERDETAILS 2296 5

ORDERS 326 7

PAYMENTS 273 4

PRODUCTLINES 7 4  
PRODUCTS 110 9

1. Right Click on the **orderdetails** table and choose tables/count rows. How many rows does the order details table include?  
   => After right clicking on the ‘orderdetails’ table and choosing tables then count rows, it showed that there 2996 rows in it.
2. Write the following SQL statement in the new tab.

desc offices;

You can also write

describe offices;

What is the result of the statement execution?  
=> After executing this statement it showed names of the columns of table ‘offices’ and showed if the column is null or not along with the column type. The result of the execution of the statement ‘desc offices’ was as follows:  
Name Null? Type

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OFFICECODE NOT NULL VARCHAR2(10)

CITY NOT NULL VARCHAR2(50)

PHONE NOT NULL VARCHAR2(50)

ADDRESSLINE1 NOT NULL VARCHAR2(50)

ADDRESSLINE2 VARCHAR2(50)

STATE VARCHAR2(50)

COUNTRY NOT NULL VARCHAR2(50)

POSTALCODE NOT NULL VARCHAR2(15)

TERRITORY NOT NULL VARCHAR2(10)

1. Type the following statements in, execute them, then briefly describe what the statement is doing!

SELECT \* FROM employees;

After entering the above statement, and executing it, the SQL developer displayed the ‘employees’ table as the result of the query, it exactly showed the data contained in employees table. It displayed all the rows and columns of table ‘employees’.

SELECT \* FROM customers ORDER BY ContactLastName;

After entering the above statement and executing it, the SQL developer displayed the ‘customers’ table as the result of the query, but it ordered the data of all the columns according to the contactLastName ordered in alphabetical order, or it can be said that it ordered the contactLastName in alphabetical order.

1. How many constraints does the **products** table have?

=> ‘products’ table have 11 constraints in it, the names of constraints are as follows:

PROD\_LINE\_FK

SYS\_C001855420

SYS\_C001855421

SYS\_C001855422

SYS\_C001855423

SYS\_C001855424

SYS\_C001855425

SYS\_C001855426

SYS\_C001855427

SYS\_C001855428

SYS\_C001855429

1. Find a way to turn on line numbers in the gutter. Where is the gutter? Describe its location in your solution file.  
   => The steps to turn on line numbers in the gutter are as follows;
2. Click on the ‘Tools’ appearing above the worksheet in menu tool bar.
3. Select ‘Prefrences’.
4. Select ‘code editor’.
5. Select ‘Format’.
6. Select ‘Line gutter’.
7. Turn the ‘show line numbers’ option appearing at the to and then at the last click ‘ok’.

1. Set the font size in the worksheet editor to a size that is best for you. (Hint: Tools/Preferences)

* I set the font size of the worksheet to ‘11’. The steps to set the font size were as follows:  
  Tools/Preferences/code editor/ fonts/fontsize.