# Getting Started
# Lab 00

## 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.

## Lab Mark

This lab does not have any weight but has to be completed in the first week.

## LAB 00 - SUBMISSION

### Explore the Database

Answer the following questions in the provided space. Save you file as a PDF file and name it as following:

**DBS211_L00_LastName.sql**

## Oracle SQL Developer Setup

Your Oracle account information is available in My Grades from the course page on Blackboard.
Use the following link to download Oracle Developer:

https://www.oracle.com/tools/downloads/sqldev-downloads.html

Choose the proper download compatible to your OS.
For instance, if your OS is Windows_X64 choose the first option to download.

Windows 64-bit with JDK 8 included

If you have MAC, download the MAC version, you also need to download the JDK and install it. You can find the link to JDK on the Notes column.

Decompress the file and execute the sqldeveloper.exe
…\sqldeveloper

If you have any problems with the font size of the SQL DEVELOPER program (menu bar and navigation panel, and …) go to the following link for the instruction to fix the problem:
https://christian-gohmann.de/2018/10/25/running-sql-developer-on-high-dpi-screens/

When you have SQL Developer running, you need to create a new connection to connect to Seneca Oracle.

To create a new connection:

- Choose a name for your connection.
- Connection Name: DBS311 (or any name you want)
- Host name: **myoracle12c.senecacollege.ca**
- Service name: **oracle12c**
- Your Oracle username and password

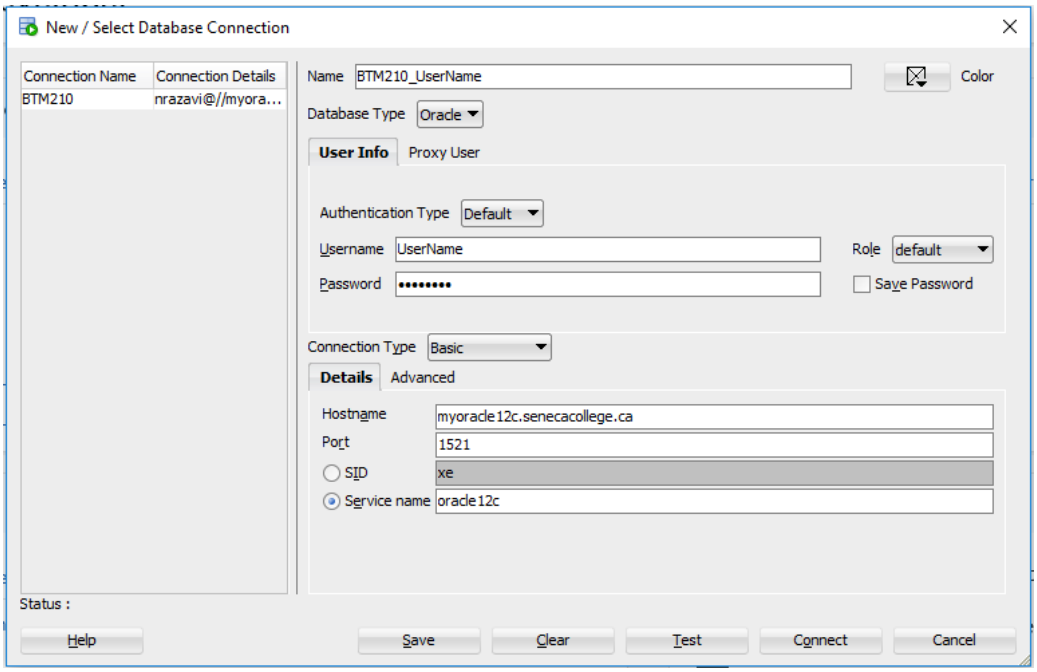


Figure 1

## You have already created the schema but you have different tables

If you have created the schema you should see the following table under "Tables" in your DBS311 connection:

```
DBS211_CUSTOMERS
DBS211_EMPLOYEES
DBS211_OFFICES
DBS211_ORDERDETAILS
DBS211_ORDERS
DBS211_PAYMENTS
DBS211_PRODUCTLINES
DBS211_PRODUCTS
```

If you see different tables from the above tables, you need to remove them and do the following instruction to create correct tables in your database.

To remove tables:

1. Right click on the table name in the navigation panel and select “Table” and the select “Drop”.

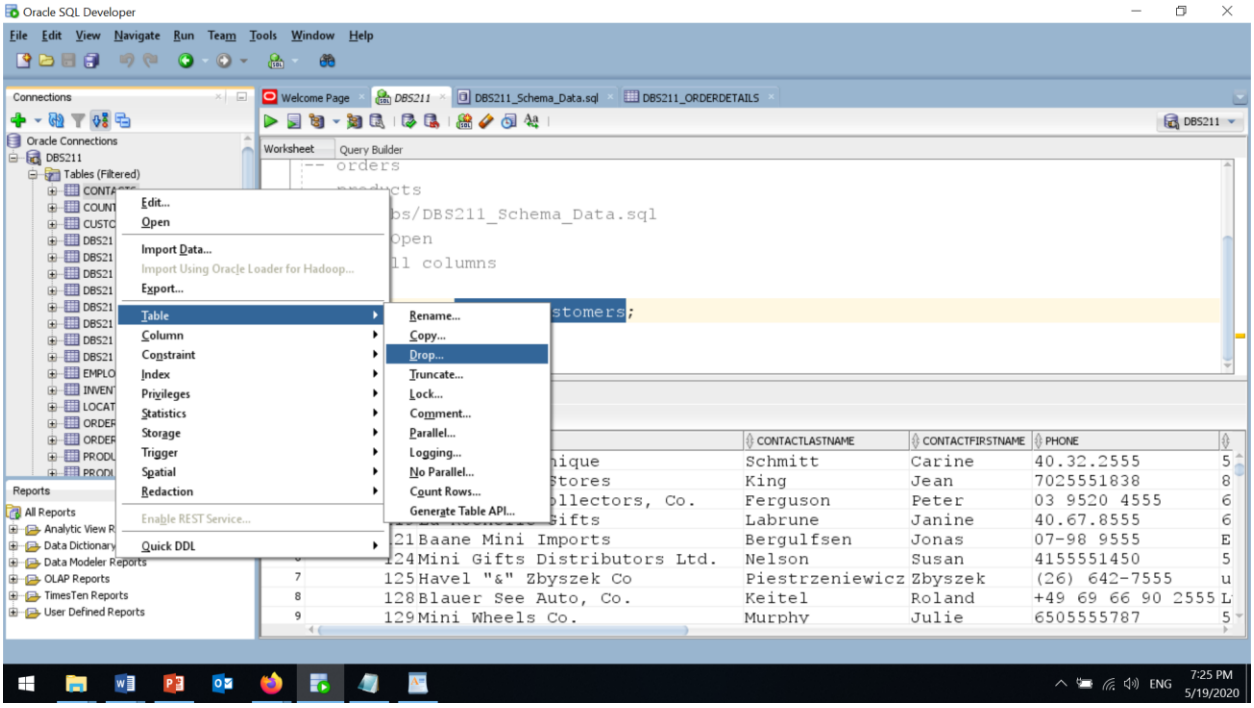


Figure 2

2. In the “Drop” page, check “Cascade Constraints” and click on the “apply” Button.

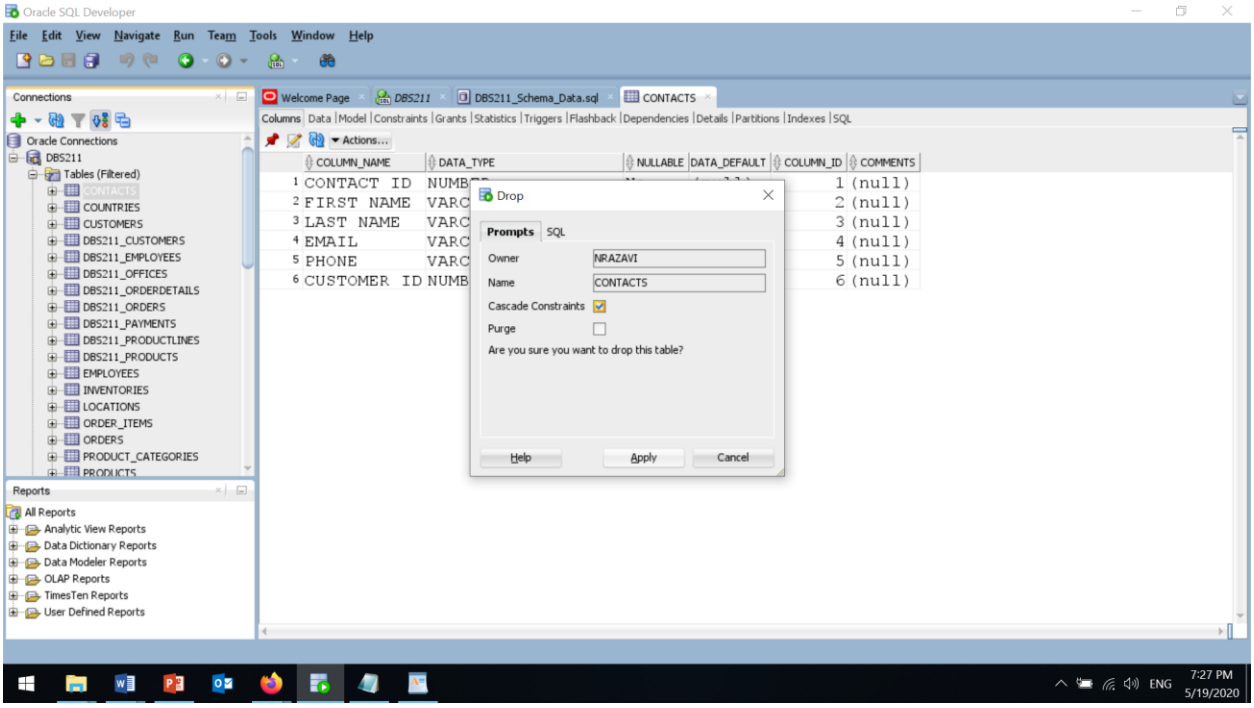


Figure 3

Repeat this to drop (remove) all tables and create the correct tables following the instruction below:

## Schema (Create Tables and Insert Data)

To create the schema, download and execute the file from
Schema Creation and Data Insertion
You can find all the files you need in this Lab 00 folder.
Right click on “Schema Creation Script” and select the “Save link as” to save the file on your computer.
schema.sql

Open this file in SQL Developer.

1. From the file menu, select **Open**.
2. Select the downloaded script and hit the open button.

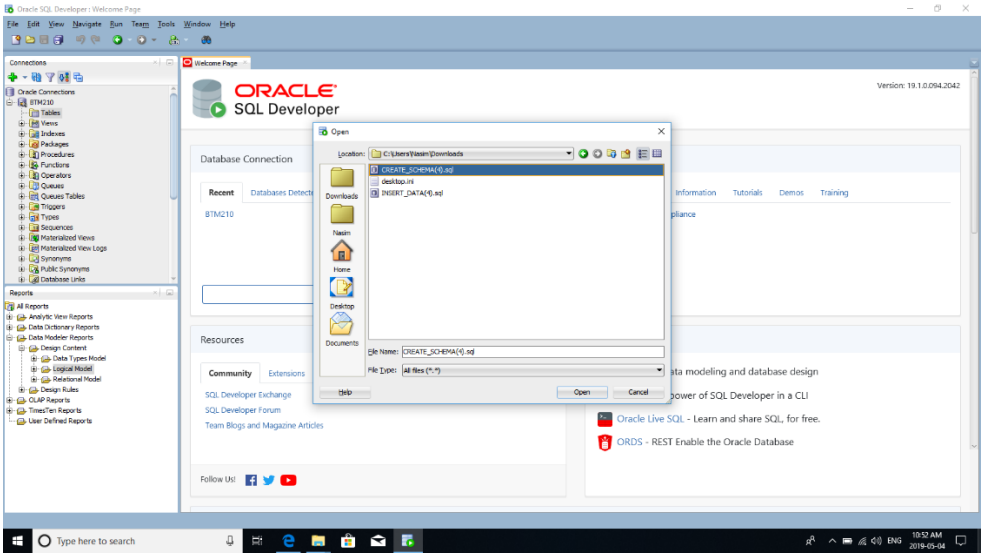


Figure 4

3. To execute the script, hit “**Run Script (F5)**” icon (the icon next the green triangle).

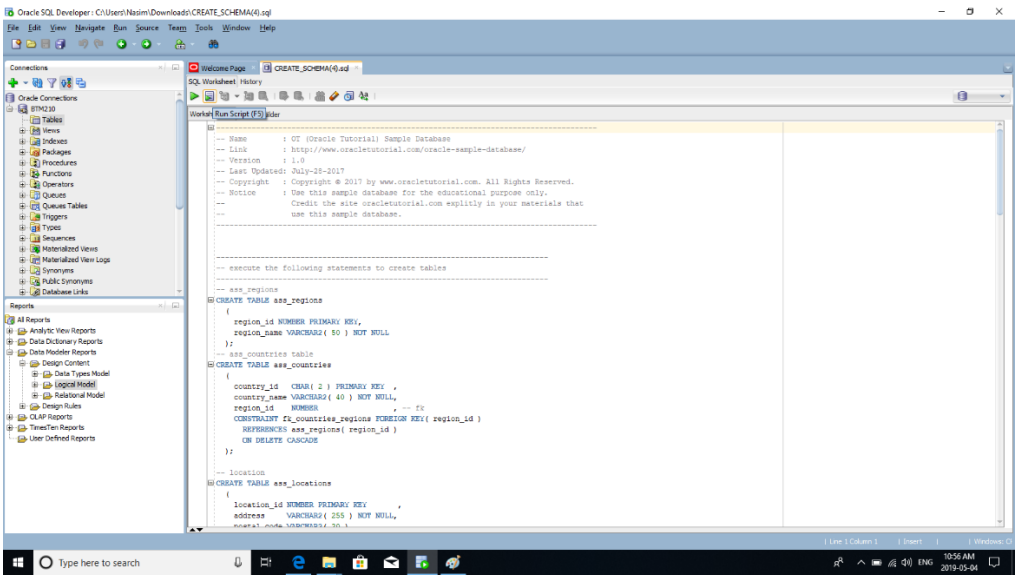

Figure 5

4. From the drop-down list, select the connection that you have created at the beginning of this lab and hit **OK**.

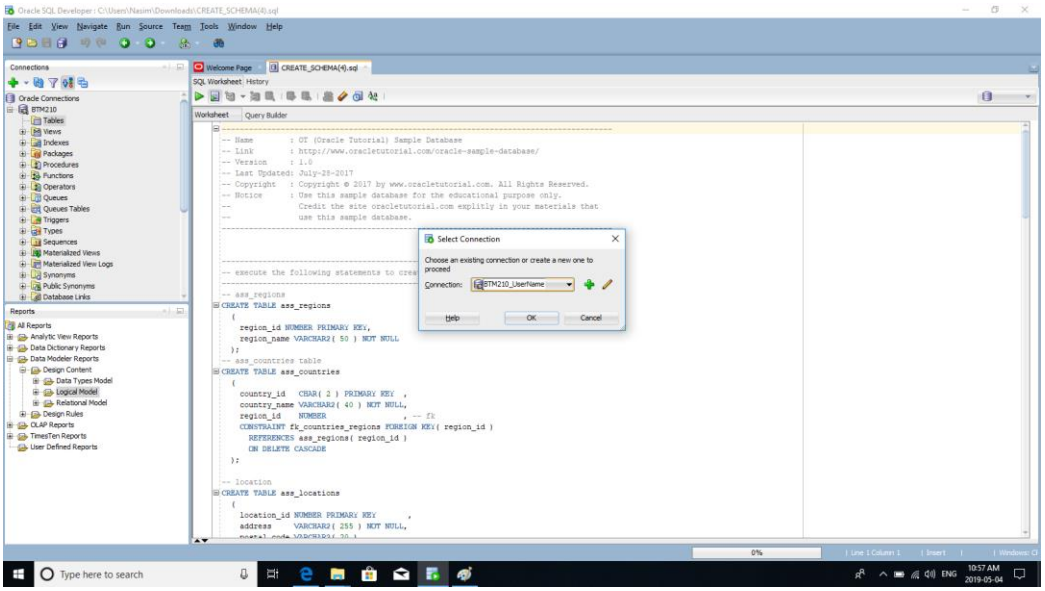


Figure 6

After all tables are created, you may not see the tables under "Tables" in the navigation panel. Right click on "Tables" and select "Refresh". Now, expand "Tables". You should see the following tables:

```
DBS211_CUSTOMERS
DBS211_EMPLOYEES
DBS211_OFFICES
DBS211_ORDERDETAILS
DBS211_ORDERS
DBS211_PAYMENTS
DBS211_PRODUCTLINES
DBS211_PRODUCTS
```

## Tasks:

To answer the questions in this lab you need the Oracle SQL developer running and the sample database with

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

1) How many tables have been created? List the names of the created tables.

There are 8 tables that have been created.

DBS211_CUSTOMERS
DBS211_EMPLOYEES
DBS211_OFFICES
DBS211_ORDERDETAILS
DBS211_ORDERS
DBS211_PAYMENTS
DBS211_PRODUCTLINES
DBS211_PRODUCTS

2) Click on table **DBS211_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 on the DBS211_customers.

3) What SQL statement would return the same results? Write the statement in the box below.

You will learn how to select rows and columns from a table by writing SQL select statements later in this course.

```
SELECT COUNT(*) AS row_count
FROM DBS211_customers;
```

4) How many columns does the **DBS211_customers** table have? List the column names.

DBS211_customers table has 13 columns. They are-

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.

5) What is the value of each column in the first row in table **DBS211_customers**? Write the column name and the column data type in addition to the value.

The Column names, their data types and the values of the first row in table DBS211_customers is-

1. **CUSTOMERNUMBER** – NUMBER(38,0) – **103**
2. **CUSTOMERNAME** – VARCHAR2(50 BYTE) – **Atelier graphique**
3. **CONTACTLASTNAME** - VARCHAR2(50 BYTE) – **Schmitt**
4. **CONTACTFIRSTNAME** - VARCHAR2(50 BYTE) – **Carine**
5. **PHONE** - VARCHAR2(50 BYTE) – **40.32.2555**
6. **ADDRESSLINE1** - VARCHAR2(50 BYTE) – **54, rue Royale**
7. **ADDRESSLINE2** - VARCHAR2(50 BYTE) - **null**
8. **CITY** - VARCHAR2(50 BYTE) - **Nantes**
9. **STATE** - VARCHAR2(50 BYTE) - **null**
10. **POSTALCODE** - VARCHAR2(50 BYTE) - **44000**
11. **COUNTRY** - VARCHAR2(50 BYTE) - **France**
12. **SALESREPEMPLOYEENUMBER** – NUMBER(38,0) - **1370**
13. **CREDITLIMIT** – NUMBER(10,2) - **21000**

6) 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 | Columns |
|---|---|---|
| DBS211_EMPLOYEES | 24 | 8 |
| DBS211_OFFICES | 8 | 9 |
| DBS211_ORDERDETAILS | 2996 | 5 |
| DBS211_ORDERS | 326 | 7 |
| DBS211_PAYMENTS | 273 | 4 |
| DBS211_PRODUCTLINES | 7 | 4 |
| DBS211_PRODUCTS | 110 | 9 |

7) Right Click on the **DBS211_orderdetails** table and choose tables/count rows. How many rows does the order details table include?

DBS211_orderdetails includes 2996 rows.

8) Write the following SQL statement in the new tab.

```
desc DBS211_offices;
```

You can also write

```
describe DBS211_offices;
```

What is the result of the statement execution?

| Name | Null? | Type |
|---|---|---|
| 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) |

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

```
SELECT * FROM DBS211_employees;
```

The above statement created a new tab in the script output area called Query Result and it has all the rows of the DBS211_employees table. It also has the amount of time it took to execute the script.

```
SELECT * FROM DBS211_customers ORDER BY ContactLastName;
```

This SQL script is selecting all columns (*) from the table named DBS211_customers and sorting the rows based on the ContactLastName column in ascending order (ORDER BY ContactLastName).

10) How many constraints does the **DBS211_products** table have?

DBS211_products has 11 constraints.

11) Find a way to turn on line numbers in the gutter.

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

Tools – Preferences – Code Editor – Fonts – Font Size (12).