Table of Contents

In this class, we focus on using interactive Oracle SQL using Oracle 12g. To work with our data we need a server (Oracle 12g) and a client. Your simplest choice is to use a communication program to log into your CCSF student linux account and then log into the SQL*Plus client using the CCSF student Oracle installation. But you do have some other choices.

1. Server software choices

1.1. Using the CCSF Oracle installation

You can access the student installation of Oracle from your CCSF Unix account. This installation runs on our dunes Linux system. Your student account is automatically created for you if you are enrolled in this class. This is generally the easiest approach since the Oracle server is set up and running and your account already exists.

On the CCSF Oracle system, each student gets one user account which is considered to be their database and all of their tables are created in that database. Oracle also refers to this as your schema. When you log into your Oracle account, you are in your private schema; other students cannot see your tables. I cannot see your tables either, since my Oracle account has the same privileges as your Oracle account.

1.2. Using a local Oracle installation

You can also download Oracle software from the Oracle site and use this for your assignments. There is a free downloadable Oracle 11g Express Edition which was a rather simple install on a Windows system. It is also available as a Linux version. This would allow you to create different users if you wanted.

I do not provide assistance in installing and configuring Oracle on your computer.

Having troubles doing a local installation will not be accepted as a reason for late assignments.

If you do this be certain you have the 12c version- not the older 10g version of Oracle express

1.3. Using a different Oracle installation

Occasionally students use an Oracle system that is set up on their job for their assignments. I do not recommend this since you could make errors that damage your company's data. A good dba would not want you doing class assignments on a production server.

1.4. Why is this a choice?

The assumption for this class is that each student has a separate user account, which is a separate database. As long as you are using Oracle 12g (or 11g) and install the tables using the scripts I give you, your assignments should work the same way.

2. Client software choices

2.1. SQL*Plus

We start with SQL*Plus, which is a command line Oracle client tool that lets you create, edit and run interactive SQL queries and PL/SQL blocks. You can use SQL*Plus to create and run script files. The result of the queries that you run is determined by both the SQL statement that is executed by the Oracle server and the current settings of the SQL*Plus environment. It is important to recognize the difference between SQL*Plus commands and SQL statements. SQL*Plus is the client available on the CCSF system. SQL*Plus is available on most Oracle installations.

Even if you commonly use a graphical client (such as SQL developer) you need to be able to use SQL*Plus.

The script-spool process for assignments needs to be run from within SQL*Plus.

2.2. SQL Developer

You may want to use SQL Developer to develop some queries so that you see a graphical client. We will discuss this in a few weeks. In general, I will not know which client you are using to develop your queries. You should be comfortable with both a command line interface (SQL*Plus) and a graphical interface (SQL Developer). SQL Developer is available as a free download from Oracle. You can connect to the CCSF Oracle server using SQL Developer.

SQL Developer has a few different client level rules than SQL*Plus. Some of the commands you are required to use for scripts do not work in SQL Developer because they are client commands, not SQL commands. You need to always double check your script and spooled results for assignments. (the major cause of errors in the that SQL Developer client will allow blank line in the middle of a query and SQL*Plus will not- that would cause an error in your script.)

2.1. Other clients

There are other clients that let you create queries and run them against an Oracle database. If you find them helpful in developing queries, please use them. If they are free, please tell other people in class about them.

2.2. Using graphical clients

You should consider using graphical clients if it helps you understand how the queries are created. Many graphical client use color coding for syntax and provide lists of relevant table and column names.

3. Communication software choices

You can use many different communication tools to get to the CCSF Linux system. You want a tool that opens a client window where you can enter commands to log into your account and to start up SQL*Plus.

You also will be transferring some files between your local computer and your linux account. This is usually done with an FTP client.

For Windows users we commonly recommend the use of SSH Secure Shell; Mac users commonly use Fugo (See the ACRC handouts for that). Any other tool that lets you connect to your Oracle account and use SQL*Plus and that lets you transfer plain text files can be used.

4. Text editor

It is a good idea to have a text editor to use when writing your queries. If you are using the SQL*Plus client, it can be easier to enter the SQL query into the text editor and then copy and paste it into the SQL*Plus client. There is an editor for the SQL*Plus client, but it is not intuitive.

Many people find NotePad++ a good text editor for Windows systems. It is a free download. MS Word is NOT a good choice- it is not a text editor.