SQL CA2

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**Course:** CSDF

**Module:** SQL Programming

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Aims:

My aim for this CA is to show you with detail and in simple layman terms how to establish a connection to an Oracle XE and Cloud Database using SQL Developer installed on your home PC or Virtual Machine.

I will be showing you how to do the following:

* Create a connection to the machine
* Create a username schema
* Use an SQL script to insert tables into the database
* Write Queries to the tables
* How to create an instance in the database
* Obtain and Instance wallet

In doing so I will be using a virtual machine with windows 10 provided to me by the college

And Oracle SQL Developer version 21.2.0.187

Method

In the methods section I will be showing you step by step instructions on how to complete each part of this lab and will be providing screenshots along the way to help further this.

ORACLE XE

To start this off we’re going to first create a system connection by clicking the green plus sign under the connections tab in Oracle SQL Developer, once that is done you will be greeted by this screen:

Graphical user interface, application

Description automatically generated

Once you are at this screen you will want to give the connection a name, I personally suggest system\_xepdb1/system and you want to give this connection a username and password. As this is the system connection you will be required to use “system” as the username and password. For your service name you want to use “xepdb1”” as this is the first PDB (pluggable database” that you will be using for this assignment.

After all this information is filled out you want to test your connection using the test button and upon success you want to save this connection.

For our next step you will be creating a username schema

Go to your system connection that you just made and drag the file “create\_std\_user” provided below in your references into the text field, this should automatically transfer the contents of the file to your system connection. Once this has been done press your F5 key on your keyboard and this will run the entire script and create your student user.

Now with this being done we’re going to move back to where we started and create a new connect called student\_xepdb1, we will be using the information from creating the user in the previous paragraph to make our connection as the file contained a user and password needed to make the connection as seen below:

**Please remember that username and passwords are case sensitive, and they may not work unless inputted correctly**

Text

Description automatically generated

With this information and using the xepdb1 service name and following the same directions for creating our system connection we now have a student schema. Now we want to connect to the schema using the password we entered to create the connection and run our CreateStudent.Sql script that is available in the references section of this report to create the tables and provide the tables with inserts.

Graphical user interface, text, application

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Once your script is loaded in you want to run the script again so press the f5 key on your keyboard and the script will start to make tables and insert the information into them. This may take a few seconds to complete. Once this is done your script output should be similar to if not like mine:

Graphical user interface, text, application

Description automatically generated

Now your tables section under your student\_xepdb1 connection should have several inserts as seen below and all contain relative information to their table. If your table has nothing inside of it you may have to repeat the process or minimize your tables bar and click the blue refresh icon above your connections.

Graphical user interface, text, application

Description automatically generated

Now we’ll use a short and simple query to get to know the tables better, if you go to your student\_xepdb1 connection again and type in “DESCRIBE” then your table name, example (student) then you will get the information on the student table such as Student ID, First name, Last name, etc etc.

Now we know how to describe the table using the query describe we’re going to write a query to join data from the tables. To start this off I will be using the select distinct command to avoid any duplicates as we don’t want our tables results flooded with duplicate information, next I will be picking out the 3 pieces of information I want to join into separate columns, in this case I chose first\_name, last\_name and zip code from Instructor as seen below.

Graphical user interface, text, application

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Oracle Cloud

For the next part we’ll be making an oracle cloud machine, to do so you will need to make an oracle cloud account through oracles website.