

- **How To Setup Gradiance**

- Create a user account at www.gradiance.com/services. **Important:** we highly recommend that you use your NCSU unity id as your login id (appended with numbers if too short). This would provide an easy mapping during the grading of assignments. Those of you who already have a login id which does not match your unity id, please contact the TAs so that we can setup a mapping between your name and the Gradiance login.
- Once you have created an account on Gradiance, register for “Database Systems: The Complete Book, 2e by Garcia Molina/Ullman/Widom”. You will need a token to add yourself to the class. The class token will be posted.
- Please refer to the quick tour for Gradiance at <http://www.gradiance.com/info.html>. That link also contains more detailed user guide.

- **Getting Started with the NCSU Oracle DBMS**

There are mainly two steps: (1) logging onto Oracle @ NCSU; and (2) logging into SQL*Plus.

SQL*Plus is a command line tool proprietary to Oracle. Users type in SQL statements in SQL*Plus that send statements to Oracle server. Oracle server then validates and executes the statements on its databases. The query results are returned to SQL*Plus and displayed to the user. After you login into SQL*Plus, at the SQL prompt, you can begin typing any SQL command. After typing the SQL command, hitting return (i.e., enter key) will not execute the SQL command but only change the SQL prompt to line number prompts. Then, you can type / to execute the SQL command. Also, a semicolon at the end of the SQL command will execute the command immediately after hitting return. In addition to SQL commands, /, and RUN, you can also execute SQL*Plus commands. For example, to use HELP command in SQL*Plus, you can type "help index" or "? index" to list topics and type "help [topic]" for instructions.

Now, please follow the steps below to go through an example of creating a table in Oracle.

1. Login onto Oracle @ NCSU.
 - You need an ssh client. ([Putty](#) is recommended.)
 - Launch your ssh client and open a secured connection to the remote host:
remote-linux.eos.ncsu.edu.
 - login: **<enter your Unity ID>**



- Password: <enter your Unity password>



- eos% add oracle11

```
remote.eos.ncsu.edu - PuTTY

jps jrunscript jsadebugd jstack jstat jstasd jvisualvm keytool
native2ascii orbd pack200 policytool rmic rmid rmiregistry
schemagen serialver servertool tnameserv unpack200 wsgen wsimport
xjc

Manpages for most commands are available by typing man <commandname>

Package installed by ITECS, eoshelp@ncsu.edu

Volume Name          Quota      Used %Used  Partition
users.sgao           2000000    100696    5%        30%
eos% add oracle10g
Oracle Client, version 10g

Use the following command to start Oracle:

    sqlplus

This application is supported by CSC
send any problem reports to help@csc.ncsu.edu

eos%
```

2. Login into SQL*Plus

- eos% sqlplus

```
remote.eos.ncsu.edu - PuTTY

Package installed by ITECS, eoshelp@ncsu.edu

Volume Name          Quota      Used %Used  Partition
users.sgao           2000000    100696    5%        30%
eos% add oracle10g
Oracle Client, version 10g

Use the following command to start Oracle:

    sqlplus

This application is supported by CSC
send any problem reports to help@csc.ncsu.edu

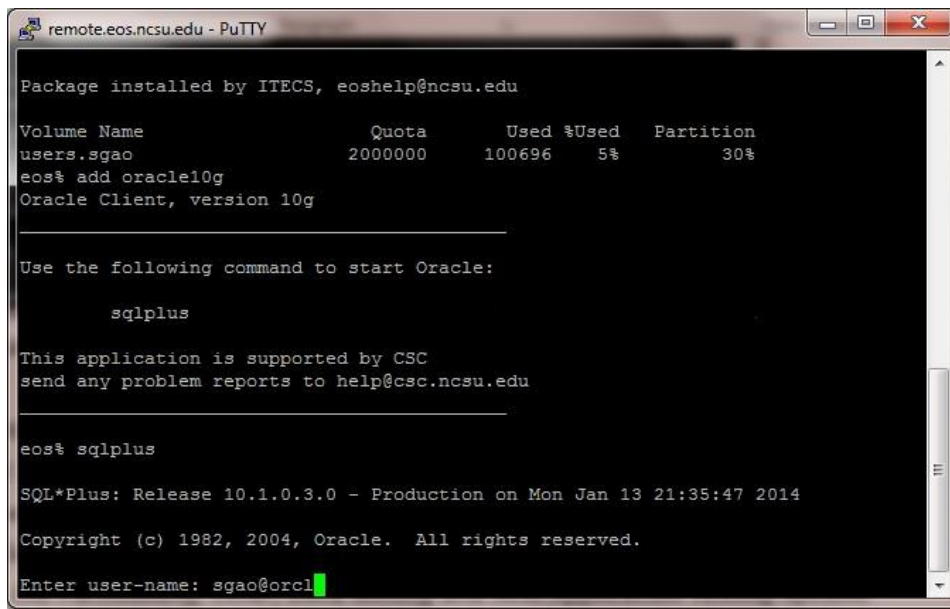
eos% sqlplus

SQL*Plus: Release 10.1.0.3.0 - Production on Mon Jan 13 21:35:47 2014

Copyright (c) 1982, 2004, Oracle. All rights reserved.

Enter user-name: 
```

- Enter username: **UnityID@orcl** (Do not forget to include @orcl)



```
remote.eos.ncsu.edu - PuTTY

Package installed by ITECS, eoshelp@ncsu.edu

Volume Name          Quota      Used %Used  Partition
users.sgao           2000000    100696     5%        30%
eos% add oracle10g
Oracle Client, version 10g

Use the following command to start Oracle:

    sqlplus

This application is supported by CSC
send any problem reports to help@csc.ncsu.edu

eos% sqlplus

SQL*Plus: Release 10.1.0.3.0 - Production on Mon Jan 13 21:35:47 2014

Copyright (c) 1982, 2004, Oracle. All rights reserved.

Enter user-name: sgao@orcl
```

- Enter password: <enter your oracle password> (your passwd will be your **student id including leading zeros**)



```
remote.eos.ncsu.edu - PuTTY

Use the following command to start Oracle:

    sqlplus

This application is supported by CSC
send any problem reports to help@csc.ncsu.edu

eos% sqlplus

SQL*Plus: Release 10.1.0.3.0 - Production on Mon Jan 13 21:35:47 2014

Copyright (c) 1982, 2004, Oracle. All rights reserved.

Enter user-name: sgao@orcl
Enter password:

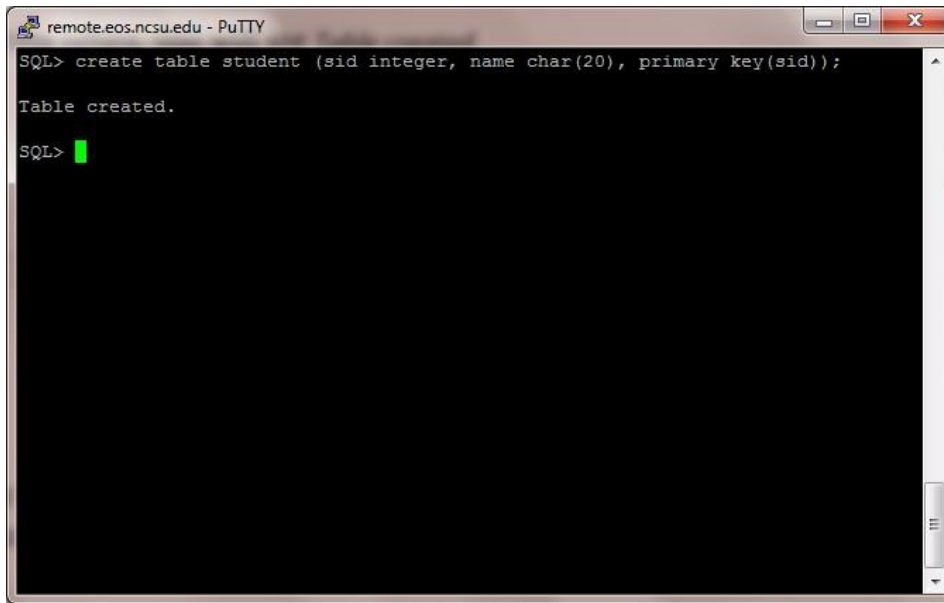
Connected to:
Oracle Database 11g Enterprise Edition Release 11.2.0.1.0 - 64bit Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options

SQL>
```

3. Create a table in Oracle using SQL*Plus

As soon as you see the default SQL*Plus prompt which is 'SQL>', you can type SQL statements.

- To create a student table with sid as the primary key, enter the SQL statement as follows:
create table student (sid integer, name char(20), primary key(sid));

A screenshot of a PuTTY terminal window titled 'remote.eos.ncsu.edu - PuTTY'. The terminal shows an SQL prompt 'SQL>' followed by the command 'create table student (sid integer, name char(20), primary key(sid));'. The output 'Table created.' is displayed on the next line. The prompt 'SQL>' is shown again with a green cursor. The terminal window has standard window controls (minimize, maximize, close) in the top right corner.

After hitting return, you will see *Table created*.

Now you can try to create a course table with cid as the primary key. The relational notation for course table is as follows:

course(cid:char[8], subj:char[5], sem:char[4])

- To view all tables you created, enter
select table_name from user_tables;

Note that when you enter a command incorrectly, SQL*Plus will give you error messages. For example, when you type “**creat** table s (id integer); ”, you will get the error message: SP2-0734 Unknown command beginning command_name ... - rest of line ignored.

You will need to check the syntax of the command you used for the correct options and retype it to get the correct results. More SQL*Plus error messages can be found [here](#).

4. Other Oracle resources

- Logging onto Oracle @ NCSU and configuring your system environment
<http://www.csc.ncsu.edu/techsupport/technotes/oracle.php>
- Oracle10g Release 1 documentation library
http://www.oracle.com/pls/db10g/portal.portal_demo3?selected=1
- Oracle Database SQL Reference
http://docs.oracle.com/cd/B14117_01/server.101/b10759/toc.htm
- Oracle10g JDBC Developer's Guide and Reference
http://docs.oracle.com/cd/B14117_01/java.101/b10979/toc.htm
- SQL*Plus
http://docs.oracle.com/cd/B19306_01/server.102/b14357/ch4.htm#i1039415
- SQL Tutorial
<http://www.mathcs.emory.edu/~cheung/Courses/377/Others/tutorial.pdf>
- Sample JDBC file - firstExample.java (will be uploaded later)