

CSE 180, Winter 2020

Week 1 Lab

Gradiance Accounts

PostgreSQL Access

Running SQL Scripts

Moving files from `unix.ucsc.edu` to your computers

A very simple SQL example

Be Sure to Read ...

... GeneralInformation.pdf file that's on Piazza under Resources → General Resources

- Info about Gradiance, which we'll discuss
- Info about PostgreSQL accounts, which you should have
- Info about moving files between unix.ucsc.edu and your computer, so that you can post it on Canvas
- Sample SQL create, load and drop statements, which are also posted on Piazza in a zip file called BeerScriptsRI.zip that's under Resources → Lab Section Notes

Gradiance

- Short homework assignments
 - Automatically graded
- Create an account : <http://www.gradiance.com/services>
- User ID : your Cruz ID (if possible)
- More info: <http://www.gradiance.com/pub/stud-guide.html>
- Use code **FBCEFD41**
- Please don't use password that you use for anything else, since it's HTTP, not HTTPS
 - If you forget your password, you can get a new password by entering your userid and email.

Canvas

- The primary webportal for UCSC class content.
 - <https://canvas.ucsc.edu>
- Submit lab assignments here.
- Your grades on Lab Assignments and Exams will also be on Canvas.

PostgreSQL

- PostgreSQL is a major open-source relational database management system

- <https://www.postgresql.org/>

- Class PostgreSQL server: `cse180-db.1t.ucsc.edu`

- Login Process

1. Using unix/linux-based terminal:

```
my_computer $ ssh <CruzID>@unix.ucsc.edu
```

2. Using Putty

```
Host Name : unix.ucsc.edu
```

```
Login as : <CruzID>
```

```
Password : <Blue Password>
```

PostgreSQL (cont'd)

3. From unix server to psql server :

```
unix4:~$ psql -h cse180-db.lt.ucsc.edu -U my_psql_username  
my_psql_username-#
```

4. Change password (optional):

```
my_psql_username-# ALTER ROLE username WITH PASSWORD 'newpassword' ;
```

OR

```
my_psql_username-# \password
```

Components of a Database

Schemas

```
CREATE SCHEMA Lab0;
```

Relations

```
CREATE TABLE table_name (  
    column_name_1 TYPE column_constraint,  
    column_name_2 TYPE column_constraint  
);
```

example_create.sql

example_create.sql

```
CREATE TABLE products (  
    productID INT,  
    name VARCHAR(80) ,  
    price DECIMAL(10,2) ,  
    retailPrice DECIMAL(10,2)  
);
```

example_create.sql

```
CREATE TABLE products (  
  
    productID INT,  
  
    name VARCHAR(80) ,  
  
    price DECIMAL(10,2) ,  
  
    retailPrice DECIMAL(10,2)  
  
);
```

[Syntax Lesson:]

DECIMAL(precision, scale)

precision := the total number of digits*

scale := the number of digits in the fraction part*

<u>Price</u>	<u>Data Type</u>
\$12.99	DECIMAL(4,2), or DECIMAL(N,2) w/ N>=4
\$5.99	DECIMAL(3,2), or DECIMAL(N,2) w/ N>=3
\$199.99	DECIMAL(5,2), or DECIMAL(N,2) w/ N>=5
\$3.998	DECIMAL(4,2), or DECIMAL(N,2) w/ N>=4
\$1,499,999.98	DECIMAL(9,2), or DECIMAL(N,2) w/ N>=9

*<http://www.postgresqltutorial.com/postgresql-numeric/>

Loading Data into Tables :

1. From a CSV File :

COPY table_name FROM 'path_to_csv_file.csv' DELIMITERS ',' CSV;

2. To load data using stdin :

COPY products FROM stdin USING DELIMITERS '|';

1419|American Greetings CreaCard Gold V4.0|21.49|25.24

1424|Barbie(R) Nail Designer(TM)|20.74|25.99

1427|Panzer Commander|21.99|30.24

1431|Riven: The Sequel to Myst|31.99|40.24

\\.

Getting Files from the Unix Timeshare

1. Copy and paste. (hint: does not scale)

2. SCP/SFTP

```
unix4:~$ ls <some_path>/lab1/  
my_cool_soln.sql  
unix4:~$
```

```
my_computer $ scp <ucsc_username>@unix.ucsc.edu:<some_path>/lab1/my_cool_soln.sql  
<some_local_path>
```

Example:

```
[ ~ ]$ scp shel@unix.ucsc.edu:~/cmps180_f19/lab1/lab1_soln.sql /cse180/lab1
```

Getting Files from the Unix Timeshare

3. For the GUI people:

FileZilla: <https://filezilla-project.org>

Host : **unix.ucsc.edu**

UserName : **<CruzID**

Password : **<Blue Password**

Port : **22**

Drag & Drop the Required Files