CS166 Section 22 Alejandro Sherman

Lab 2 Report Images:

First I logged into my designated lab machine - wch 133-38.
Then I followed the steps in the getting started guide.

```
asher011@wch133-38's password:
Last login: Wed Jun  5 11:02:45 2019

READ THIS!!!
============

* FILES ON THIS COMPUTER ARE DELETED WHEN YOU LOG OUT!

 > The "home directory" on this computer is in RAM.  It is EXTREMELY fast, but
   it is NOT your centrally stored CS home directory and it disappears when you
   log out!  Copy out any files you want to keep before you log out!!!

* HOW TO ACCESS YOUR CS HOME DIRECTORY AND FILES

 > IF you need to access your CS home directory and files (check with your TA
   for course-specific instructions), you can do so by connecting to server
   bolt.cs.ucr.edu using SSH for a command-line login session or SCP if you
   just need to copy files.

~
asher011@wch133-38 $ ls
VirtualBox VMs
~
asher011@wch133-38 $  mkdir /tmp/$LOGNAME
~
asher011@wch133-38 $ cd /tmp/$LOGNAME
/tmp/asher011
asher011@wch133-38 $ ls
/tmp/asher011
asher011@wch133-38 $ pwd
```

```
asher011@wch133-38 $ mkdir test
/tmp/asher011
asher011@wch133-38 $ ls
test
/tmp/asher011
asher011@wch133-38 $ mkdir test/data
/tmp/asher011
asher011@wch133-38 $ ls
test
/tmp/asher011
asher011@wch133-38 $ mkdir sockets
/tmp/asher011
asher011@wch133-38 $ ls
sockets  test
/tmp/asher011
asher011@wch133-38 $ export PGDATA=/tmp/$LOGNAME/test/data
/tmp/asher011
asher011@wch133-38 $ initdb
initdb: invalid locale name ""
initdb: invalid locale name ""
initdb: invalid locale name ""
initdb: invalid locale name ""
initdb: invalid locale name ""
initdb: invalid locale name ""
The files belonging to this database system will be owned by user "asher011".
This user must also own the server process.

The database cluster will be initialized with locale "C".
```

```
The default database encoding has accordingly been set to "SQL_ASCII".
The default text search configuration will be set to "english".

fixing permissions on existing directory /tmp/asher011/test/data ... ok
creating subdirectories ... ok
selecting default max_connections ... 100
selecting default shared_buffers ... 32MB
creating configuration files ... ok
creating template1 database in /tmp/asher011/test/data/base/1 ... ok
initializing pg_authid ... ok
initializing dependencies ... ok
creating system views ... ok
loading system objects' descriptions ... ok
creating collations ... locale: Cannot set LC_MESSAGES to default locale: No such file or directory
ok
creating conversions ... ok
creating dictionaries ... ok
setting privileges on built-in objects ... ok
creating information schema ... ok
loading PL/pgSQL server-side language ... ok
vacuuming database template1 ... ok
copying template1 to template0 ... ok
copying template1 to postgres ... ok

WARNING: enabling "trust" authentication for local connections
You can change this by editing pg_hba.conf or using the option -A, or
--auth-local and --auth-host, the next time you run initdb.
```

```
WARNING: enabling "trust" authentication for local connections
You can change this by editing pg_hba.conf or using the option -A, or
--auth-local and --auth-host, the next time you run initdb.

Success. You can now start the database server using:

    postgres -D /tmp/asher011/test/data
or
    pg_ctl -D /tmp/asher011/test/data -l logfile start

/tmp/asher011
asher011@wch133-38 $
```

```
/tmp/asher011
asher011@wch133-38 $ pg_ctl -o "-c unix_socket_directories=/tmp/$LOGNAME/sockets" -D $PGDATA -l /tmp/$LOGNAME/logfile
start
server starting
/tmp/asher011
asher011@wch133-38 $ createdb -h /tmp/$LOGNAME/sockets mydata
/tmp/asher011
asher011@wch133-38 $ psql -h /tmp/$LOGNAME/sockets mydata
psql (9.2.24)
Type "help" for help.

mydata=# my
```

```
mydata=# SELECT datname FROM pg_database;
  datname
-----------
 template1
 template0
 postgres
 mydata
(4 rows)

mydata=# SELECT table_name
mydata-# FROM information_schema.tables
mydata-# WHERE table_schema='public';
 table_name
------------
(0 rows)

mydata=#
```

```
(0 rows)

mydata=# \q
/tmp/asher011
asher011@wch133-38 $ pg_ctl -o "c unix_socket_directories=/tmp/$LOGNAME/sockets" -D /tmp/$LOGNAME/test/data stop
waiting for server to shut down.... done
server stopped
/tmp/asher011
asher011@wch133-38 $
```

End quick start guide.

Begin lab 2:
I did my lab 2 work directly in the tmp folder.

```
startPostgreSQL.sh
stopPostgreDB.sh
systemd-private-9dede542e5524ae7a7fb8fe4d874f852-bolt.service-iaibPA
systemd-private-9dede542e5524ae7a7fb8fe4d874f852-colord.service-qcYH0s
systemd-private-9dede542e5524ae7a7fb8fe4d874f852-cups.service-ffBCYF
systemd-private-9dede542e5524ae7a7fb8fe4d874f852-rtkit-daemon.service-r0GXcp
/tmp
asher011@wch133-38 $ source ./startPostgreSQL.sh
/tmp/asher011
initdb: invalid locale name ""
initdb: invalid locale name ""
initdb: invalid locale name ""
initdb: invalid locale name ""
initdb: invalid locale name ""
initdb: invalid locale name ""
The files belonging to this database system will be owned by user "asher011".
This user must also own the server process.

The database cluster will be initialized with locale "C".
The default database encoding has accordingly been set to "SQL_ASCII".
The default text search configuration will be set to "english".

fixing permissions on existing directory /tmp/asher011/myDB/data ... ok
creating subdirectories ... ok
selecting default max_connections ... 100
selecting default shared_buffers ... 32MB
creating configuration files ... ok
creating template1 database in /tmp/asher011/myDB/data/base/1 ... ok
```

```
initializing pg_authid ... ok
initializing dependencies ... ok
creating system views ... ok
loading system objects' descriptions ... ok
creating collations ... locale: Cannot set LC_MESSAGES to default locale: No such file or directory
ok
creating conversions ... ok
creating dictionaries ... ok
setting privileges on built-in objects ... ok
creating information schema ... ok
loading PL/pgSQL server-side language ... ok
vacuuming database template1 ... ok
copying template1 to template0 ... ok
copying template1 to postgres ... ok

WARNING: enabling "trust" authentication for local connections
You can change this by editing pg_hba.conf or using the option -A, or
--auth-local and --auth-host, the next time you run initdb.

Success. You can now start the database server using:

    postgres -D /tmp/asher011/myDB/data
or
    pg_ctl -D /tmp/asher011/myDB/data -l logfile start

server starting
/tmp
asher011@wch133-38 $
```

```
asher011@wch133-38 $ pg_ctl status
pg_ctl: server is running (PID: 4579)
/usr/bin/postgres "-D" "/tmp/asher011/myDB/data" "-c" "unix_socket_directories=/tmp/asher011/myDB/sockets" "-p" "8192"
/tmp
asher011@wch133-38 $
```

During this step one, I began by looking into what the commands in this start script is doing. Here I see that this script is performing the things we did in the quick start guide.

Step 2

```
asher011@wch133-38 $ source ./createPostgreDB.sh
creating db named ... asher011_DB
pg_ctl: server is running (PID: 4579)
/usr/bin/postgres "-D" "/tmp/asher011/myDB/data" "-c" "unix_socket_directories=/tmp/asher011/myDB/sockets" "-p" "8192"
/tmp
asher011@wch133-38 $
```

here the database is called asher011_DB

```
/tmp
asher011@wch133-38 $ psql -h localhost -p $PGPORT $USER"_DB"
psql (9.2.24)
Type "help" for help.

asher011_DB=# CREATE TABLE Students (SID numeric (9, 0), Name text, Grade float);
CREATE TABLE
asher011_DB=# \dt
          List of relations
 Schema |   Name   | Type  |  Owner
--------+----------+-------+----------
 public | students | table | asher011
(1 row)

asher011_DB=# INSERT INTO Students VALUES (860507041, 'John Anderson', 3.67);
INSERT 0 1
asher011_DB=# INSERT INTO Students VALUES (860309067, 'Tom Kamber', 3.12);
INSERT 0 1
asher011_DB=# SELECT SID, Name, Grade FROM Students WHERE SID = 860507041;
    sid    |      name       | grade
-----------+-----------------+-------
 860507041 | John Anderson |  3.67
(1 row)

asher011_DB=# INSERT INTO Students VALUES (860704039, 'George Haggerty', 3.67);
INSERT 0 1
asher011_DB=# SELECT SID, Name, Grade FROM Students WHERE Grade = 3.67;
    sid    |       name        | grade
```

```
asher011_DB=# SELECT SID, Name, Grade FROM Students WHERE Grade = 3.67;
    sid    |      name       | grade
-----------+-----------------+-------
 860507041 | John Anderson   |  3.67
 860704039 | George Haggerty |  3.67
(2 rows)

asher011_DB=# \q
/tmp
asher011@wch133-38 $
```

My script called asher011lab2.sql

```
DROP TABLE IF EXISTS Students;
CREATE TABLE Students (SID numeric(9,0), Name text, Grade float);
INSERT INTO Students VALUES (860507041, 'John Anderson', 3.67);
INSERT INTO Students VALUES (860309067, 'Tom Kamber', 3.12);
SELECT SID, Name, Grade FROM Students WHERE SID = 860507041;
INSERT INTO Students VALUES (860704039, 'George Haggerty', 3.67);
SELECT SID, Name, Grade FROM Students WHERE Grade = 3.67;
```

```
/tmp
asher011@wch133-38 $ psql -h localhost -p $PGPORT $USER"_DB" < asher011lab2.sql
DROP TABLE
CREATE TABLE
INSERT 0 1
INSERT 0 1
    sid    |     name      | grade
-----------+---------------+-------
 860507041 | John Anderson |  3.67
(1 row)

INSERT 0 1
    sid    |      name       | grade
-----------+-----------------+-------
 860507041 | John Anderson   |  3.67
 860704039 | George Haggerty |  3.67
(2 rows)

/tmp
asher011@wch133-38 $
```

```
/tmp
asher011@wch133-38 $ source ./stopPostgreDB.sh
waiting for server to shut down.... done
server stopped
/tmp
asher011@wch133-38 $
```