

Part II: Using PostgreSQL

1. SSH to your VM on our servers using the username and hostname `<aid>@<aid>-db.qatar.cmu.local` where *aid* is your andrew ID. Enter your password when prompted.
2. You can either run a PostgreSQL Client from the command-line or use a web-based PostgreSQL Client such as phpPgAdmin (<https://<aid>@<aid>-db.qatar.cmu.local>) and Shell In A Box (<https://<aid>-db.qatar.cmu.local:12320>).

We will continue the instructions on how to create and manipulate databases from the command-line.

3. Create a new empty database *Recitation 3*:

```
createdb -U postgres -h <aid>-db.qatar.cmu.local Recitation3 ;
```

4. Connect to the database *Recitation 3*:

```
psql -U postgres -h <aid>-db.qatar.cmu.local Recitation3 ;
```

5. Under the database, create four tables namely: *Student*, *Faculty*, *Class*, and *Enrolled*. You can either enter the SQL CREATE statements via the command-line or put them all in a file (aka a SQL script). For convenience, we have provided you with the file containing the SQL CREATE statements under `'/home/shared/Ex5.1/CreateTableScript-Ex5.1.txt'`. You can either copy each CREATE statement to the command prompt and hit enter or instruct Postgres to read all the CREATE statements from the file:

```
\i '/home/shared/Ex5.1/CreateTableScript-Ex5.1.txt' ;
```

6. To check that the tables were created, use phpPgAdmin or type the command:

```
\dt ;
```

7. Populate the tables by inserting tuples. Again, you may enter your SQL INSERT statements via the command-line. However, we shall show you how to import existing data into the tables. Under `'/home/shared/Ex5.1'`, there are four CSV (Comma Separated Values) files namely: *student.csv*, *faculty.csv*, *class.csv*, and *enrolled.csv*, each of which should be imported into the respective table. To do so, use the *copy* command as exemplified below:

```
copy <table_name> from '<filename>' with CSV
copy student from '/home/shared/ Ex5.1/Student.csv' with CSV;
copy faculty from '/home/shared/ Ex5.1/Faculty.csv' with CSV;
copy class from '/home/shared/ Ex5.1/Class.csv' with CSV;
copy enrolled from '/home/shared/ Ex5.1/Enrolled.csv' with CSV;
```

8. Write your first query ever!

```
SELECT * FROM student
```

9. Enter the queries from PART I and see the result sets.

10. Close the connection to the database:

```
\q;
```