Lab 3 Handout

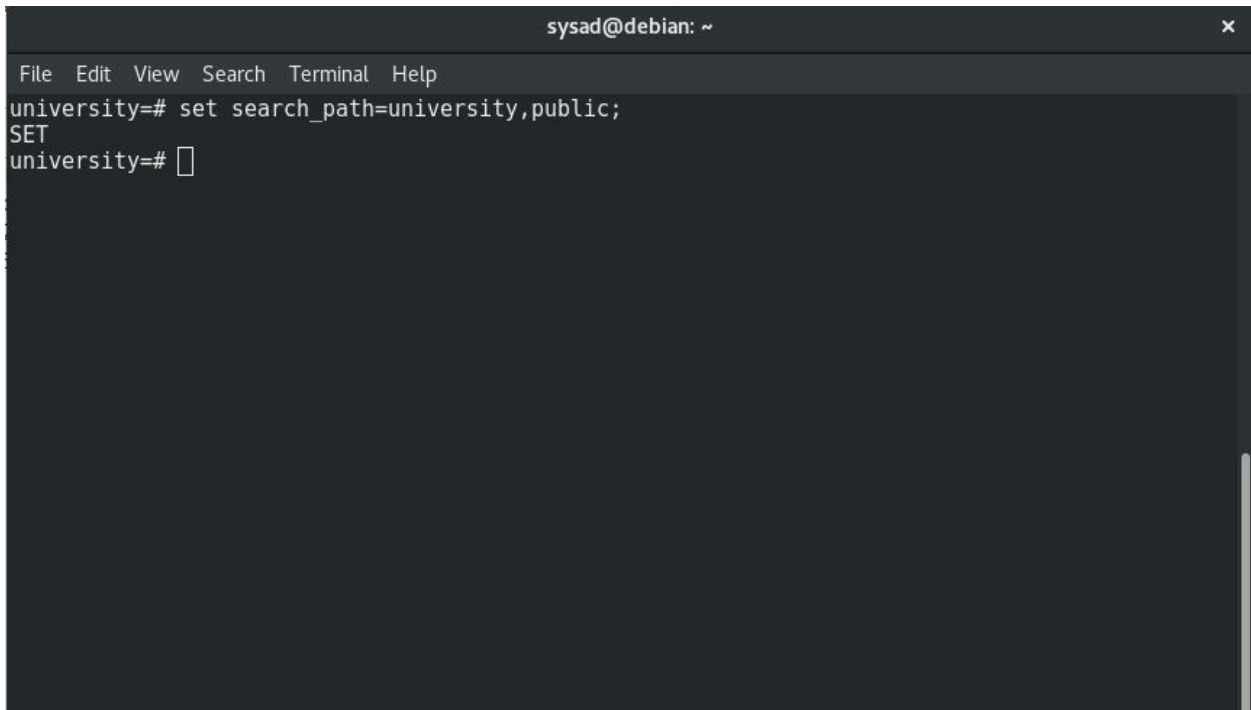1. **Create University database using the create database statement (using psql also or pgAdmin)**

```
                              sysad@debian: ~                              ✕

File   Edit   View   Search   Terminal   Help
postgres=# CREATE DATABASE university;
CREATE DATABASE
postgres=# \l
 Studentdb   | User1     | UTF8    | en_IN   | en_IN  |
 cs387       | postgres  | UTF8    | en_IN   | en_IN  | =Tc/postgres        +
             |           |         |         |        | postgres=CTc/postgres+
             |           |         |         |        | dbuser=CTc/postgres

 postgres    | postgres  | UTF8    | en_IN   | en_IN  |
 studentdb   | postgres  | UTF8    | en_IN   | en_IN  |
 template0   | postgres  | UTF8    | en_IN   | en_IN  | =c/postgres         +
             |           |         |         |        | postgres=CTc/postgres
 template1   | postgres  | UTF8    | en_IN   | en_IN  | =c/postgres         +
             |           |         |         |        | postgres=CTc/postgres

 university  | postgres  | UTF8    | en_IN   | en_IN  |

postgres=#
```
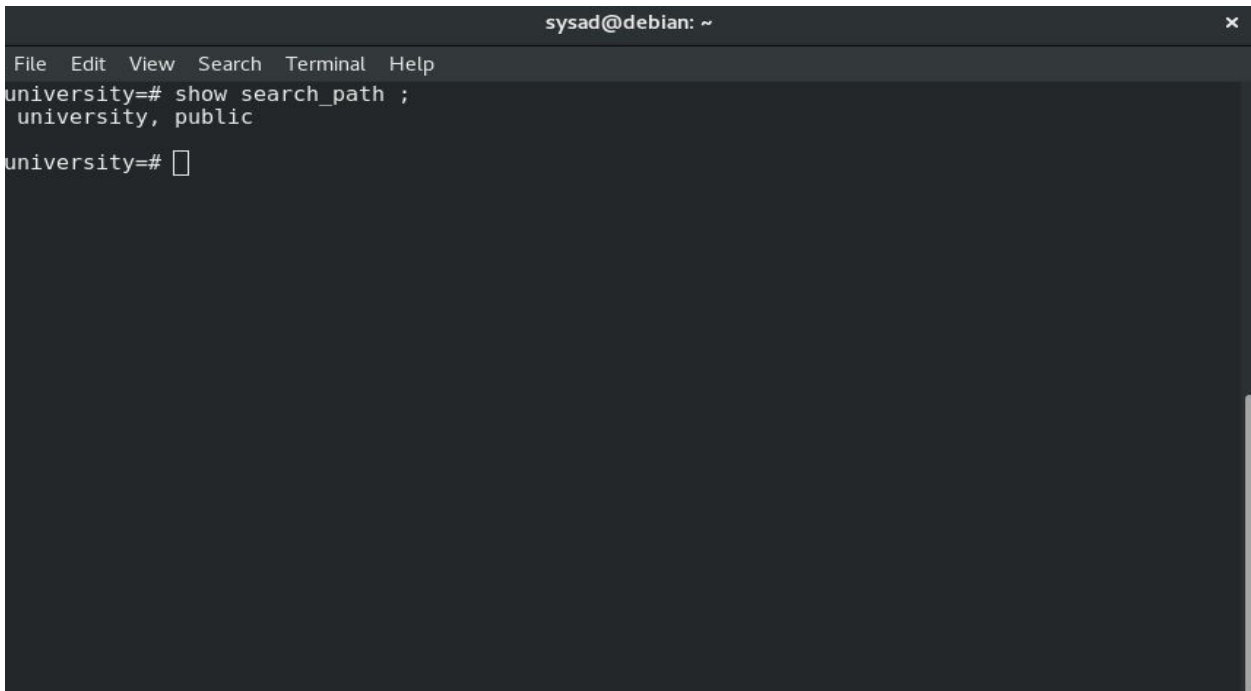
2. **Connect to this database using \c command in psql**

```
                              sysad@debian: ~                              ✕

File   Edit   View   Search   Terminal   Help
postgres=# \c university
You are now connected to database "university" as user "postgres".
university=#
```

3. Set search path to university schema as in Set sesrch_path to university, public.

```
                                  sysad@debian: ~                              ×
 File   Edit   View   Search   Terminal   Help
university=# set search_path=university,public;
SET
university=# 
```

Check that you are currently in this by executing select current_schema statement

```
                                  sysad@debian: ~                              ×
 File   Edit   View   Search   Terminal   Help
university=# show search_path ;
 university, public

university=# 
```

4. The above will not require you to qualify your table names with schema, since postgresql will look for the tables referred by you in the schemas mentioned in your search path

5. Take DDL_drop.sql file from moodle and also the SmallRelationsInsertFile.sql file and execute them using \I filename
These will create your tables in university database and also load some data in them.

```
                              sysad@debian: ~                              ×

File  Edit  View  Search  Terminal  Help
university=# \i /home/sysad/POSTGRSQL/DDL_drop.sql
DROP TABLE
DROP TABLE
DROP TABLE
DROP TABLE
DROP TABLE
DROP TABLE
DROP TABLE
DROP TABLE
DROP TABLE
DROP TABLE
DROP TABLE
CREATE TABLE
CREATE TABLE
CREATE TABLE
CREATE TABLE
CREATE TABLE
CREATE TABLE
CREATE TABLE
CREATE TABLE
CREATE TABLE
CREATE TABLE
CREATE TABLE
university=#
```

```
                              sysad@debian: ~                              ×

File  Edit  View  Search  Terminal  Help
university=# \i /home/sysad/POSTGRSQL/smallRelationsInsertFile.sql
DELETE 0
DELETE 0
DELETE 0
DELETE 0
DELETE 0
DELETE 0
DELETE 0
DELETE 0
DELETE 0
DELETE 0
DELETE 0
INSERT 0 1
INSERT 0 1
INSERT 0 1
INSERT 0 1
INSERT 0 1
INSERT 0 1
INSERT 0 1
INSERT 0 1
INSERT 0 1
INSERT 0 1
INSERT 0 1
INSERT 0 1
```

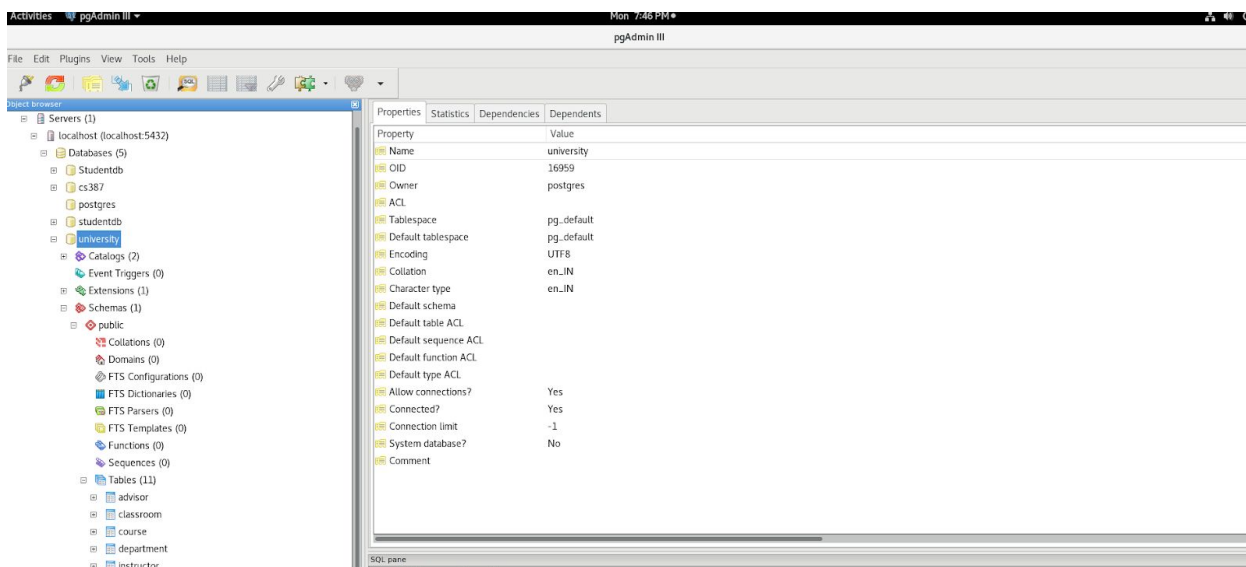**6. Become familiar with data, run select * on various tables**

```
                                    sysad@debian: ~                              ×

 File  Edit  View  Search  Terminal  Help

university=# \d
            List of relations
 Schema |    Name     | Type  |  Owner
--------+-------------+-------+----------
 public | advisor     | table | postgres
 public | classroom   | table | postgres
 public | course      | table | postgres
 public | department  | table | postgres
 public | instructor  | table | postgres
 public | prereq      | table | postgres
 public | section     | table | postgres
 public | student     | table | postgres
 public | takes       | table | postgres
 public | teaches     | table | postgres
 public | time_slot   | table | postgres
(11 rows)

university=# ▯
```

```
                                    sysad@debian: ~                              ×

 File  Edit  View  Search  Terminal  Help



university=# select * from student;
  id   |  name    | dept_name  | tot_cred
-------+----------+------------+----------
 00128 | Zhang    | Comp. Sci. |      102
 12345 | Shankar  | Comp. Sci. |       32
 19991 | Brandt   | History    |       80
 23121 | Chavez   | Finance    |      110
 44553 | Peltier  | Physics    |       56
 45678 | Levy     | Physics    |       46
 54321 | Williams | Comp. Sci. |       54
 55739 | Sanchez  | Music      |       38
 70557 | Snow     | Physics    |        0
 76543 | Brown    | Comp. Sci. |       58
 76653 | Aoi      | Elec. Eng. |       60
 98765 | Bourikas | Elec. Eng. |       98
 98988 | Tanaka   | Biology    |      120
(13 rows)

university=# ▯
```
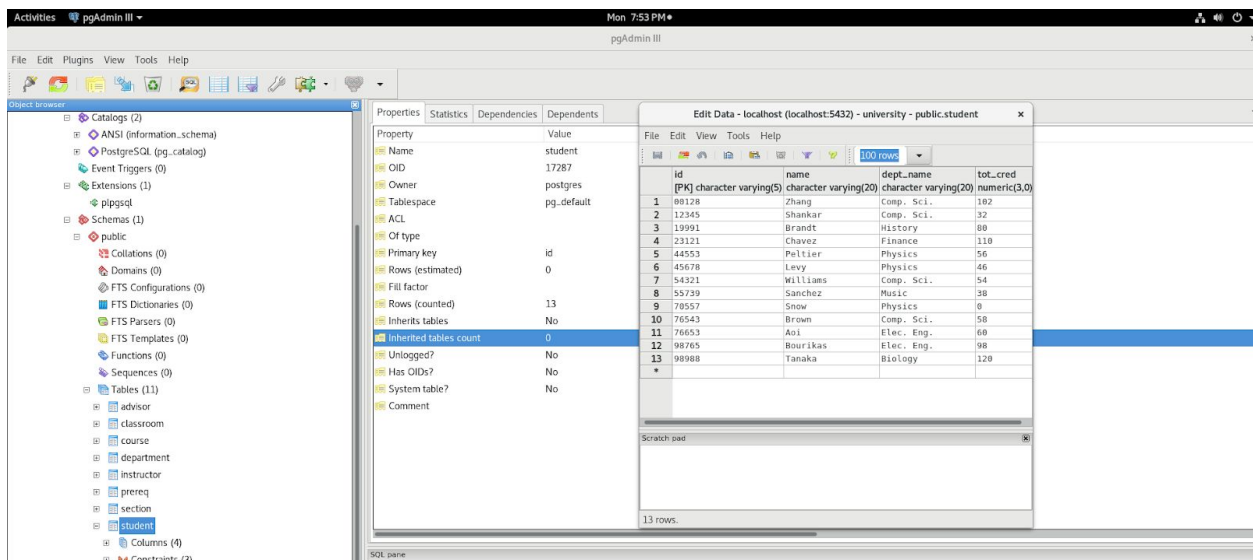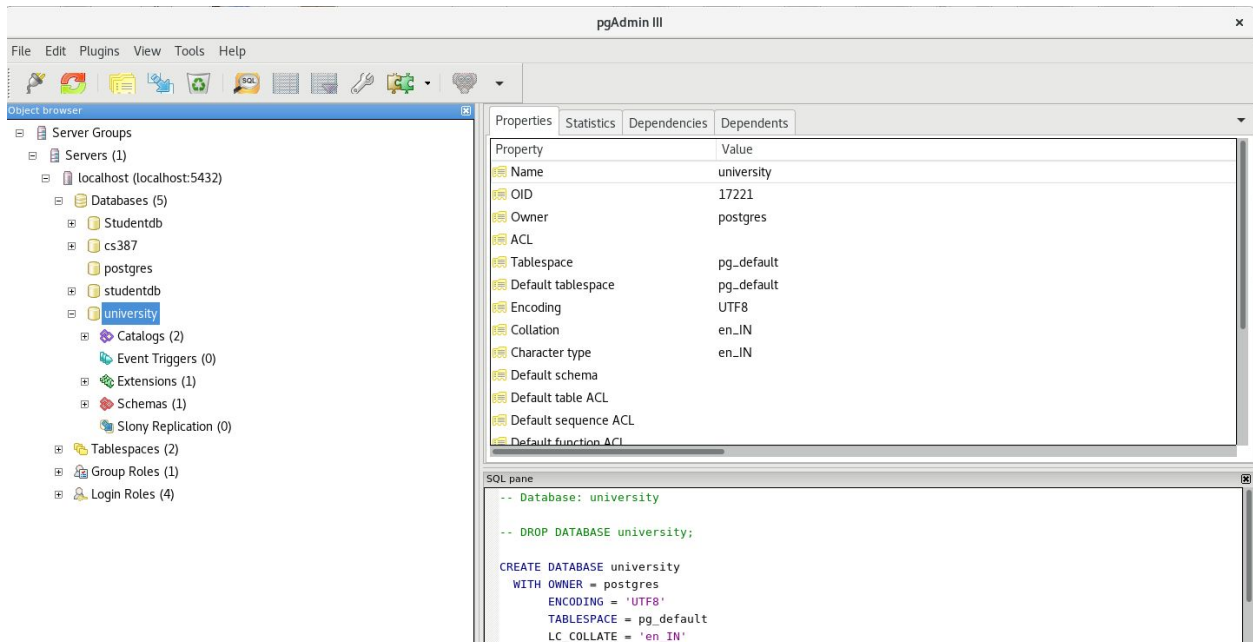
7. You will have pgAdmin also installed when you installed postgresql. Start pgAdmin, connect to localhost DB, see all tables and data in them.

8. You may use pgAdmin to drop tables that we created above, and re-create the tables again by running those same .sql files in pgAdmin in its query window.

pgAdmin III

File   Edit   Plugins   View   Tools   Help

Object browser

- ☐ 🔷 Catalogs (2)
  - ☐ 🔷 ANSI (information_schema)
  - ☐ 🔷 PostgreSQL (pg_catalog)
  - 🔷 Event Triggers (0)
- ☐ 🔷 Extensions (1)
  - 🔷 plpgsql
- ☐ 🔷 Schemas (1)
  - ☐ 🔷 public
    - 🔷 Collations (0)
    - 🔷 Domains (0)
    - 🔷 FTS Configurations (0)
    - 🔷 FTS Dictionaries (0)
    - 🔷 FTS Parsers (0)
    - 🔷 FTS Templates (0)
    - 🔷 Functions (0)
    - 🔷 Sequences (0)
    - ☐ 🔷 Tables (11)
      - ☐ advisor
      - ☐ classroom
      - ☐ course
      - ☐ department
      - ☐ instructor
      - ☐ prereq
      - ☐ section
      - ☐ student
        - ☐ Columns (4)

Properties | Statistics | Dependencies | Dependents

Property	Value
Name	student
OID	17287
Owner	postgres
Tablespace	pg_default
ACL	
Of type	
Primary key	id
Rows (estimated)	0
Fill factor	
Rows (counted)	13
Inherits tables	No
Inherited tables count	0
Unlogged?	No
Has OIDs?	No
System table?	No
Comment	

Query - university on postgres@localhost:5432 *   ✕

File   Edit   Query   Favourites   Macros   View   Help

postgres@localhost:5432 ▾

SQL Editor | Graphical Query Builder

Previous queries   Delete   Delete All

```
SELECT
    *
FROM
    public.student;
```

Scratch pad

select * from public.student;

Output pane

Data Output | Explain | Messages | History

	id character varying(5)	name character varying(20)	dept_name character varying(20)	tot_cred numeric(3,0)
1	00128	Zhang	Comp. Sci.	102
2	12345	Shankar	Comp. Sci.	32
3	19991	Brandt	History	80
4	23121	Chavez	Finance	110
5	44553	Peltier	Physics	56
6	45678	Levy	Physics	46
7	54321	Williams	Comp. Sci.	54
8	55739	Sanchez	Music	38
9	70557	Snow	Physics	0
10	76543	Brown	Comp. Sci.	58
11	76653	Aoi	Elec. Eng.	60
12	98765	Bourikas	Elec. Eng.	98

SQL pane