BT5110 Data Management and Warehousing

Tutorial 0 Special: Foundamental `psql` Operations

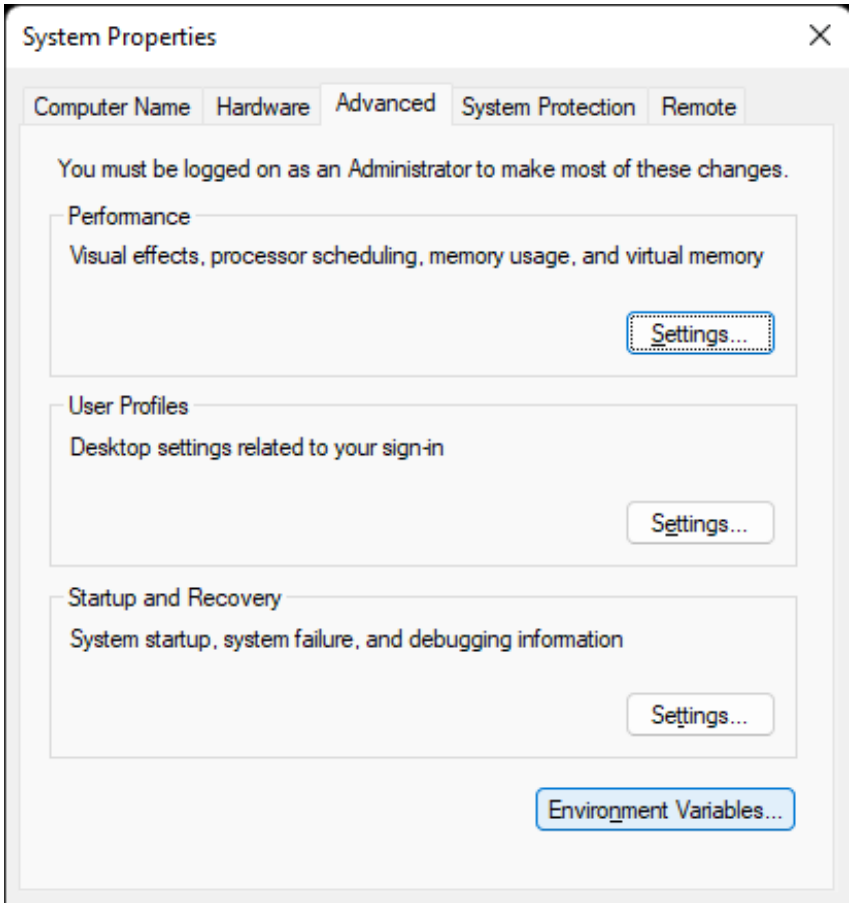
Mark Meng Huasong

School of Computing
National University of Singapore

Aug 2021

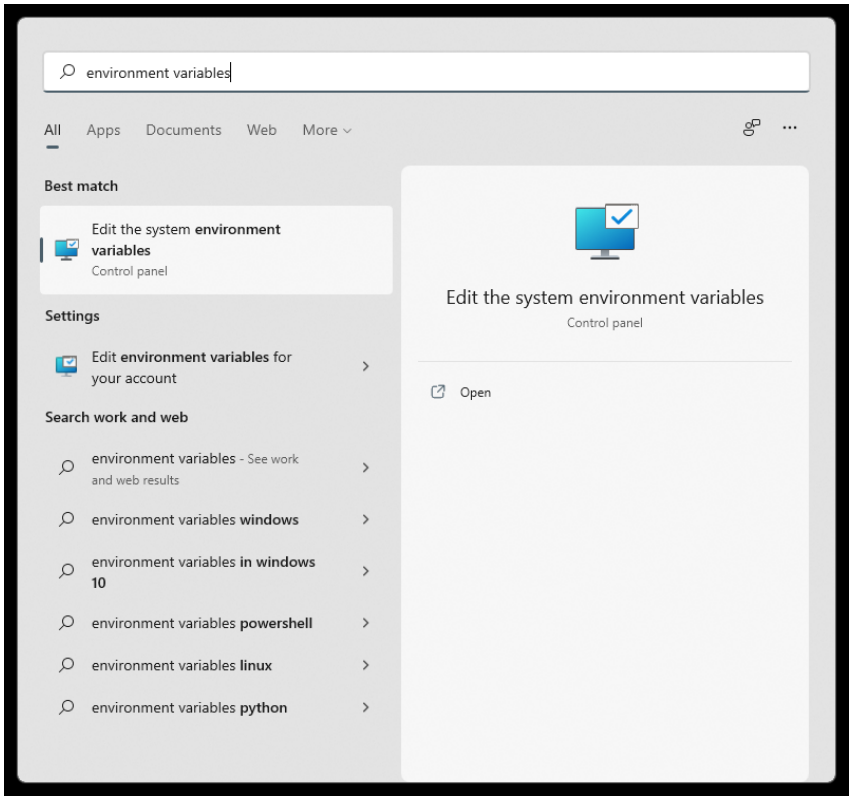
Configuration on Windows PC (8/10/11)

(1-a) Right click my PC, click "Properties".
Go to "Advanced" tab, click the "Environment Variables" button.



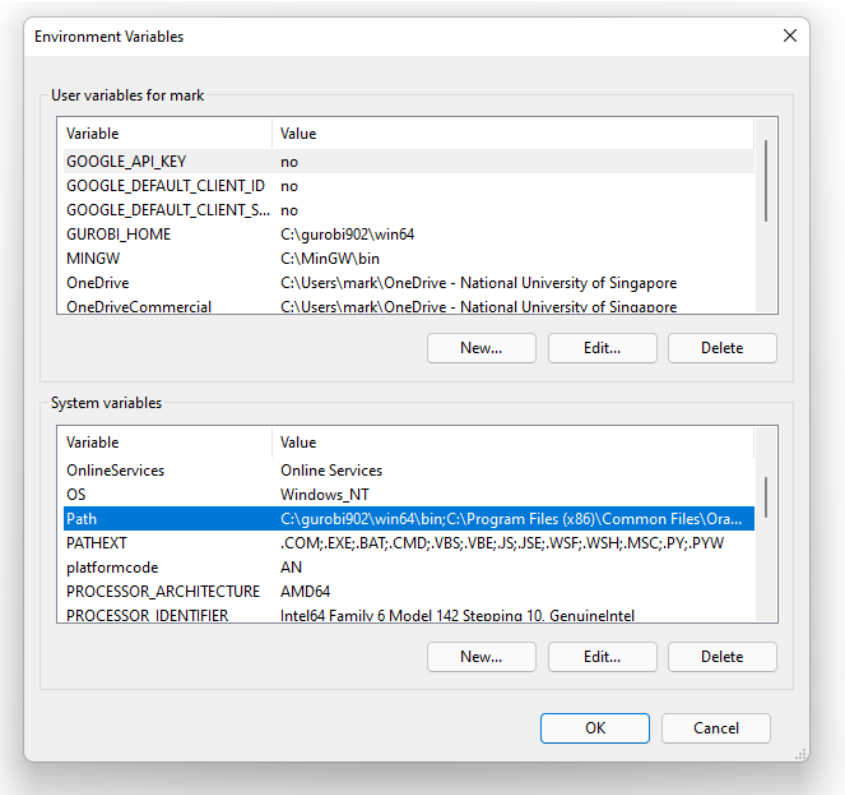
Configuration on Windows PC

(1-b) Alternatively, you may also click "start" and type keyword to search, like the figure below:



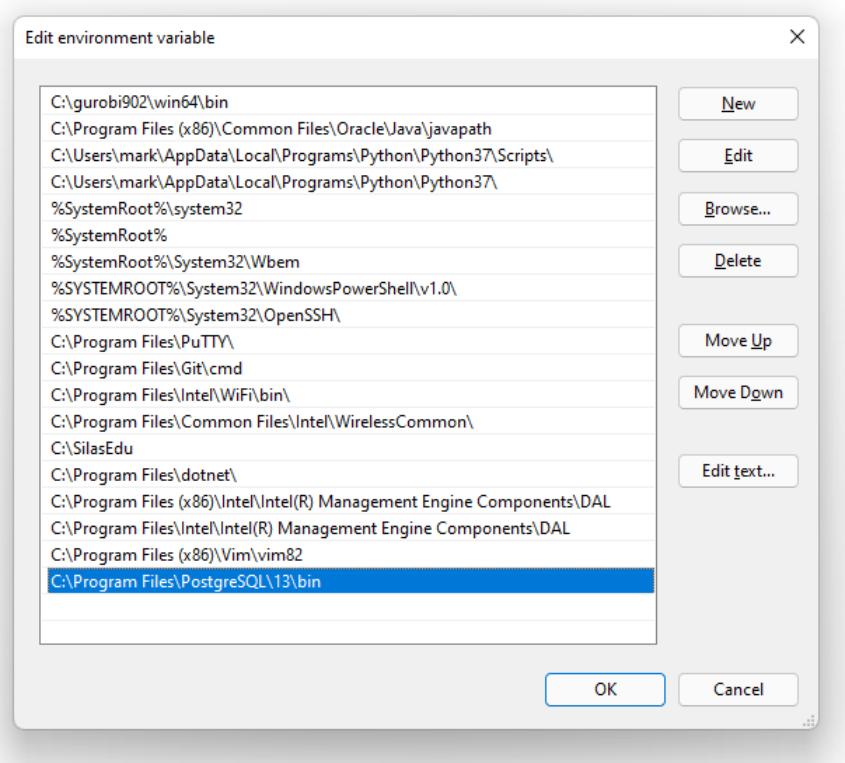
Configuration on Windows PC

(2) Find the "Path" in system variables.



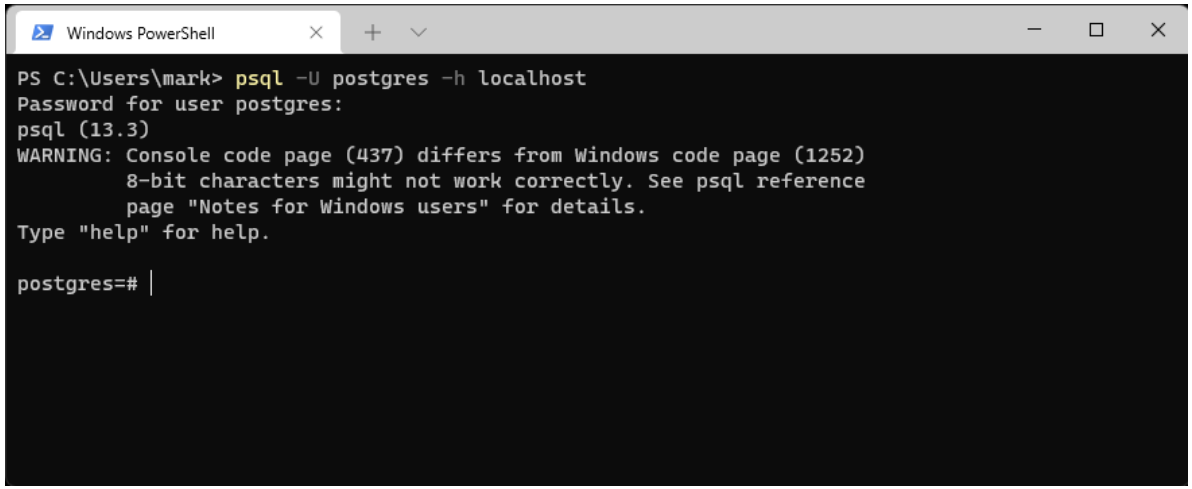
Configuration on Windows PC

(3) Add your PostgreSQL 13 installation path (typically `C:\\Program Files\PostgreSQL\13\bin`).



Connect to psql server

Open "Command Line"/"Windows Terminal", and type in the command below to connect PostgreSQL.

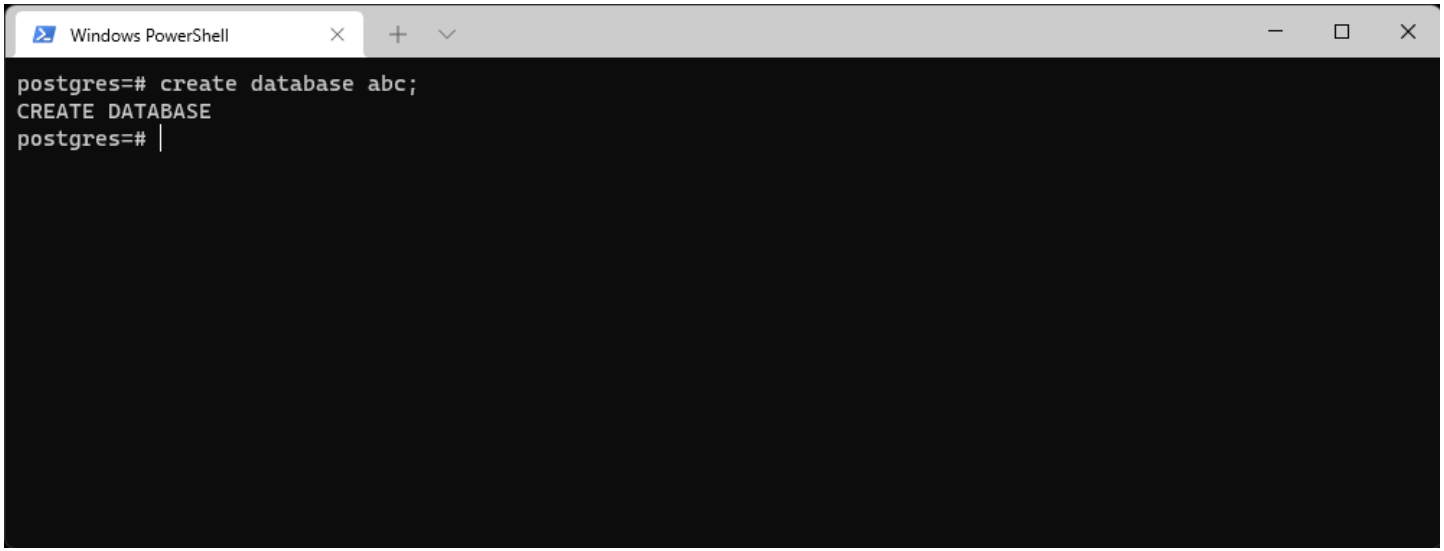


Caution

Don't just enter "`psql`" as it assumes you are connecting with your Windows login account (e.g., **`mark`** in this case). However, in a fresh installed PostgreSQL, there is no such user but only "**`postgres`**".

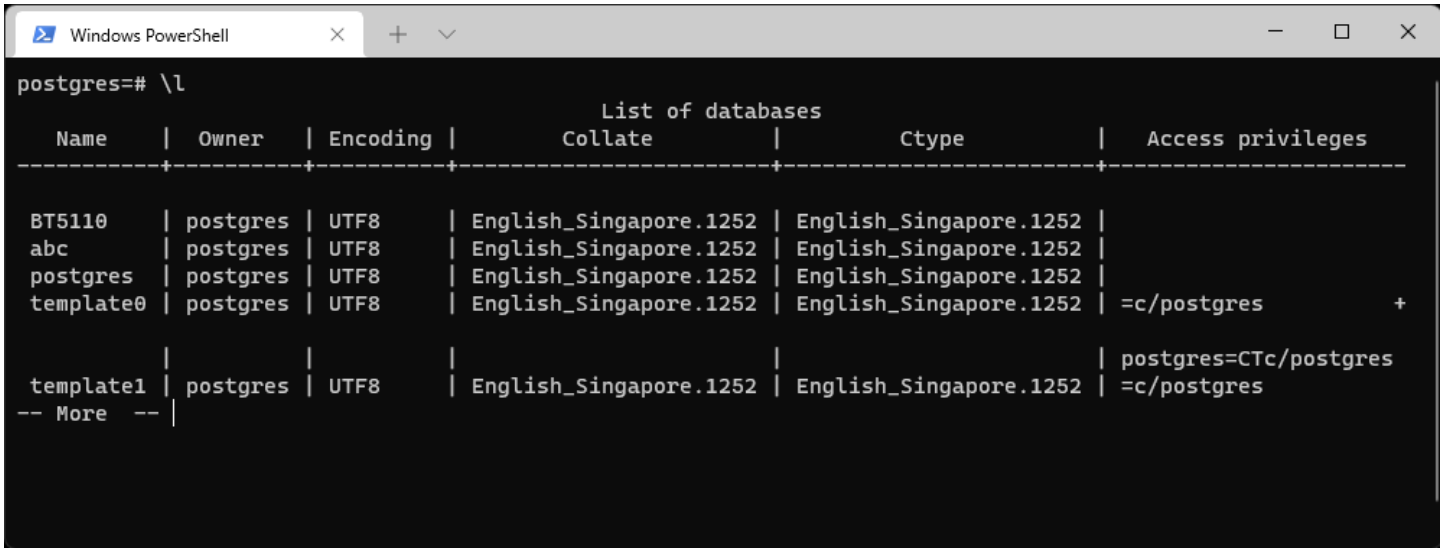
Create a new database

Enter "`create database abc;`" to **create** a database named "abc".



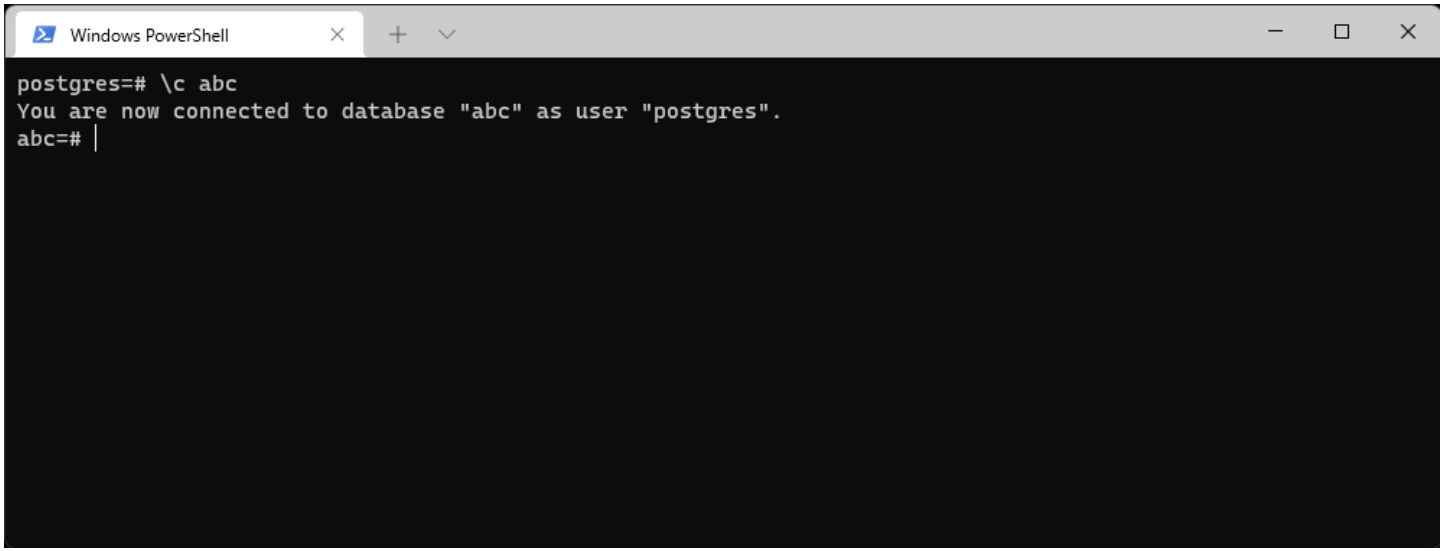
Browse all databases

Enter "`\l`" to **list** all databases.



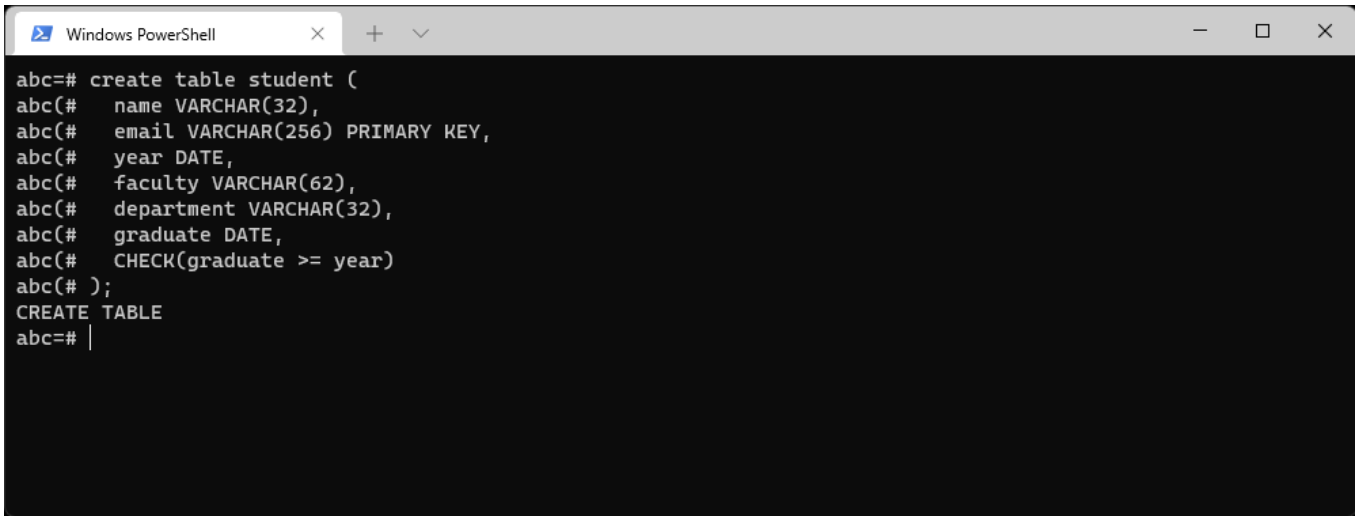
Connect to a database

Enter "\c abc" to **connect** with the database "abc".



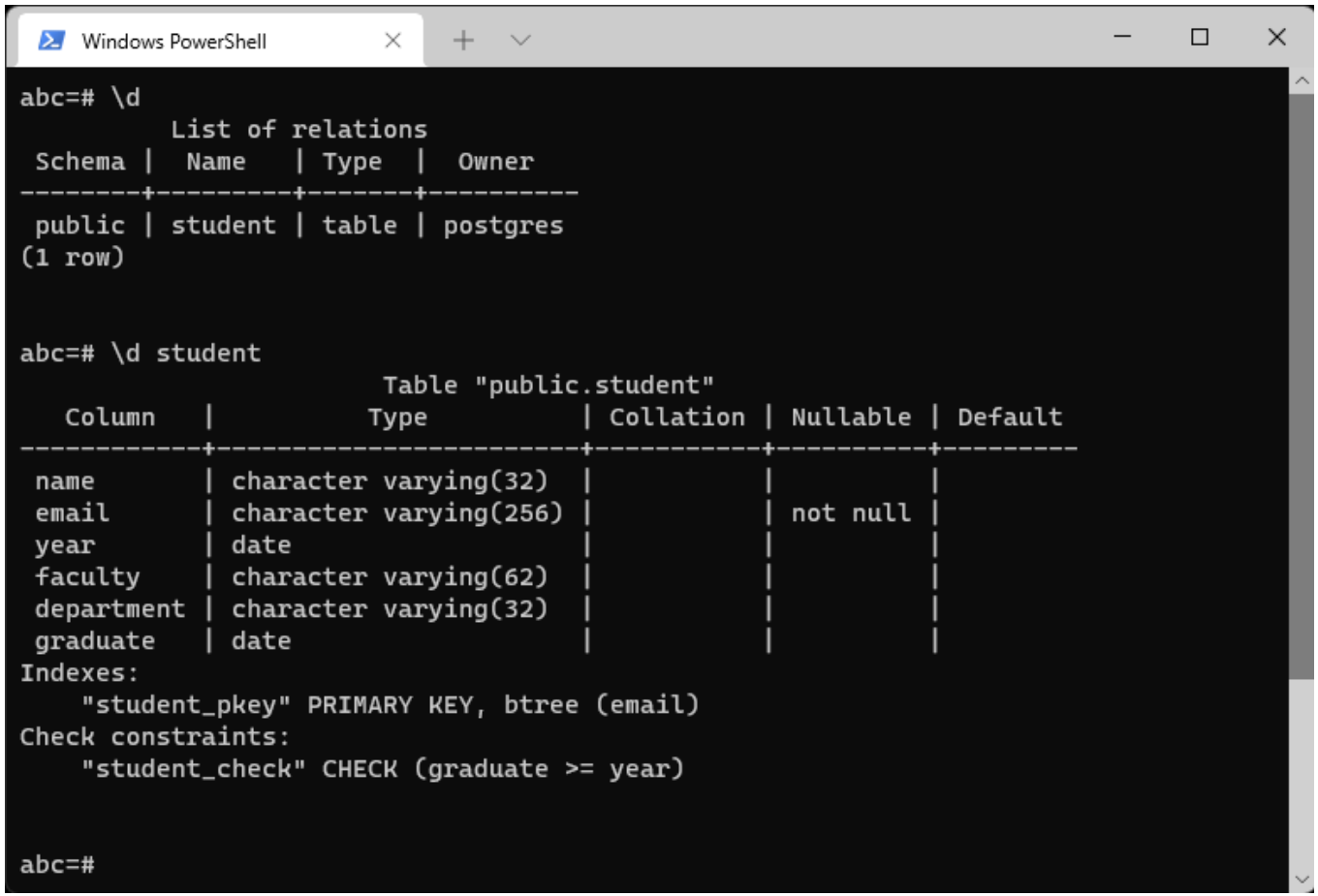
Create a table

Let's create a table "student", which is exactly same as the one we will use for Tutorial 1.



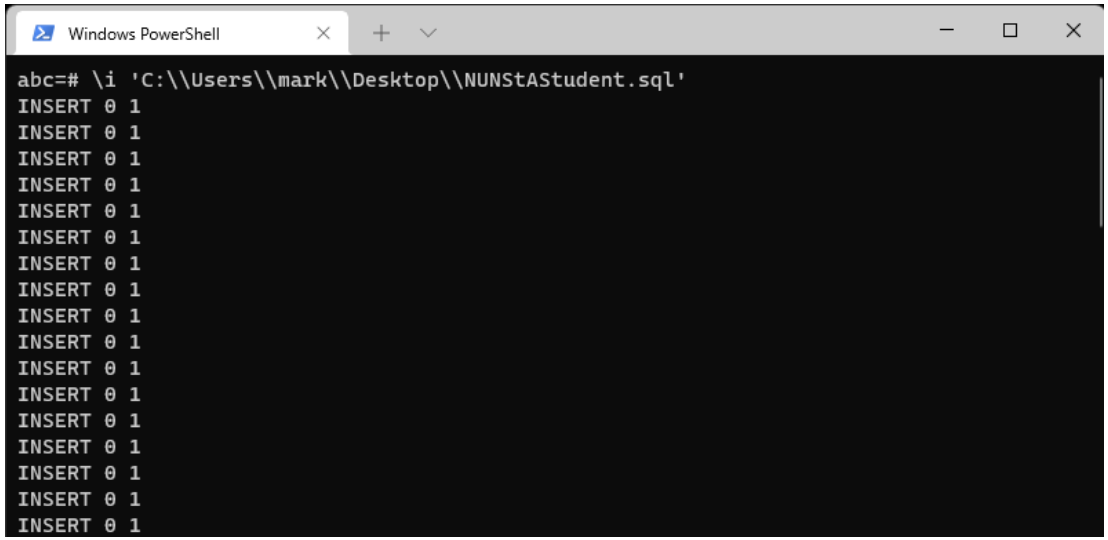
View existing tables

Enter "\d" to **display** all relations in the current database.
Enter "\d student" to **display** the details of the table "student".



Execute an SQL script from files

Now let's insert some data. To save time, we just make use of the SQL script provided for our tutorials – "`NUNStAStudent.sql`"

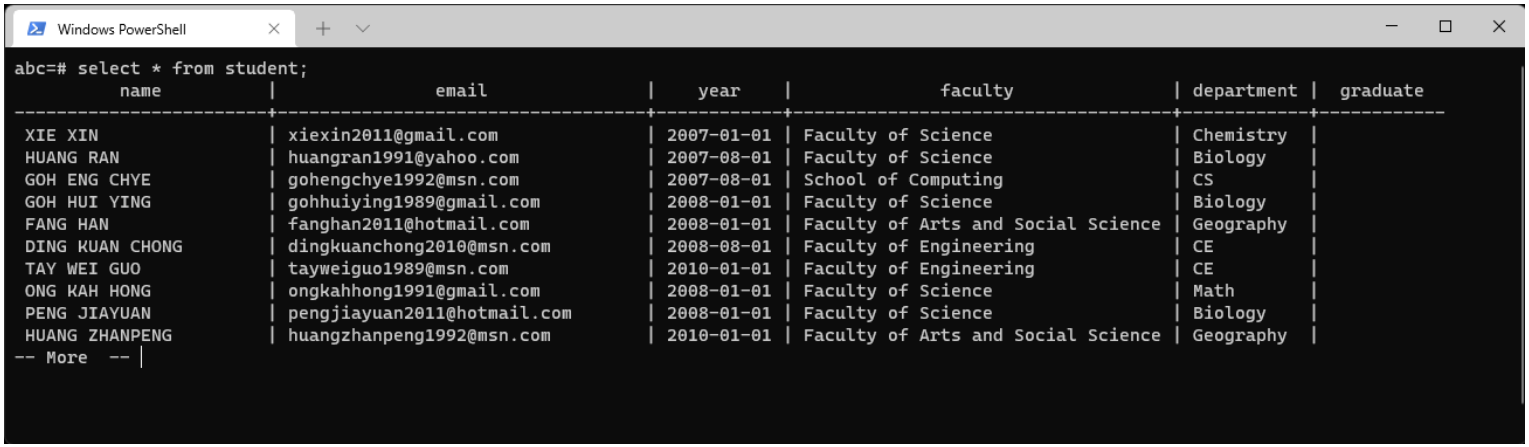


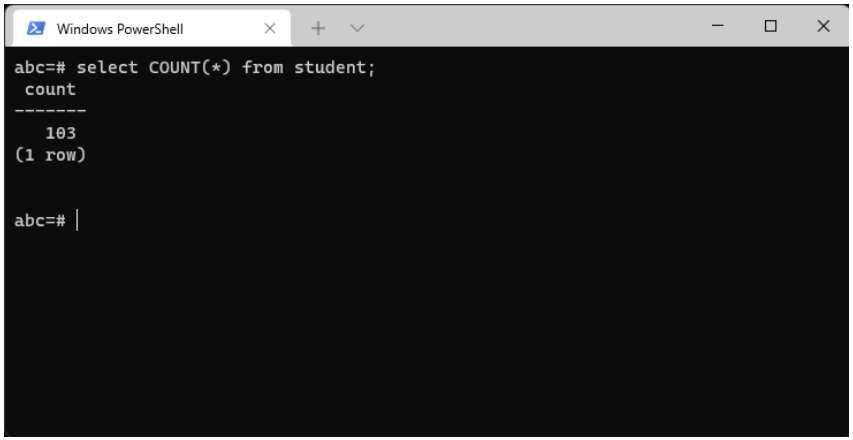
Caution

Please be cautious that the file path on Windows must be formatted with double '//' and enclosed within single-quote symbols ("*C:\\Users\\mark\\Desktop\\NUNStAStudent.sql* " in this case). Otherwise a `Permission Denied` error will be returned.

Execute an SQL script manually

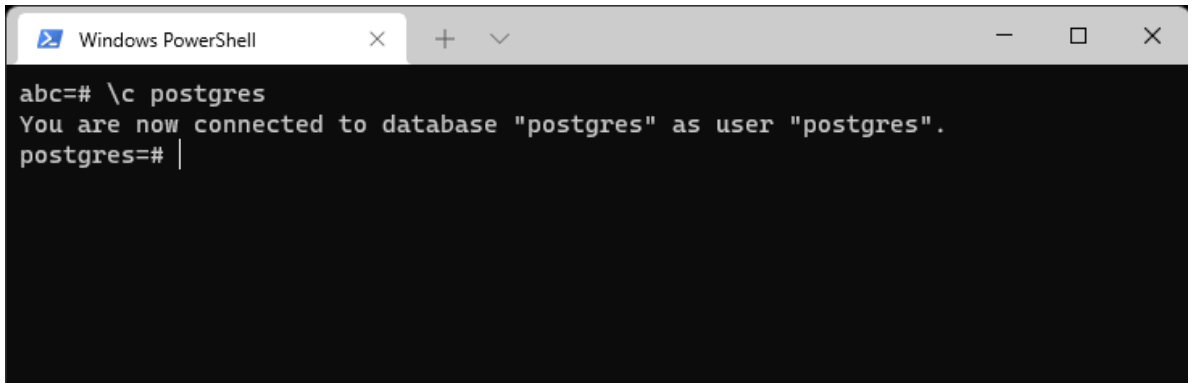
Enter SQL query manually to view outputs.

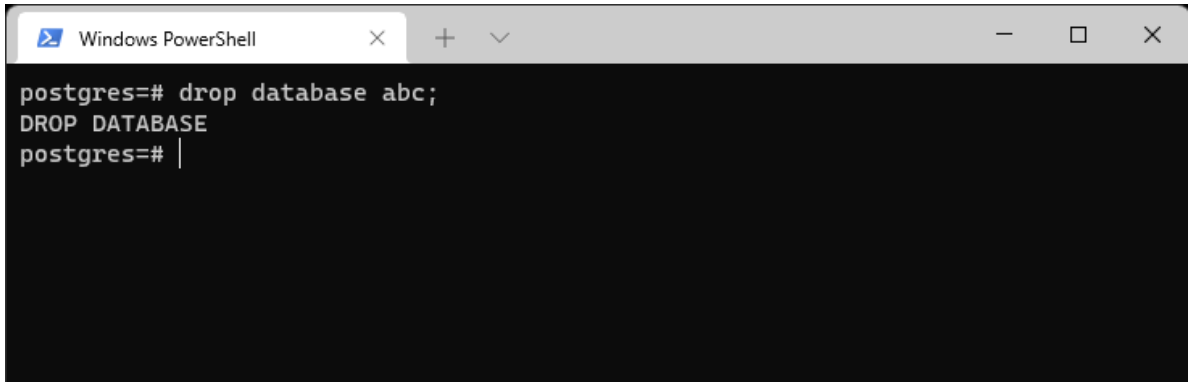




Disconnect & Drop a database

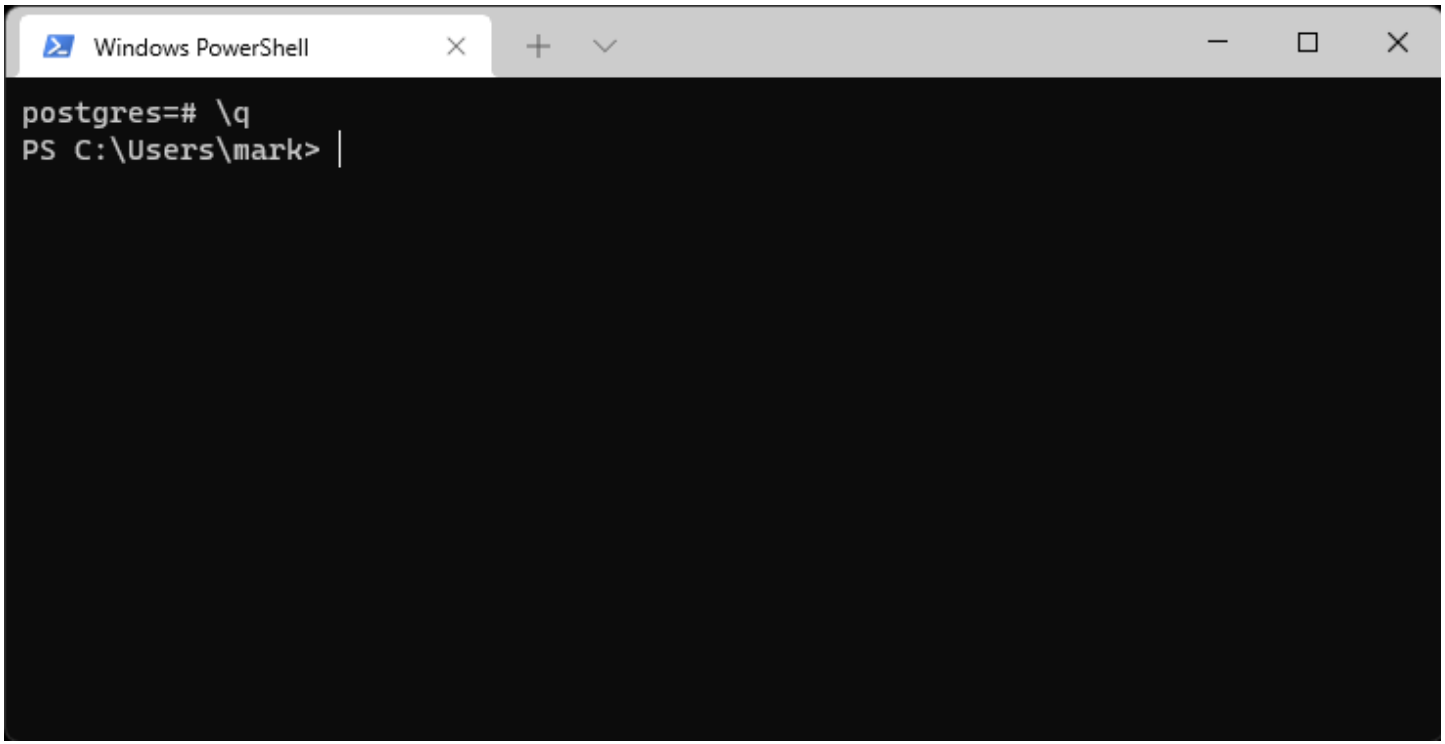
To drop the current database, you have to disconnect it first.
To do that, just connect to the other one by entering "`\c postgres`" to **connect** to the default database "`postgres`".
Then enter "`drop database abc`" to **drop** the database we have just created.





Quit the psql

Enter "\q" to **quit**.



For any further question, please feel free to email me:

hmeng@comp.nus.edu.sg