A step by step guide to using MySQL with Python

This tutorial will help you set up a MySQL connection from a python program. We assume you already have python installed: it comes on most Linux computers and all Macs.

Step 1: Install Python Libraries

Install Libraries on Windows

We recommend you install ActivePython from here:

http://www.activestate.com/activepython/downloads/thank-you?dl=http://downloads.activestate.com/ActivePython/releases/2.7.2.5/ActivePython-2.7.2.5-win32-x86.msi

Next, we need to update some environment variables so the python scripts will work.

- 1. Click the Start Menu
- 2. Right click on "Computer"
- 3. Select "Properties"
- 4. Click on "Advanced System Settings" on the left side
- 5. Click the "Advanced" tab
- 6. Click the "Environment Variables ... " button
- 7. Find the PATH variable, and add the following text to the end of it: C:\Program Files\MySQL\MySQL Server 5.5\bin
- 8. Create a variable named DYLD_LIBRARY_PATH with the following value:
 - C:\Program Files\MySQL\MySQL Server 5.5\lib
- 9. Press OK to save your changes

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Now we need to install the python libraries.

- 1. Click the Start Menu
- 2. Type cmd and press enter. The command prompt should open.
- 3. Type the following command:

```
pypm install sqlalchemy mysql-python
```

Please ask for help if you need it.

Install Libraries on Mac

Go to a command prompt:

- 1. Click on the Spotlight button in the top right corner of the screen
- 2. Search for "Terminal" and run it



Make sure the MySQL environment variables are set up (MySQL doesn't do this for you):

1. Run the following commands to create and open a bash profile for your account:

touch ~/.bash_profile

open -e ~/.bash_profile

2. Add the following lines to the file (to the bottom, if it already has something in it): export PATH=\$PATH:/usr/local/mysql/bin

export DYLD_LIBRARY_PATH=\$DYLD_LIBRARY_PATH:/usr/local/mysql/lib

3. Save and close the file, then run the following command in the terminal: source ~/.bash_profile

Run the following commands in the terminal to install the libraries

1. Run the following commands, and enter your password if asked:

sudo easy_install pip
sudo pip install sqlalchemy mysql-python

Install Libraries on Linux

Go to a command prompt and run the following commands:

 Run the following commands, and enter your password if asked: sudo easy_install pip sudo pip install sqlalchemy mysql-python

Step 2: Set up a simple database program

1. Download the demo script named DBDemo.py from the course web site at <u>http://www.ccs.neu.edu/home/kathleen/classes/cs3200/index.htm</u>

- 2. Open the file in your favorite text editor
- 3. If you followed the MySQL tutorial's advice and created a user named root with the password root, then skip to the next step. If you have some other user name and password, look for the fields called userName and password and change them to the account you created.

# Connection settings			
settings = {			
'userName': "root",	#	The	name of the MySQL account to use (or empty for anonymous)
'password': "root",	#	The	password for the MySQL account (or empty for anonymous)
'serverName': "localhost",	#	The	name of the computer running MySQL
'portNumber': 3306,	#	The	port of the MySQL server (default is 3306)
'dbName': "test",	#	The	name of the database we are testing with (this default is installed with MySQL)
}			

4. Run the program. If it works, its output should look like this:

```
Connected to database
Created a table
Inserted some data
test Boston MA 12345
```

If you get an error message instead, you have a problem to fix. Here are some things to check:

- MySQL might not be running
- The python script might not be able to find the driver (check the installation instructions and your environment variables)
- · Your user name and password might be wrong
- · The credentials are right, but the user doesn't have permission to connect to the database

Try to get it working, if you can. If you can't, please don't hesitate to ask for help from the TAs! Good luck!