

MySQL

MySQL is a very popular open source database backend. You can connect to it with Python in several different ways. For example, you could connect to it using one of the ODBC methods I mentioned in the last two sections. One of the most popular ways to connect to MySQL with Python is the MySQLdb package. There are actually a couple of variants of this package:

- MySQLdb1
- MySQLdb2
- moist

The first is the traditional way to connect to MySQL with Python. However it is basically only in maintenance only development now and won't be receiving any new features. The developers switched to doing MySQLdb2 and then transformed that into the **moist** project. MySQL had a rift occur after they were bought by Oracle and it ended up getting forked into a project called Maria. So now there is Maria, MySQL and another fork called Drizzle that are all based on some portion of the original MySQL code. The **moist** project attempts to create a bridge we can use to connect to all three of these backends, although it's still a bit in the alpha or beta stages at the time of publication. To make things extra confusing, MySQLdb is a wrapper around `_mysql`, which you can use directly if you want to.

After all of that, you'll quickly learn that MySQLdb is not compatible with Python 3 at all. The moist project will be some day, but it's not there yet. So what does one use with Python 3? You have a few choices:

- mysql-connector-python
- pymysql
- CyMySQL

- mysqlclient

The **mysqlclient** is a fork of MySQL-python (i.e. MySQLdb) that adds Python 3 support. It is also the method that the Django project recommends for connecting to MySQL. So we will focus our time looking at this package in this section.

Note that you will need to have MySQL or a MySQL Client installed before you can successfully install the **mysqlclient** package. But if you have those prerequisites, then you can just use pip to get it installed:

```
pip install mysqlclient
```



Let's look at a quick example of its usage:

```
import MySQLdb

conn = MySQLdb.connect('localhost', 'username', 'password', 'table_name')
cursor = conn.cursor()

cursor.execute("SELECT * FROM table_name")

# get a single row
row = cursor.fetchone()
print(row)

# disconnect from the database
conn.close()
```



This code probably looks pretty familiar to you. Most good database related packages follow the same API. So in this one, we import our package and create a connection. You will note that we need to know the name of the server we're connecting too (localhost, an IP, etc), the username and password to connect with and the table that we want to interact with.

Next we create a cursor object so we can execute SQL commands which we do in the very next line of code. Finally we fetch one row from the result, print it out and close our database connection.

I want to stop here and note that the documentation for this is pretty lousy. There really isn't much for official documentation other than the code so you will need to rely on that and the few tutorials that are out there.

