

Python and MySQL

1. What is a database and why is it needed?
2. What is SQL?
3. What are the main four SQL statements?

Connecting to a MySQL Database from Python

To access the MySQL database from Python, you need a **database driver**. MySQL Connector/Python is a standard database driver provided by MySQL.

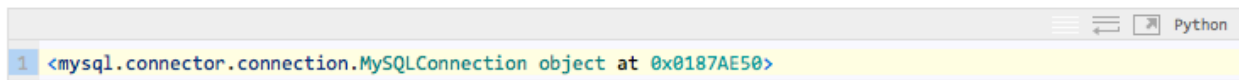
Download the driver for Python 3.4 from <http://dev.mysql.com/downloads/connector/python> and install it on your computer.

To test the installation, first check that your MySQL database is running using MySQL Workbench. Then issue the following python command:



```
1 >>> import mysql.connector
2 >>> mysql.connector.connect(host='localhost', database='mysql', user='root', password='')
```

You should see a successful connection message similar to the following:



```
1 <mysql.connector.connection.MySQLConnection object at 0x0187AE50>
```

For this exercise you can use the SchoolNova Attendance database we created last semester. If you do not have that database, download the DDL & SQL files from the SchoolNova site and run them in MySQL Workbench:

http://schoolnova.org/student_area/attendance/Attendance.ddl

http://schoolnova.org/student_area/attendance/Attendance.sql

Execute SQL Select Statement

```
import mysql.connector
from mysql.connector import MySQLConnection, Error

def getStudents():
    try:
        conn =
mysql.connector.connect(host='localhost',database='it102',user='root',
password='')
        if conn.is_connected():
            print("connected")
            cursor = conn.cursor()
            cursor.execute("SELECT * FROM STUDENTS")
            rows = cursor.fetchall()
            return rows
    except Error as e:
        print(e)
    finally:
        cursor.close()
        conn.close()

if __name__ == '__main__':
    students = getStudents()
    for student in students:
        print(str(student[1]))
```

Homework

1. Select only the students whose name starts with "L", ordered by name in ascending order;
2. Create a Python function that inserts a new student in the STUDENTS table. Use the cursor.execute method. Use the documentation at <http://dev.mysql.com/doc/connector-python/en/> if you need help.