College of Computing MySQL server connection instructions

The College of Computing provides a MySQL server for academic use by students on an as needed basis. If you have received an e-mail from admin@cc.gatech.edu informing you of a database creation, then these instructions will help you connect to your database. Please note that this database is not the same as databases located on acme.gatech.edu, and instructions for acme will not work for this database, and vice versa. Also, please remember: This database is for academic use only. It and any code on the server will be DELETED at the end of every semester. Please ensure you secure your code before the end of the semester if you wish to keep it.

There are three major ways to connect to your MySQL database:

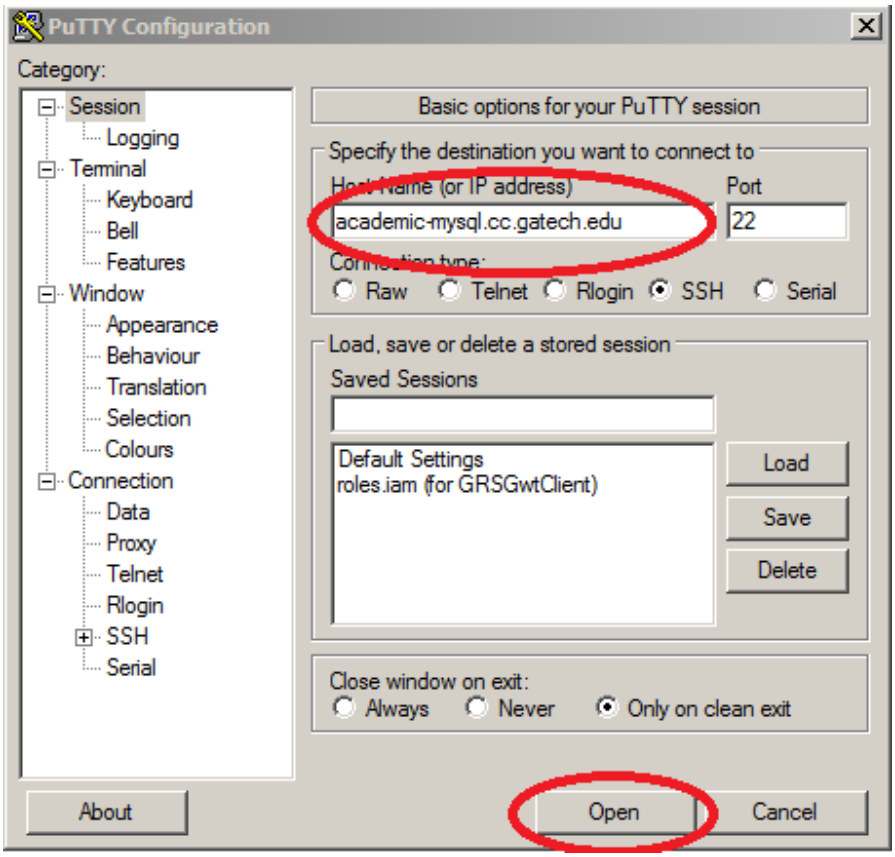
1. Using the MySQL client located on academic-mysql.cc.gatech.edu
2. Using phpmyadmin, a web-based tool for manipulating your database
3. Using a direct connection via a software application that you design (e.g. php, java, python)

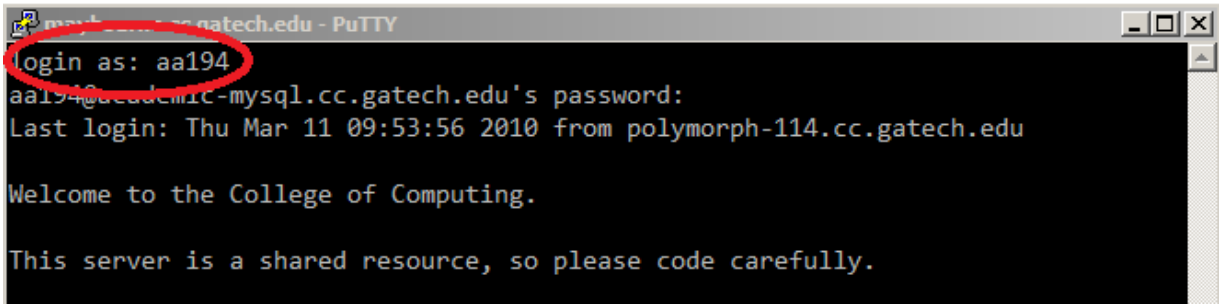
This document will detail the steps and provide code examples for each of the above methods.

Method 1: Using the mysql client

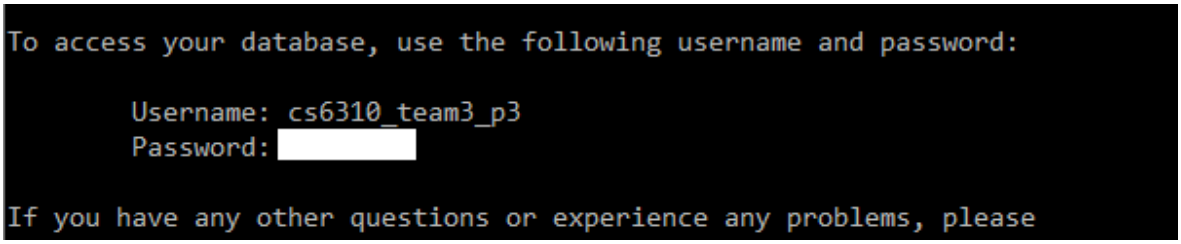
The mysql client in academic-mysql.cc.gatech.edu allows you to manipulate your database from a command line interface. To use the mysql command line client, perform the following steps:

1. ssh to academic-mysql.cc.gatech.edu using your GT account name and password. This can be done via SecureCRT or putty (for windows), or the `ssh` command (linux and mac):

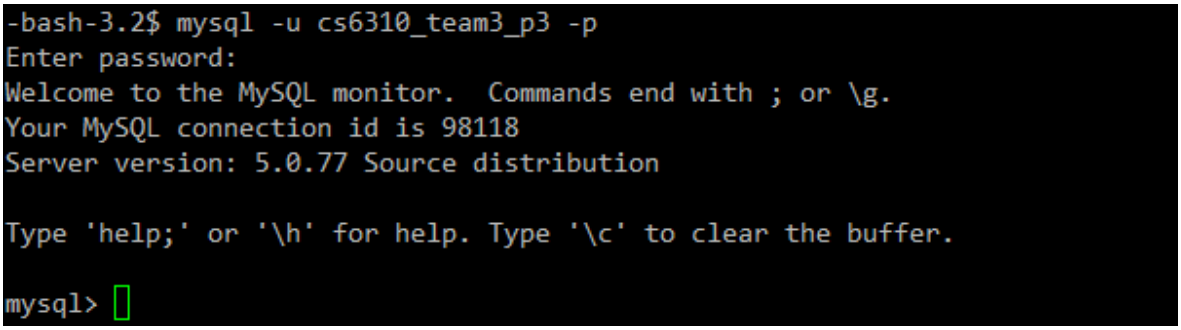




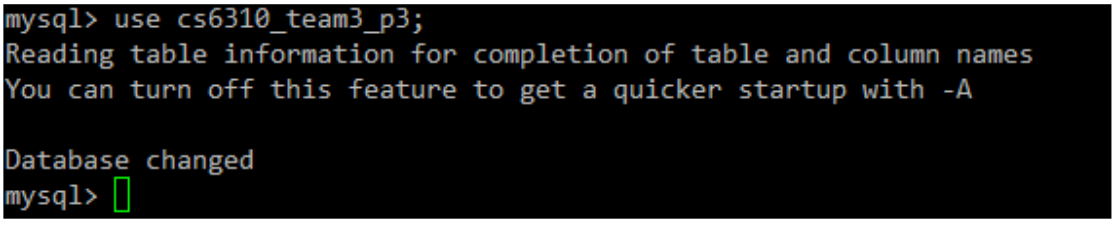
2. Open the README file located in your home directory, and obtain your database username and password



3. Then run the mysql client to connect to your database, using the username and password from the README:



4. Then, select your database:

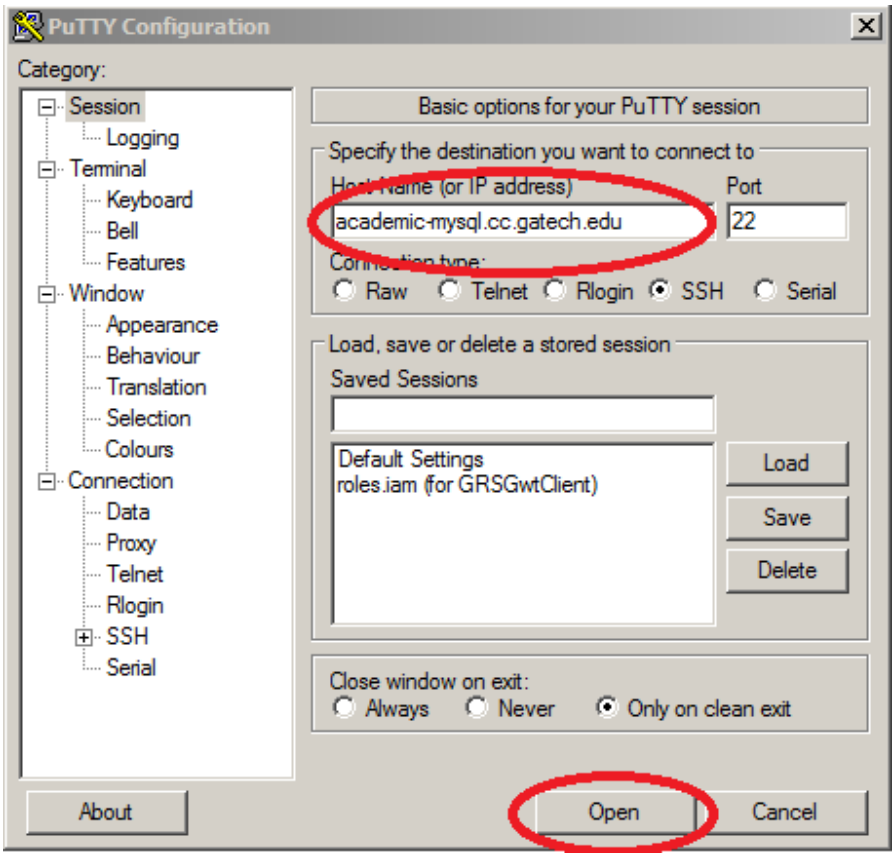


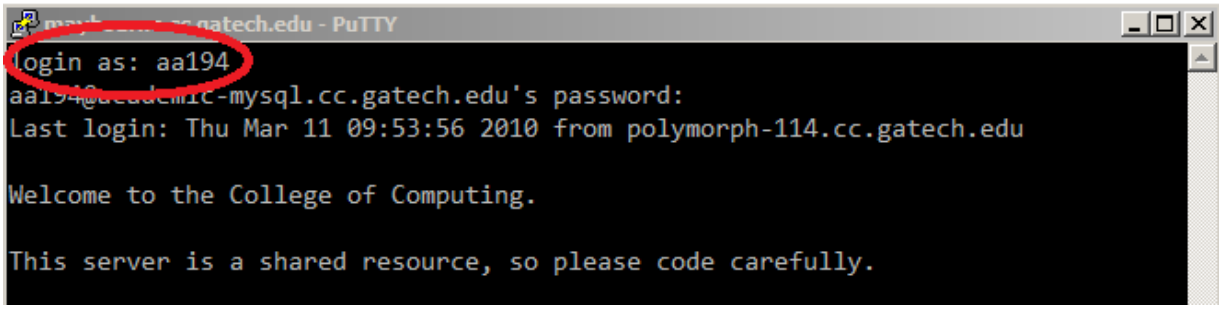
5. At this point, you are ready to manipulate your database via SQL statements.

Method 2: Using phpMyAdmin

phpMyAdmin is a web-based graphical tool for manipulating your MySQL database. It provides a user the ability to do everything the mysql command line client does, with added graphical manipulation tools. To use phpMyAdmin, perform the following steps:

1. ssh to academic-mysql.cc.gatech.edu using your GT account name and password. This can be done via SecureCRT or putty (for windows), or the `ssh` command (linux and mac):



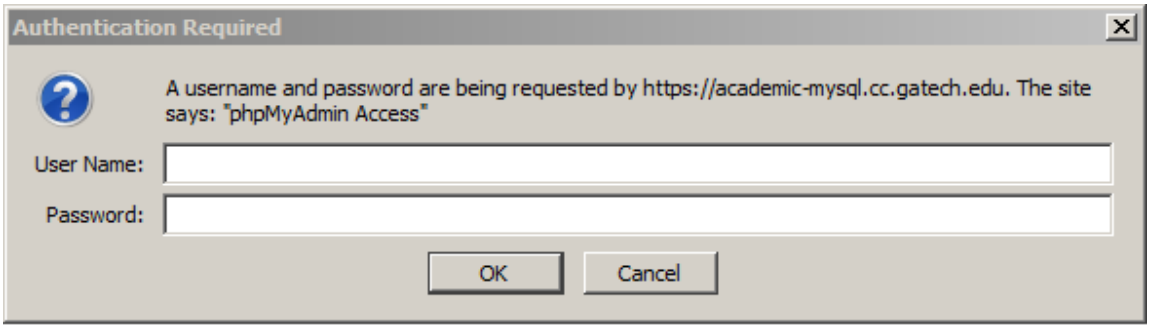


2. Open the README file located in your home directory, and obtain your database username and password

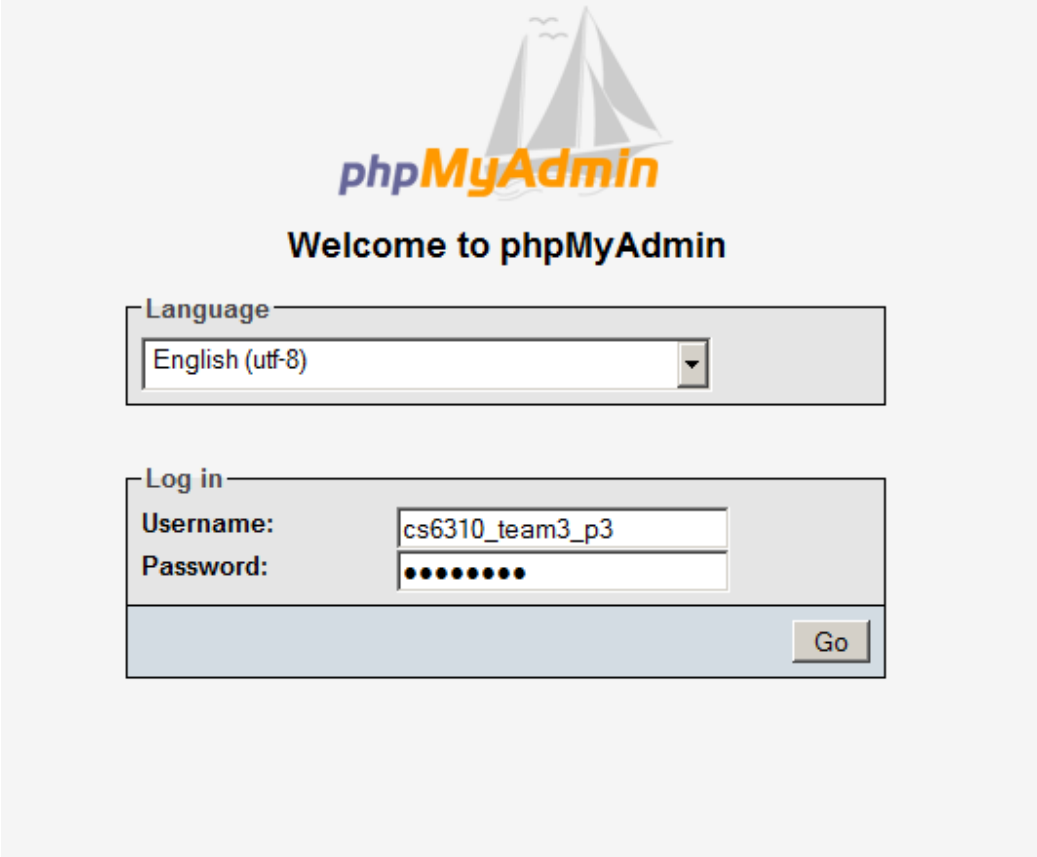
```
To access your database, use the following username and password:

        Username: cs6310_team3_p3
        Password:

If you have any other questions or experience any problems, please
```

3. Then, point a web browser to https://academic-mysql.cc.gatech.edu/phpmyadmin

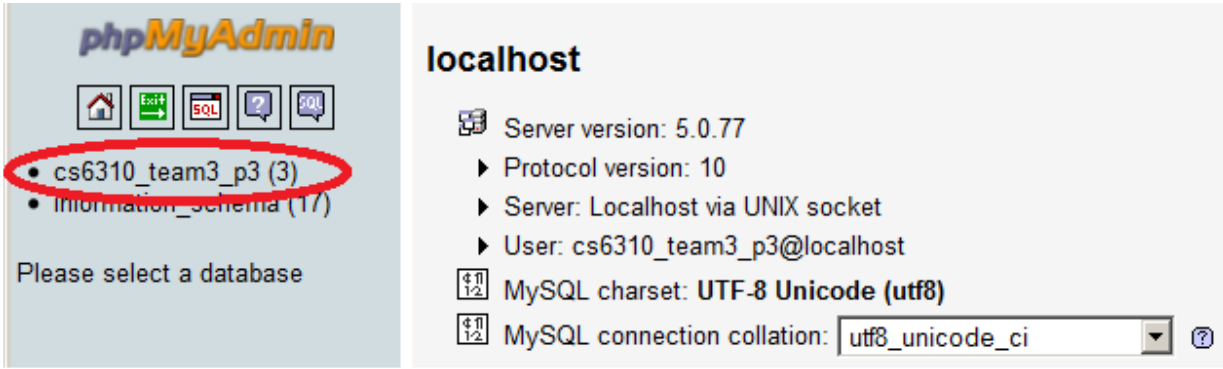
4. You will receive a popup asking for your GT username and password:



5. Input your GT username and password, and you will be displayed a page asking for your database username and password:



6. Input the username and password obtained from your README, and you will be directed to the main phpMyAdmin page. Select your database from the navigation menu on the left:



7. At this point, you may use SQL statements within the interface to manipulate your MySQL DB.

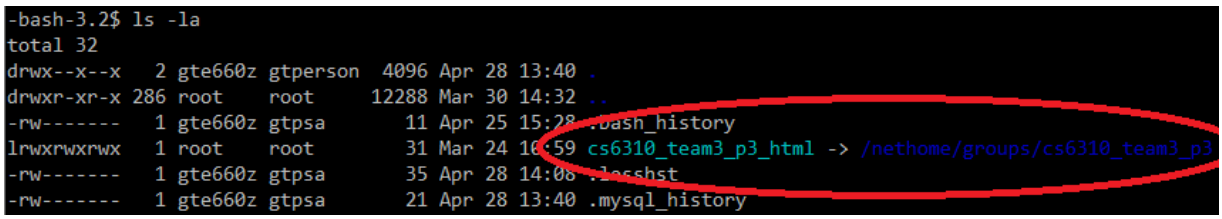
Method 3: Using your application software to connect to your DB

The MySQL DBs on academic-mysql can be directly accessed from campus IP addresses (minus resnet), including the OIT VPN. This means that while on campus, or while the VPN is running on your computer anywhere else in the world, you may make a direct connection to your DB over an encrypted channel. This method will let you write software in your programming language of choice and manipulate your DB wherever you may be.

The following code examples detail how to connect to your MySQL db for PHP and Java.

PHP

Php code for your database may be placed directly on academic-mysql.cc.gatech.edu in either the "public_html" folder in your home directory, or in your group php folder, located at "/nethome/groups/<DB name>". For your convenience, if you have a group php folder, a symlink will be in your home directory to access it:



IMPORTANT: The webserver on academic-php.cc.gatech.edu is configured to execute php for only files that end with ".php". Also, make sure that ALL of your web files are set with read and execute permissions for others (e.g. chmod o+rx), or you will receive a 403 "Forbidden" Error. Lastly, the server is configured to look for index.php in your web directory as landing page for your webspace.

The following is an example piece of php code to connect to a MySQL database:

```
<?php
   $link = mysql_connect('localhost', 'cs6310_team3_p3', 'secret');
   if (!$link) {
      die('Could not connect: ' . mysql_error());
   }
   mysql_select_db('cs6310_team_p3');
   echo 'Connected successfully';
   mysql_close($link);
?>
```

The code above tells php to connect to the database running on the local machine using the username and password you supply. After the connection is established, select your database.

If you place your code in your public_html directory on academic-mysql, you can view the code's execution by using the following URL:

https://academic-php.cc.gatech.edu/~<username>/

If you are working in a group, then your code's output can be seen at:

https://academic-php.cc.gatech.edu/groups/<groupname>/

Java

Connecting to a MySQL database with java takes a bit more work. First, ensure you are running your code from a machine on campus, or that you have the OIT VPN turned on. If you need to install the OIT VPN, start by going to the following webpage, and following the instructions there:

http://www.oit.gatech.edu/service/vpn/getting-started

After you have the VPN installed and running, or if you're already on campus, you should download and install the Java MySQL JDBC connector. For most linux distributions, consult your package manager for the connector. For Windows and Mac, as of this writing, the latest connector can he found at:

http://dev.mysql.com/downloads/connector/j/

Within the download, there will be a jar file, named "mysql-connector-java-<version>.jar" You should place that jar into your external library folder, normally located in %JAVA_HOME%/lib/ext (e.g. C:\Program Files\Java\jre\lib\ext).

Once the connector has been installed, your Java code would look something like this:

```
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;

public class JdbcExample {

  public static void main(String args[]) {
    Connection con = null;

    try {
      Class.forName("com.mysql.jdbc.Driver").newInstance();
      con = DriverManager.getConnection("jdbc:mysql://academic-
         mysql.cc.gatech.edu/cs6310_team3_p3", " cs6310_team3_p3",
         "secret");

      if(!con.isClosed())
        System.out.println("Successfully connected to " +
          "MySQL server using TCP/IP...");

    } catch(Exception e) {
      System.err.println("Exception: " + e.getMessage());
    } finally {
      try {
        if(con != null)
          con.close();
      } catch(SQLException e) {}
    }
  }
}
```

For other programming languages, see their relevant documentation.