

Installing MySQL on the Command Line

Overview: These steps will help you get MySQL installed on a command line, which is an alternative to phpMyAdmin. You can find a more comprehensive tutorial [here](#).

This tutorial will show you how to:

1. Install MySQL
2. Start MySQL and create your first database with a setup.sql file
3. Overview of the general workflow with MySQL (with existing databases)

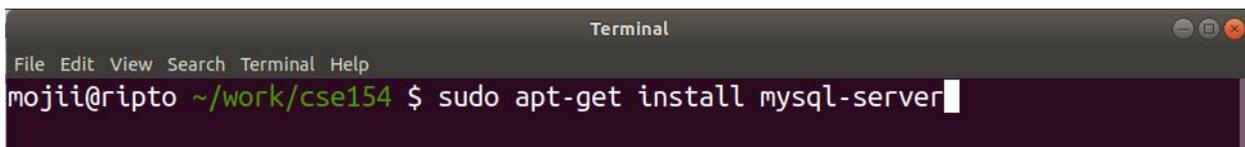
Requirements:

- A Bash Terminal (e.g. Putty, Cywgin, or Ubuntu for Windows 10). See here for directions on installing Ubuntu for Windows 10 (if you are installing a terminal at this point, you'll also need to make sure you can run PHP on the command line, which you can find the same document).

Installation:

Install mysql-server in a new Terminal window by typing the following and press ENTER (it doesn't matter where your Terminal location is when installing, but the example screenshot below is currently in the /work/cse154 directory):

```
sudo apt-get install mysql-server
```



If you run into any error messages, you can try typing the following and trying again:

```
sudo apt-get update
```

If you are still getting error messages, refer to [this tutorial](#) for some alternative installation commands depending on your OS.

Setting up your First Database using a provided SQL file

For Week 9 Section, we provided two setup-*.sql files (you will later use your own SQL CREATE/INSERT statements to create your own). You can download [setup-games.sql](#) and use it to populate your first database by moving them to the current directory. You'll need to be the same directory as this file when following these steps for populating your first database.

In this tutorial, we've created and entered a directory called `sql-practice`, where we put `setup-games.sql`. The `ls` command "lists" all files you have in a current directory in the terminal, which is useful to check that you have the file you want.

```
mojii@ripto ~/work/cse154/sql-practice $ ls
setup-games.sql
mojii@ripto ~/work/cse154/sql-practice $
```

Starting MySQL:

Anytime you want to use the command line to run MySQL, you'll need to do the following:

1. Start with

```
sudo service mysql start
```

2. Then enter

```
mysql
```

You can write any SQL commands in this console. Quit the MySQL session with CTRL+C or by typing `quit;`.

3. When you're done, enter:

```
sudo service mysql stop
```

Example Screenshots:

```
mojii@ripto ~/work/cse154/sql-practice $ sudo service mysql start
mojii@ripto ~/work/cse154/sql-practice $ mysql
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 2
Server version: 5.7.24-0ubuntu0.18.04.1 (Ubuntu)

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Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>
```

From here, you're ready to get started! You can find everything you need for creating your first database and tables for different projects [here](#).

1. To populate a new database with the tables from setup-games.sql (remember to make sure your current directory has that file), you can run the following (make sure you are in a mysql> prompt):

```
CREATE DATABASE gamesdb;
```

```
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| sys |
+-----+
4 rows in set (0.01 sec)

mysql> CREATE DATABASE gamesdb;
Query OK, 1 row affected (0.00 sec)

mysql> █
```

2. Use the created database and then run the provided SQL commands:

```
mysql> use gamesdb;
Database changed
mysql> source setup-games.sql; █
```

After running the above, you should see the results of running all of the queries in setup-games.sql. When it's finished, you can check that you have the Games table in your new gamesdb database by using the command:

```
SHOW tables;
```

```
Query OK, 1 row affected (0.01 sec)
Query OK, 1 row affected (0.00 sec)

mysql> show tables;
+-----+
| Tables_in_gamesdb |
+-----+
| Games |
+-----+
1 row in set (0.00 sec)

mysql> █
```

3. Finally, you can start writing queries with the Games table!

```
mysql> SELECT name, publisher FROM Games LIMIT 5;
+-----+-----+
| name                | publisher                |
+-----+-----+
| Pokemon Red/Blue    | Nintendo                 |
| Spyro Reignited Trilogy | Activision              |
| Universal Paperclips | Frank Lantz              |
| Super Mario Bros.   | Nintendo                 |
| Crash Bandicoot     | Sony Computer Entertainment |
+-----+-----+
5 rows in set (0.01 sec)

mysql> █
```

Conclusion:

This tutorial walked you through installing MySQL on the command line, creating a new database (which we called gamesdb) and then populating the database with CREATE TABLE and INSERT statements given in setup-games.sql. When you want to create your own database, make sure to use CREATE DATABASE <newdbname> **and** use <newdbname> before writing your SQL queries with any tables for that database. Then you can write your own setup.sql similarly to quickly populate your database. Note that you only need to create a database once, and usually only want to create each table stored in that database once.

Generally, when you are done with a setup process for a new database in MySQL, your workflow from start to finish will look more like:

1. Start mysql with `sudo server mysql start`
2. Choose your database containing the tables you want to query with `USE <dbname>`
3. Start writing your SQL queries!
4. Exit MySQL console with CTRL+C or typing `quit;`
5. Stop mysql with `sudo server mysql stop`

```
mojii@ripto ~/work/cse154/sql-practice $ sudo service mysql start
mojii@ripto ~/work/cse154/sql-practice $ mysql
Welcome to the MySQL monitor.  Commands end with ; or \g.
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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use gamesdb;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> SELECT name, publisher FROM Games LIMIT 2;
+-----+-----+
| name                | publisher |
+-----+-----+
| Pokemon Red/Blue   | Nintendo  |
| Spyro Reignited Trilogy | Activision |
+-----+-----+
2 rows in set (0.00 sec)

mysql> quit;
Bye
mojii@ripto ~/work/cse154/sql-practice $ sudo service mysql stop
mojii@ripto ~/work/cse154/sql-practice $
```