Week 1 - Due this Week

Assignment 0

In this assignment you will 1. Access a MariaDB server, 2. import a database dump and 3. run a specified query and submit the results. This page will walk you through all three steps.

A database has been created for each student on the College server. You can access it using a web-based GUI like PHPMyAdmin, a desktop tool like MySQL Workbench or simply the command-line mysql client from the flip servers.

You must be connected to the **OSU VPN** **(https://oregonstate.teamdynamix.com/TDClient/KB/?CategoryID=6889)** to access the database.

Your credentials for accessing the database are:

- **username:** cs340_{your_ONID_username}
- **password:** {last-4-digits-of-your-OSU-ID-number}
- **hostname:** classmysql.engr.oregonstate.edu
- **database_name :** cs340_{your_ONID_username}

You need to replace the text inside the curly braces with the right content and remove the braces. Thus, for me, the credentials are:

- ***username:*** *cs340_hedaoos*
- ***password:*** *4321*
- ***hostname:*** *classmysql.engr.oregonstate.edu*

And my *database_name* is the same as my username which is *cs340_hedaoos*

You should change your password as soon you log in for the first time!

There are two ways to access the database, which I have outlined below. You can use the one you are most comfortable with.

Way 1: Accessing using PHPMyAdmin

The College hosts a web-based GUI called PHPMyAdmin which you can use to access and use your database. The URL is **https://tools.engr.oregonstate.edu/phpMyAdmin/index.php?server=5** **(https://tools.engr.oregonstate.edu/phpMyAdmin/index.php?server=5)**

You just need to enter your username and password and select the right server from the drop-down menu.

Once you've accessed the database, you can import the **Database Dump** **(https://oregonstate.instructure.com/courses/1727186/pages/download-bsg-database-bsg-db-dot-sql)** (click the link to download it first). **(https://oregonstate.instructure.com/courses/1727186/pages/tutorial-using-**

phpmyadmin-for-the-cs340-database)

First, select your database named *cs340_{your_ONID_username}* from the left pane. As you can see in the right pane, there are no tables in the database yet since it has been created just for you. Then click on **Import** in the right pane. Under the "File to Import" section, clicking on "Browse" will present us with a File Selection dialog box.

Let's locate the Database Dump file that you downloaded and import it. (We don't need to tweak any options in **Import** right now, although you might need to tweak these options later for future assignments. The format will be SQL as we are importing a *.sql* file.)

And that's it. Click on **Go**.

The import should finish within milliseconds, then we will have 4 tables visible in the left pane under the database name including "bsg_people", "bsg_certs", and so on.

Now to run a query, we will just select the database again from the left and then click on the **SQL** option in the right pane. We will be presented with a textbox titled, "Run SQL query/queries on database *cs340_{your_ONID_username}*"

Let's say we want to see all the records from bsg_people. The query I would run is

```
SELECT * FROM bsg_people;
```

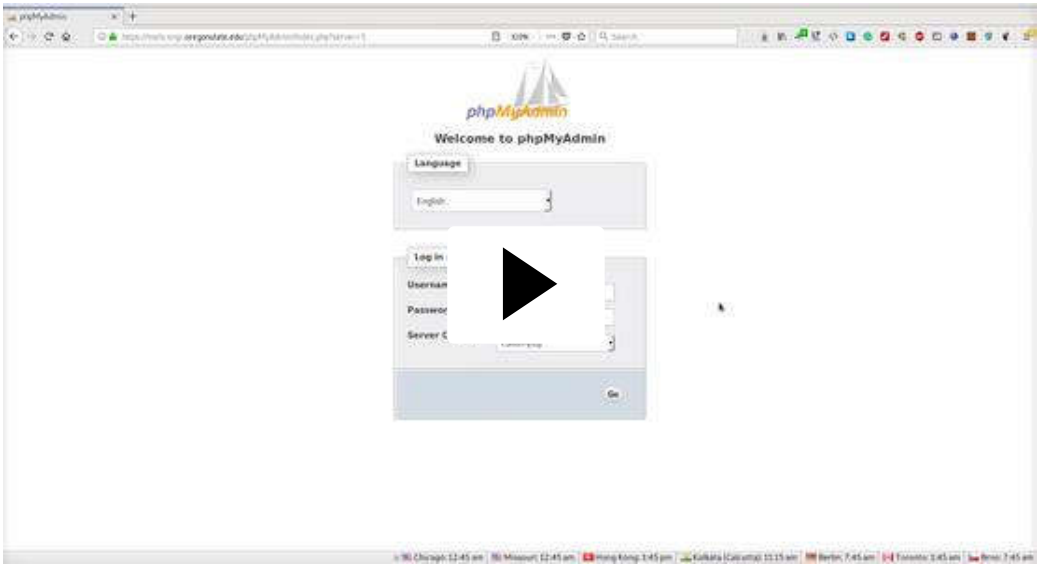
Then click on **Go**.

Then it runs and we can see all the records from the **bsg_people** table: the results of the query.

That's how you execute a query on the database using PHPMyAdmin! Great job, you can now scroll down past the "Way 2" section to complete the assignment.

Or if you are still having trouble and want to watch this walk-through video, here it is for your convenience:

Importing a Database Dump Using phpMyAdmin (https://cdnapisec.kaltura.com/html5/html5lib/v2.71.2/mwEmbedFrame.php/p/391241/uiconf_id/41332562/entry_id/1_07ld702l?wid=_391241&iframeembed=true&playerId=kaltura_player&entry_id=1_07ld702l&flashvars%5BlocalizationCode%5D=en&flashvars%5BleadWithHTML5%5D=true&flashvars%5BsideBarContainer.plugin%5D=true&flashvars%5BsideBarContainer.position%5D=left&flashvars%5BsideBarContainer.clickToClose%5D=true&flashvars%5Bchapters.plugin%5D=true&flashvars%5Bchapters.layout%5D=vertical&flashvars%5Bchapters.thumbnailRotator%5D=false&flashvars%5BstreamSelector.plugin%5D=true&flashvars%5BEmbedPlayer.SpinnerTarget%5D=videoHolder&flashvars%5BdualScreen.plugin%5D=true&&wid=0_sucw7j87) (01:35)



Way 2: Accessing using the command line mysql client

(https://oregonstate.instructure.com/courses/1727186/pages/tutorial-using-mysql-command-line-client-on-the-flip-servers-for-the-cs340-database) To access the database using the mysql command line client, you need to connect to the **flip** servers using an SSH client like putty and run:

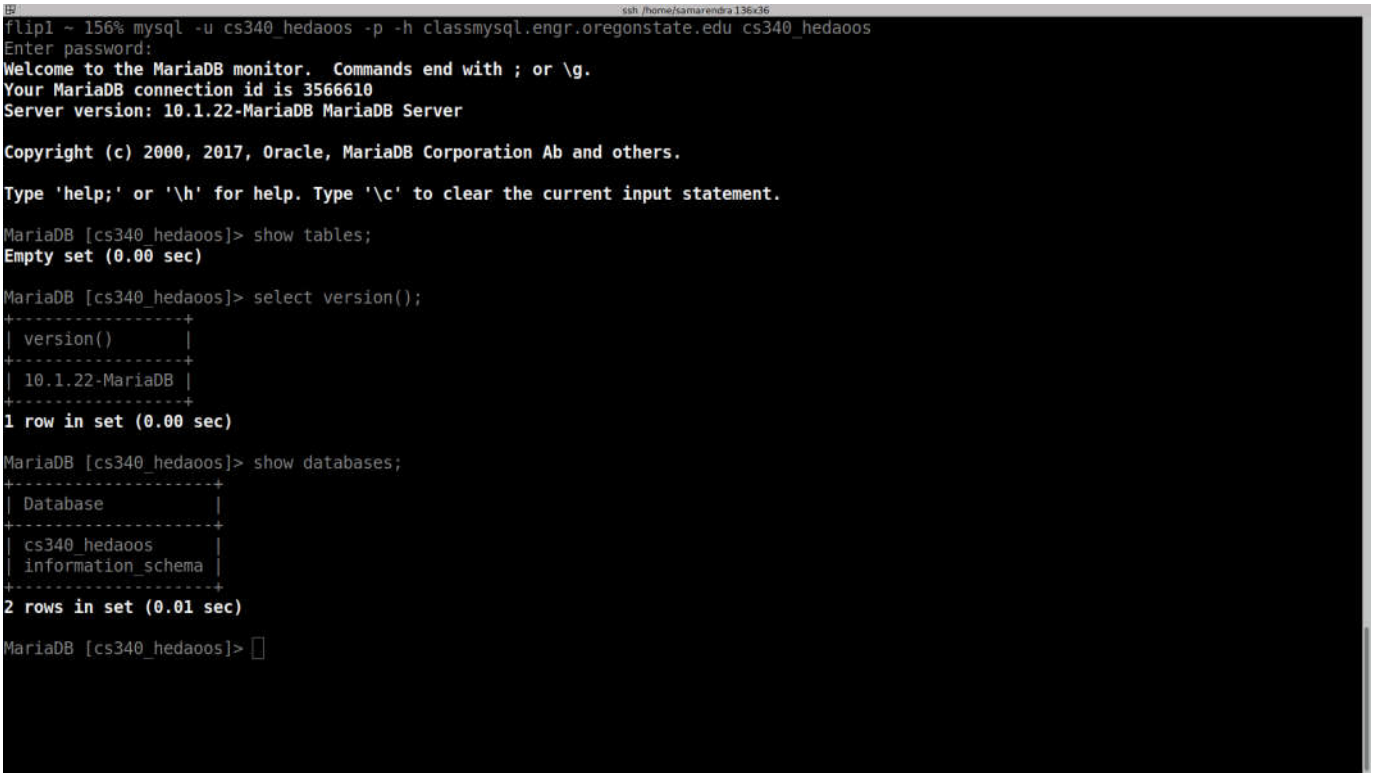
```
mysql -u {username} -p -h classmysql.engr.oregonstate.edu {database_name}
```

You will then receive a prompt for the password:

```
Enter password:
```

But, like all Linux password prompts, your password will ***not*** be visible as you type it!

Once you have typed the correct password and press Enter, you will be presented with a prompt with your database name, where you can type SQL commands.

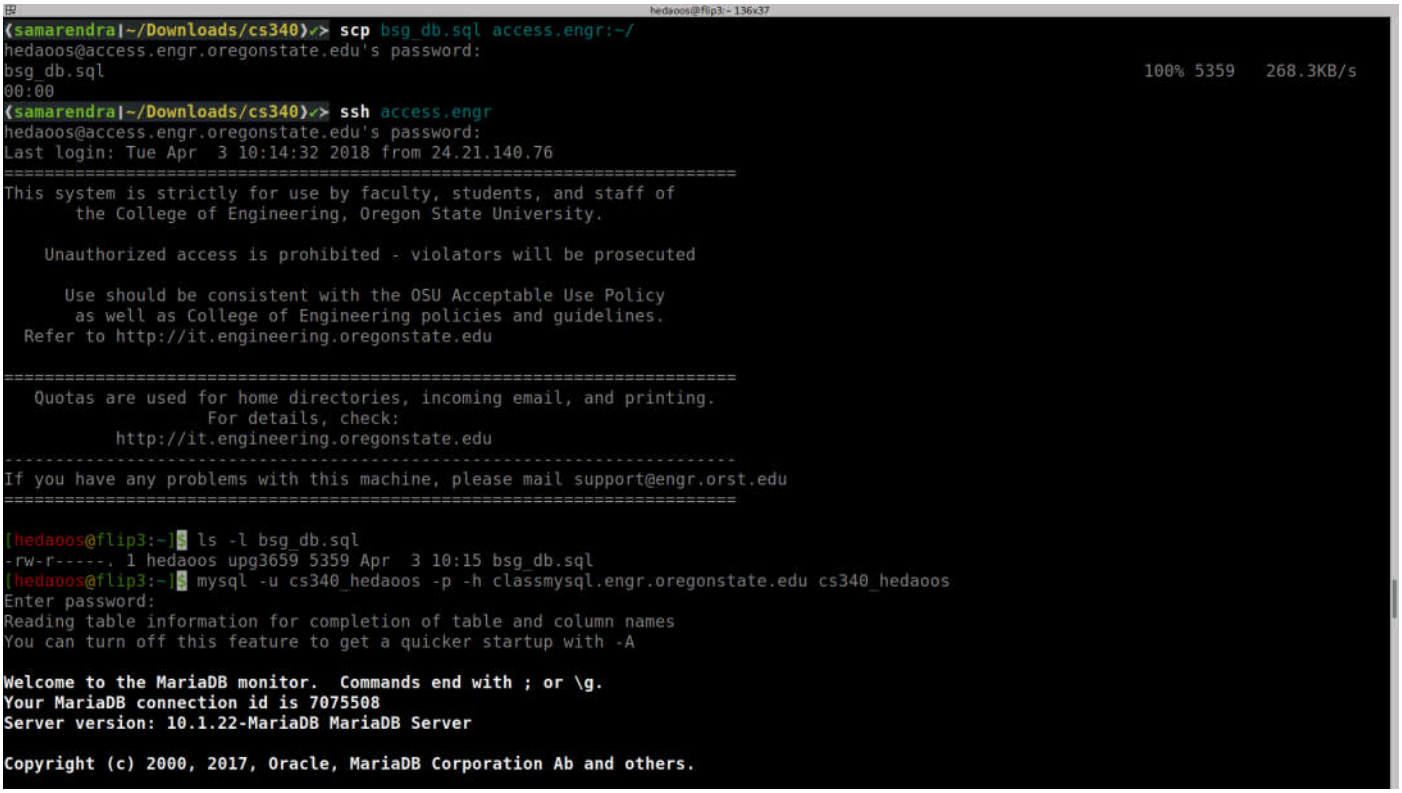


Now that you've accessed the database, you can complete the next step.

First, let's copy the **Database Dump (https://oregonstate.instructure.com/courses/1727186/pages/download-bsg-database-bsg-db-dot-sql)** file, using **scp** command, to your home directory on the server. You may also use an FTP client but be sure to note where you are copying the file.

```
scp bsg_db.sql access.engr.oregonstate.edu:~/
```

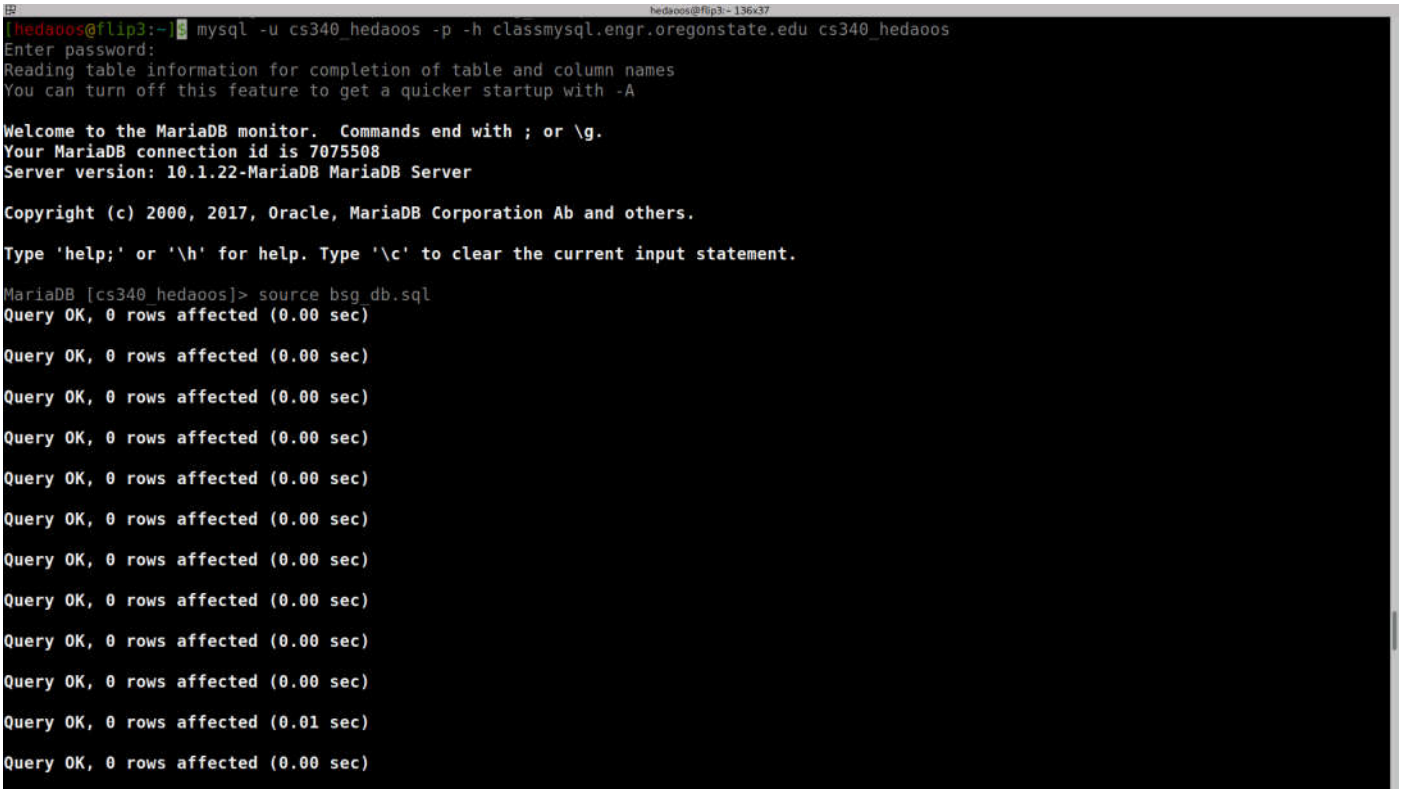
Please note that, in the screenshots below, *access.engr* is an alias to *access.engr.oregonstate.edu.*



Once that's done, connect to the *access.engr* server and login to MySQL as described in **Accessing Your CS340 Database. (https://oregonstate.instructure.com/courses/1727186/pages/read-accessing-your-cs340-database)** Then import the file by running the **source** command on the MySQL prompt:

```
source ~/.bsg_db.sql
```

This tells the MariaDB server to run all the queries that are inside the *bsg_db.sql* located in your home directory.

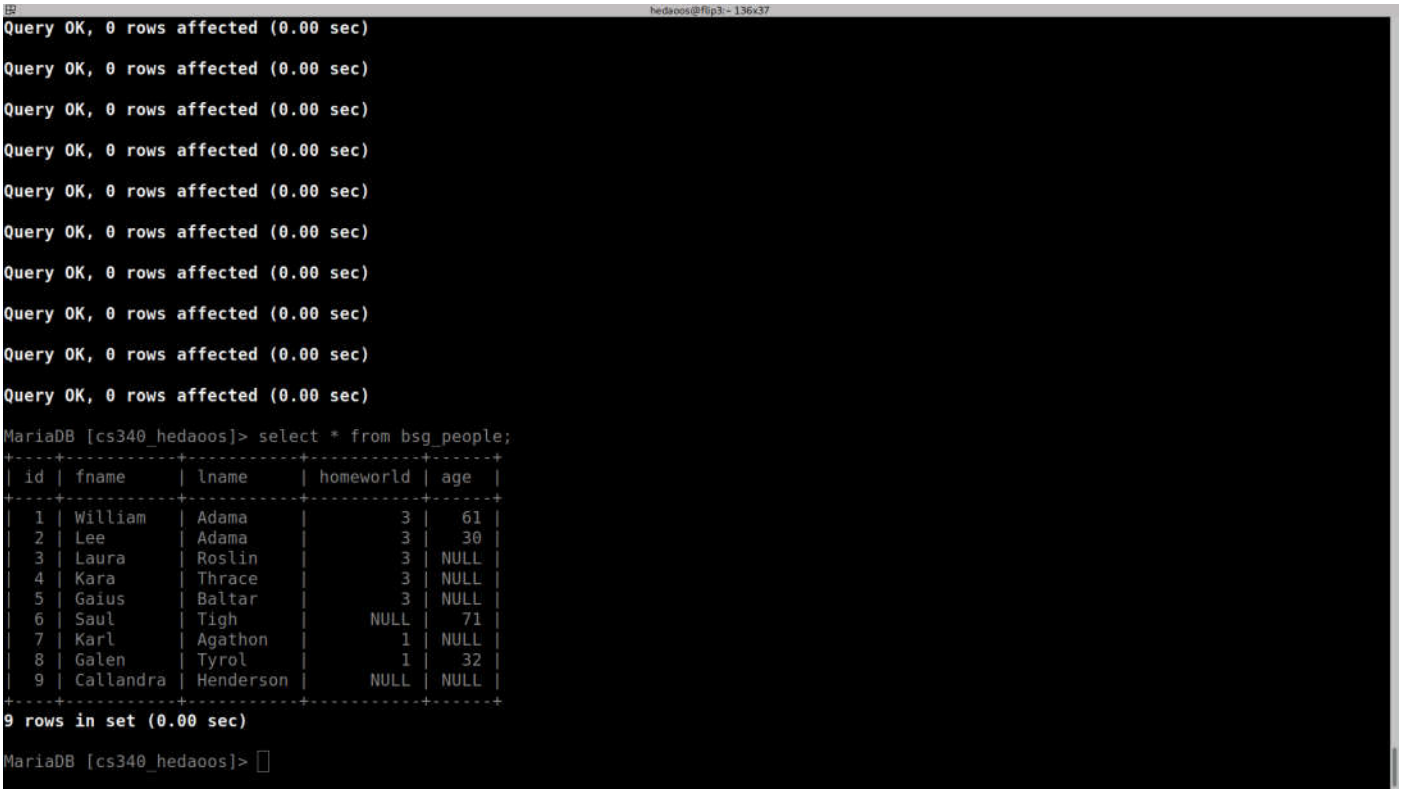


Once, that's done you can see that 4 tables are now present in your database by running (*not shown in the screenshot below):*

```
show tables
```

and you can run a query on them:

```
select * from bsg_people;
```



To quit the command-line client, run

```
quit
```

or press **Ctrl+D.**

Congratulations, you have learned how to import a database and run a query! You are ready to complete the assignment now.

*A Note about MySQL VS MariaDB

Throughout this course you will often see MySQL or MariaDB referred interchangeably.
For example, the college server runs MariaDB but most of the documentation links will be to MySQL.

You can read more about MariaDB vs MySQL at the following pages:

- **MariaDB versus MySQL - Features (https://mariadb.com/kb/en/library/mariadb-vs-mysql-features/)**
  MariaDB. (2018). *MariaDB versus MySQL - Features*. MariaDB (website). Retrieved from https://mariadb.com/kb/en/library/mariadb-vs-mysql-features/
- **MariaDB Vs MySQL: In-Depth Comparison 2018 (https://blog.panoply.io/a-comparative-vmariadb-vs-mysql)**
  Panoply. (2018). *MariaDB Vs MySQL: In-Depth Comparison 2018*. Panoply (website). Retrieved from https://blog.panoply.io/a-comparative-vmariadb-vs-mysql

Submit the Assignment

After you have accessed the database and imported the database dump, you will need to run the specified query and submit a screenshot of the results. Click here to go to the assignment when you are ready for the query:

Assignment 0: Access and Use the CS340 Database (Due Sun, Week 1) (https://oregonstate.instructure.com/courses/1727186/assignments/7471309)

Project Step 0

You will also need to complete a preliminary step for your term project. I recommend using this **NodeJS guide (http://classes.engr.oregonstate.edu/eecs/spring2018/cs340-400/using_node_on_engr_servers/index.html)** .

When you are ready to work on project step 0, follow the link below.

Project Step 0: Get a Website Connected to Database and Running (Due Sun, Week 1) (https://oregonstate.instructure.com/courses/1727186/assignments/7471312)

Task 0

You need to team up with one of your classmates to form a Project Group to work on Project Steps 1 through 7. To contact your classmates, you can use Slack or Piazza.

Details about the logistics and how to inform about your Project Group are inside the following assignment.

Task 0: Form your Project Group (Due Sun, Week 1) (https://oregonstate.instructure.com/courses/1727186/modules/items/18520915)

Week 1 Survey

I encourage you to submit the course survey for this week. I use course feedback to improve my course's design every term!

Week 1 Survey (https://oregonstate.instructure.com/courses/1727186/quizzes/2469289)