

## Homework 2: Environment Setup (Total Points: 50)

Due: Sunday, February 13 2022, 11:59PM ET

### Problem 1: Launch an EC2 instance to be used as your database server (Points: 25)

Create an EC2 instance using the Amazon Linux 2 AMI. Set up security group access to allow **EC2 Instance Connect** access through your selected AWS Region. Do not make your EC2 instance open to the world!

In addition, ensure that this instance can be connected to using Session Manager. You may get the following message when you try to connect using SSM:

Which region are you working in (2 points):

What is the EC2\_INSTANCE\_CONNECT IP Prefix for the region you are working in (3 points):

What is the EC2\_INSTANCE\_CONNECT IP Prefix for **us-gov-east-1** (5 points):

Provide a screenshot of your Security Group details (show protocol, port range, allowed source addresses) (5 points):

Connect to your instance and provide a screenshot of your console window after running the linux command 'whoami' (10 points):

**Problem 2: Install MySQL database on your EC2 instance (Points: 25)** Now that you have your server in the cloud, connect to it from your local computer and install MySQL Server Database.

Provide the full list of commands needed to install, start and verify the status of your MySQL server (5 points):

Once your MySQL database is up and running, perform the following SQL command to demonstrate success:

```
SHOW DATABASES;
```

Provide a screenshot of the result of executing the above SQL command (20 points):

## BONUS

**Bonus Problem 1: Install a local SQL client (Points: 5)** There are many SQL Clients available to download for free which can be used as a graphical user interface to your MySQL Server. You can easily find lists of free clients through a simple Google search (for example: <https://medevel.com/17-sql-client-open-source/> ) or you can opt to use another that you are interested in or familiar with. SQL Workbench is another popular, free option. On your local computer install one of these clients and connect it to your MySQL server running on the EC2 instance. You will need to document, in detail, the steps involved in establishing connectivity between your SQL Client and your MySQL Server. The instructions should be clear enough that the graders can follow them literally and establish a successful connection with their own db instance.

***Note: The teaching staff does not provide guidance on bonus problems. We will clarify ambiguities, but not offer troubleshooting tips. Bonus problems are only graded for assignments submitted before the deadline.***

Identify which client you chose to install, and step by step instructions for configuring access:

Provide a screenshot of your SQL Client's connection details pointing to the MySQL database running on the EC2 instance. Also show the result of the Connection Test (or the status of your connection as shown in your client of choice).

--