Computer Science 213 -01
Web Development with LAMP
Lab 2: Basic Linux commands, MySQL database, and phpMyAdmin

Due date: Monday, September 23, 2024 (before midnight)

1. Type in the Linux command(s) required to achieve the following tasks:

   i) Change directory from any directory to the Desktop directory of the user.

   ```
   cd ~/Desktop
   ```

   ii) Copy all php files from current directory to **/var/www/backup** directory with root's access permission

   ```
   sudo cp *.php /var/www/backup/
   ```

   iii) Create a new folder named public under your Desktop folder

   ```
   mkdir ~/Desktop/public
   ```

   iv) Set the permission of your Desktop/public folder with a value of 755

   ```
   chmod 755 ~/Desktop/public
   ```

   v) Add 'write' permission of your Desktop/public folder to everyone.

   ```
   chmod a+w ~/Desktop/public
   ```

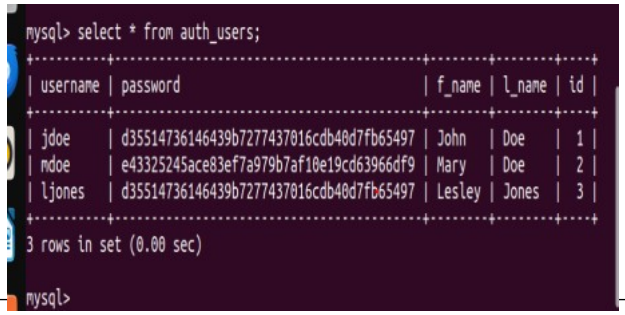
   vi) Remove your Desktop/public/garbage directory and its files/subdirectories recursively.

   ```
   rm -rf ~/Desktop/public/garbage
   ```

2. Power on your Ubuntu Linux virtual machine. Open a terminal, complete the steps from the handout titled "Create MySQL database" (available from our Moodle course site). During the process, you should take four screenshots as mentioned in the handout.

   Insert the first screenshot

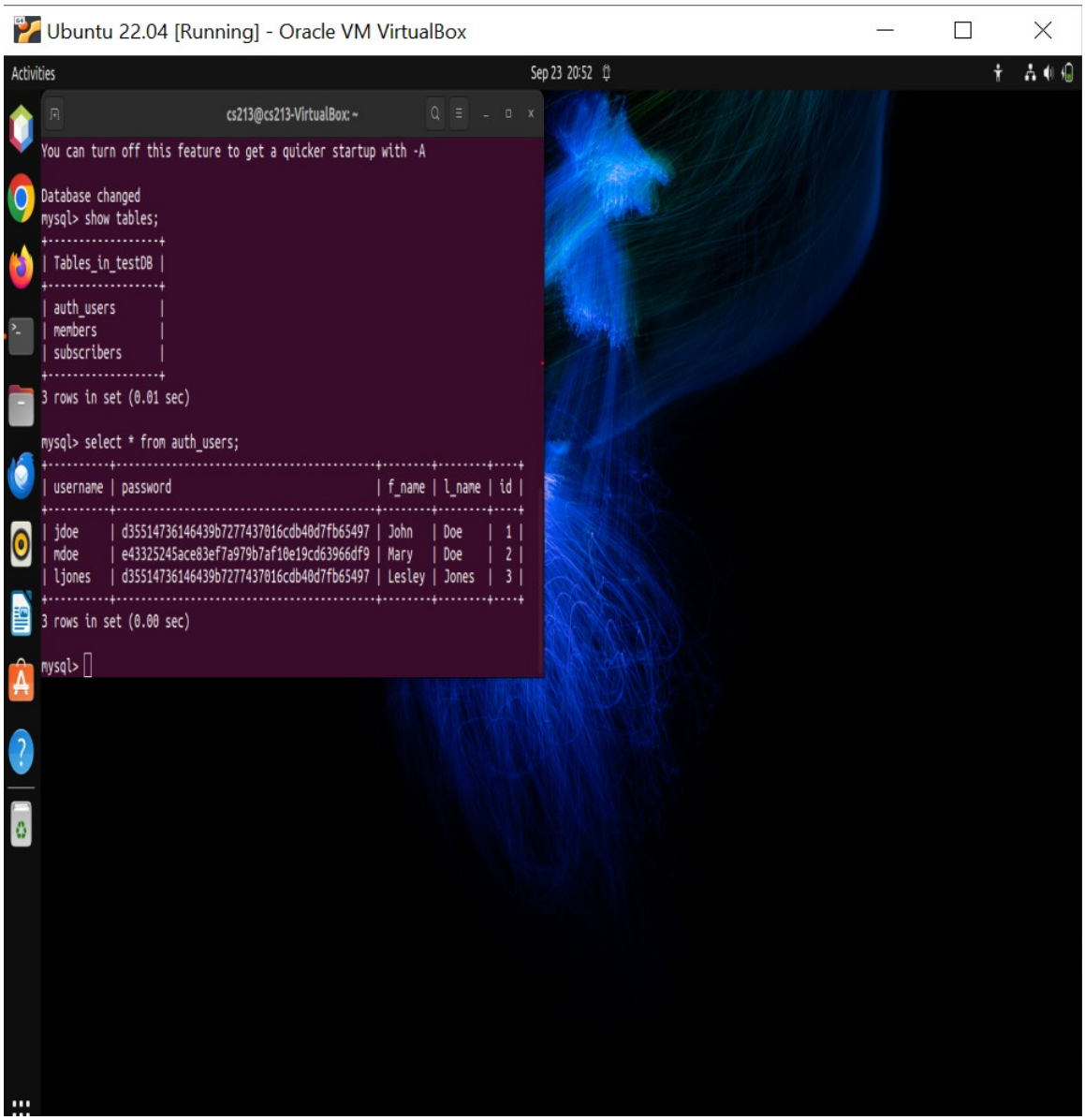
I forgot to take Screen shot of first one, so I have only the updated one, sorry



```
mysql> select * from auth_users;
+----------+------------------------------------------+--------+--------+----+
| username | password                                 | f_name | l_name | id |
+----------+------------------------------------------+--------+--------+----+
| jdoe     | d35514736146439b7277437016cdb40d7fb65497 | John   | Doe    |  1 |
| mdoe     | e43325245ace83ef7a979b7af10e19cd63966df9 | Mary   | Doe    |  2 |
| ljones   | d35514736146439b7277437016cdb40d7fb65497 | Lesley | Jones  |  3 |
+----------+------------------------------------------+--------+--------+----+
3 rows in set (0.00 sec)

mysql>
```

Insert the second screenshot



Insert the third screenshot

Insert the fourth screenshot

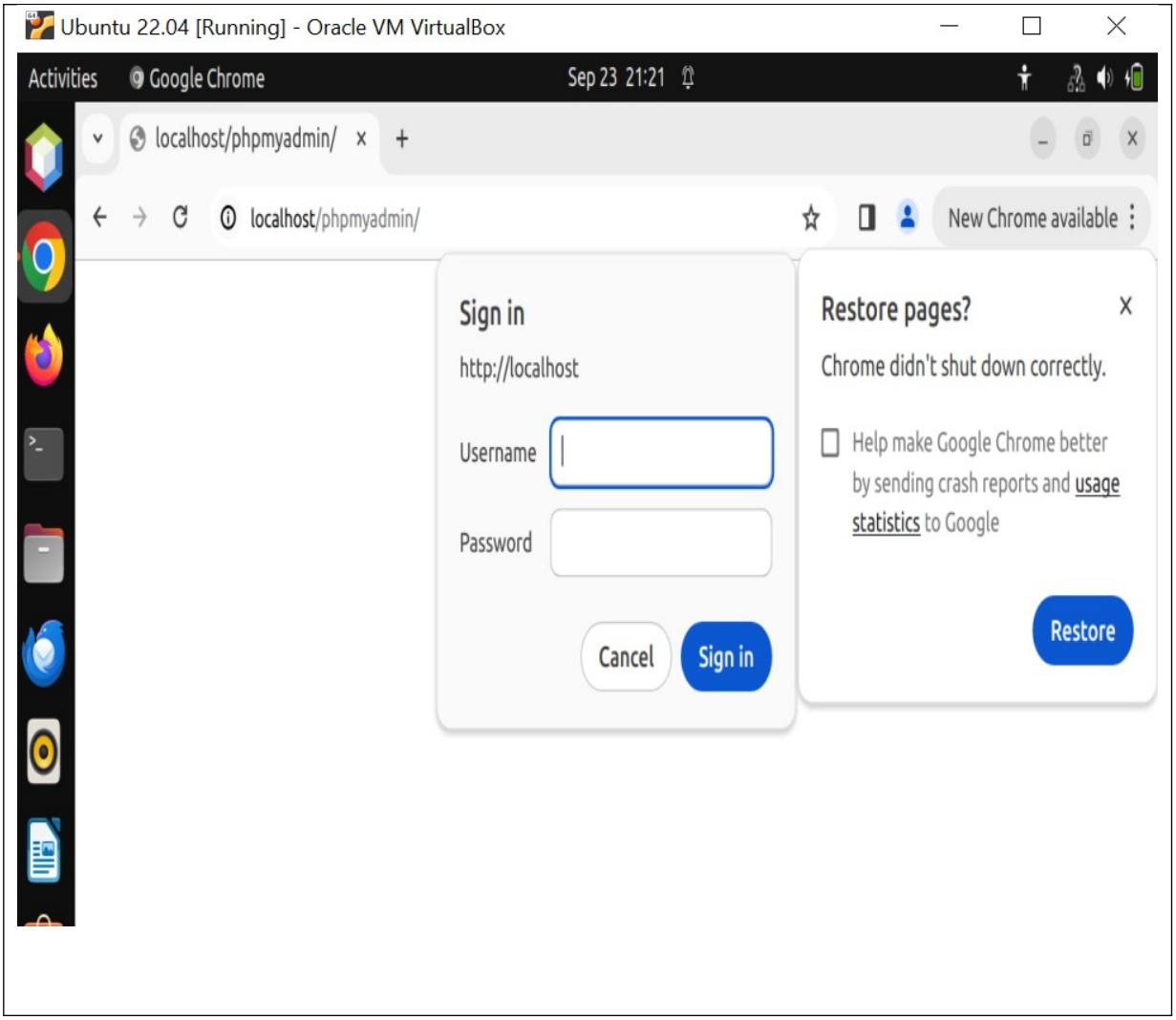
Next perform two database operations:

i) Dump your *testDB* database and save it with a name called ***testDB.sql***. Use gedit editor to open your ***testDB.sql*** file. Take a screenshot of your gedit screen and insert it here below:

ii) Create a new database named *testDBbackup* using your ***testDB.sql*** file. Take a screenshot of showing the command lines in a terminal, which used the *testDBbackup* database and showed all the tables within the database. Insert your screenshot below:

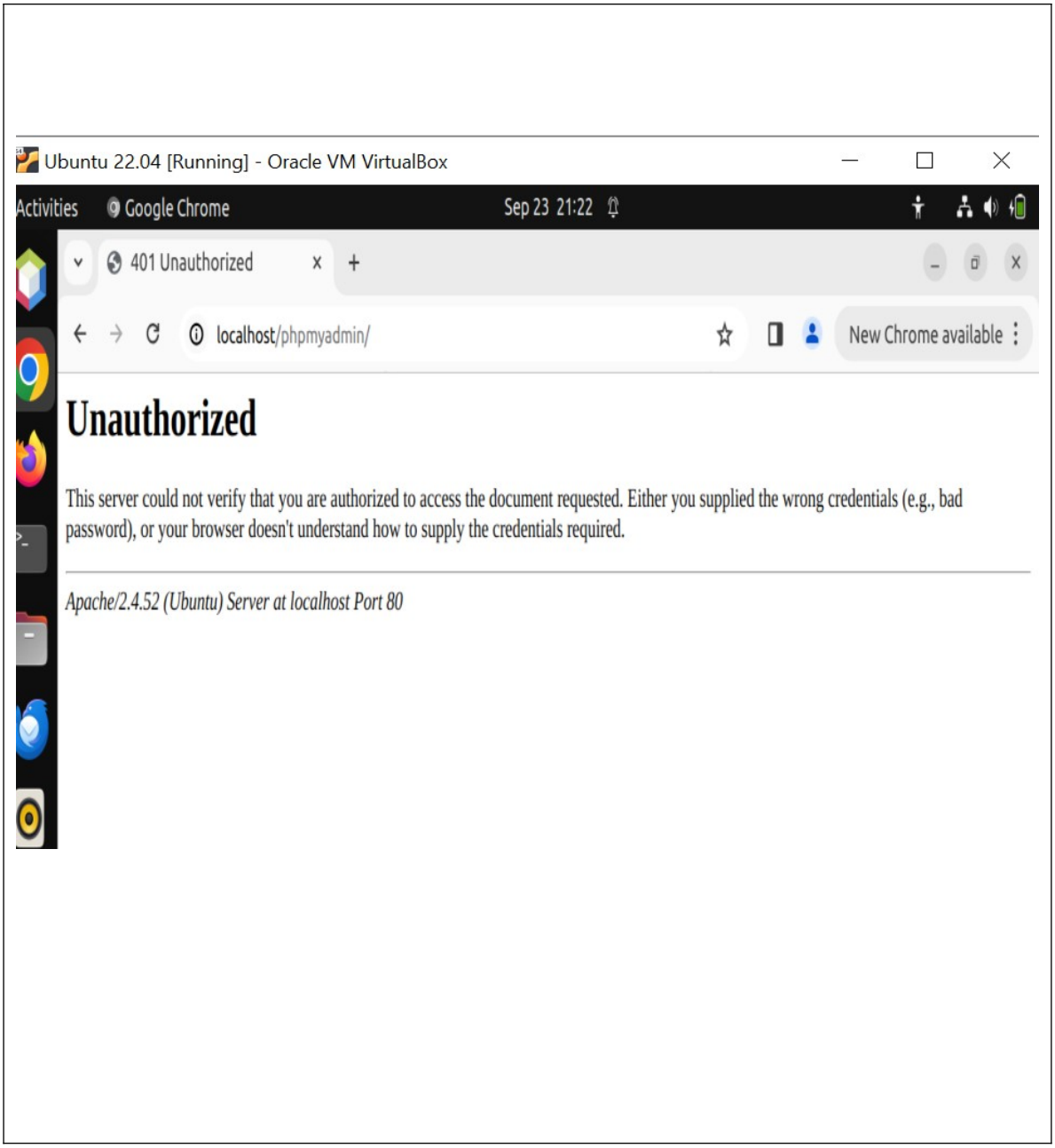
3. Install phpMyAdmin (refer to the handout titled "How to Install and Secure phpMyAdmin on Ubuntu") into your Linux virtual machine as explained in class.

   Open a Chrome or FireFox browser, type in http://localhost/phpmyadmin to access your phpMyAdmin interface. A dialog box titled "Authentication Required" should pop up. This is a security feature set up in the *.htaccess* file earlier in the installation. Take a screenshot to show this "Authentication Required" dialog box from your virtual machine and insert your screenshot below.



If you get past this layer of security successfully, you'll see the login page for you to login to your phpMyAdmin (use "root" and "letmein" as username and password for your login respectively).

i. Show all databases, and take a screenshot of all the databases available. Insert your screenshot below.



ii. Click on your **testDB** database and then the **auth_users** table. Next export the auth_users table as "CSV" format. Open the "auth_users.csv" file with a text editor (e.g. gedit). Also take notes for the order of data fields and the field separator used. Next **change the ids from 1, 3, 4 to 4, 5, 6** respectively because we'll import the csv file to populate a new table later as a merge records operation. These id values are primary keys, which may cause issue (e.g. performing update operations with the matching keys as oppose to records merging) when import into the new table.

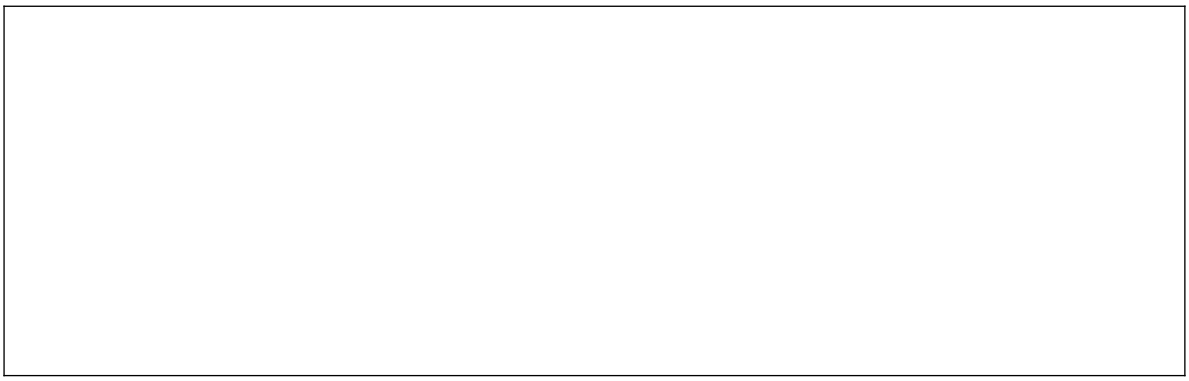
iii. Click on the *Database* tab and create a new database named **mytestDB**. Next create a table named **auth_users**, exactly the same table we created in the **testDB** database. Use the same order of the data fields as you noted from your "auth_users.csv" file to create your new **auth_users** table.

Next insert the first two records into the new **auth_users** table with the following values:

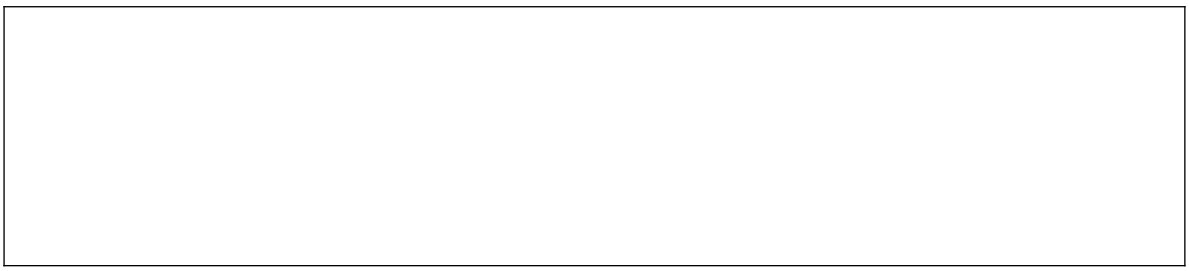
username: ***jtrudeau*** password: ***jtrudeau*** firstname: ***Justin***
lastname: ***Trudeau*** id: ***null***

username: ***rmckay*** password: ***rmckay*** firstname: ***Ron***
lastname: ***Mckay*** id: ***null***

iv. Next complete the table by importing the data field values from the "auth_users.csv" file. Click on the *Browse* tab to show all records from the **auth_users** table. Take a screenshot and insert it below.

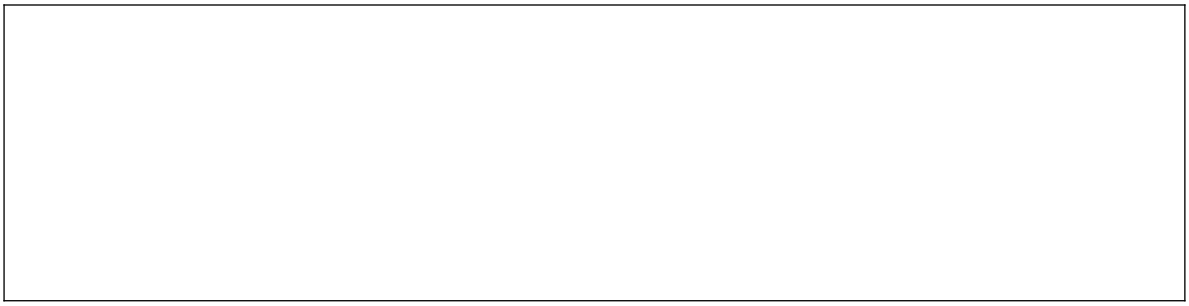


v. Click on the *Database* tab, and then *Check privileges* for **mytestDB** database, and then add a new user named **cs213newuser** with all privileges granted for the database. Click on the *Privileges* tab to show all the users. Take a screenshot and insert it below.



vi. Click on your **mytestDB** database to use it, then click on the *SQL* tab to perform a query: *select all records with their usernames end with "doe".* Hints: use 'like' clause and '%' symbol.

Take a screenshot of the results and insert it below.



Next perform an update on the record " Justin Trudeau" to "Justyn Trudeau".

Next delete the record "Ron Mckay".

Then browse to show all records of the **auth_users** table in **mytestDB** database. Take a screenshot and insert it below.

vii. Create a new database named mytestDBbackup which is a backup copy of your mytestDB database. Browse the auth_users table of mytestDBbackup database. Take a screenshot and insert it here below:

Submitting your work:

When you're done, please export/save this Word document as PDF format. Submit your PDF file via Lab 2 link on our Moodle page by *Monday, September 23, 2024 (before midnight).*