
Tutorial 1

CSC343
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Marking & Tutorial Teaching Assistants

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Piazza

- If you are not already enrolled in the class on Piazza, please email Michael (MICHAEL.LIUT@UTORONTO.CA)
- Instead of emailing a TA or the Professor a general question, ask it on the Piazza board
- Check the board frequently to see if your question has already been asked and to answer other students' questions
- When should you email Michael instead of posting on discussion board?
 - When the answer to your question is very specific to you, and knowing it will not benefit any other student.



Tutorial Participation

Expectations:

- You show up on time, ready to work.
- You spend the hour working productively on your lab.
- You are not messing around with your friends, but instead working collaboratively.
- You are not disrupting the flow of the lab and disturbing people around you.

Marks:

- If you meet all of the above criteria, and the TA thinks you have made a good effort to complete the lab by the end of the hour, you will receive your mark for the lab.
- At the start of the lab the TA will let you know how much you have to complete to get the participation mark.



Anonymous feedback form:

<https://forms.gle/hEUndxSwiWxwcVzy9>



Overview

1. Data Independence
2. Basic Server and MySQL Commands
3. Let's Try an Example Together!
4. Executing a Script



Connecting to UTM's Servers

- Access to MySQL requires you to establish a connection with:

1. `cs.utm.utoronto.ca`

OR

2. `cslinux.utm.utoronto.ca`

- To establish this connection you must use SSH protocol.

e.g. `ssh UTORID@cs.utm.utoronto.ca`

`ssh UTORID@cslinux.utm.utoronto.ca`



Basic Bash Commands: SCP

- SCP is *Secure Copy* used for file copying to/from different hosts.
- To copy a file “myfile.txt” from a remote host to your local host:
 - `scp UTORID@[UTM_Server]:myfile.txt /some/local/directory/`
- To copy a file “myfile.txt” from your local host to a remote host:
 - `scp myfile.txt UTORID@[UTM_Server]:/some/remote/directory/`

NOTE:

- Replace UTORID with your own UTORID and UTM_Server with one of the hosts in the previous slide.
- Ensure that you replace the paths (such as myfile.txt or /some/remote/directory) with valid paths in your local system and your cslinux directory.



Connecting to MySQL

- Access is facilitated by **mcsdb.utm.utoronto.ca**.
- To connect to MySQL from your established connection with one of UTM's servers listed on the previous page, use the command:

➤ `mysql -u [YourUTORID] -p -h 142.1.207.11`



MySQL Login Credentials

- The command from the previous page:
 - `mysql -u [YourUTORID] -p -h 142.1.207.11`
- [YourUTORID] is to be replaced with your actual UTORID; no brackets.
- Password: last 5 digits of their library barcode, before the last 2 digits.

e.g. If your barcode number is #1234567890 then your password == 45678.



MySQL Database

- You can check what databases you have available to work with by requesting a list of them; using the **SHOW DATABASES;** command.
- Your working database is: "[YourUTORID]_343".

e.g. If your UTORID is smithjohn13 then your database == "smithjohn13_343".



Basic MySQL Commands

NOTE: Anything that is capitalized should be written as is on the mysql terminal. Anything with [] surrounding them must be replaced with a valid value.

Command	What does it do?
SHOW DATABASES;	Lists all databases.
USE <i>[db_name]</i> ;	Allows you to use this particular database.
SHOW TABLES;	Shows all tables in the database.
DESCRIBE <i>[table_name]</i> ;	Shows the structure of a table.



Example

- Please download the following files:
 1. tut1.ddl
 2. tut1_drop.ddl
- Upload them to a directory on your UTM server.
- Launch tut1.ddl with your script execution commands.
 - tut1_drop.ddl is there to easily delete the tables created with tut1.ddl



Script Execution

- Two options:
 1. From Command Line (having not launched MySQL)
 - `mysql -u UTORID -p -h 142.1.207.11 DB_NAME < path/to/test.sql`
 2. From MySQL Command Line (**mysql>**)
 - **mysql>** `source ~/Downloads/test.sql;`

NOTE: The paths above will not be the same on your system(s). Ensure that you are replacing them with valid paths.



Script Execution

- Do you want to export the output to a file?

➤ `mysql -u UTORID -p -h 142.1.207.11 DB_NAME < queries.sql > results_file.txt`

NOTE: The paths above will not be the same on your system(s). Ensure that you are replacing them with valid paths. For the `results_file.txt`, the file should not already exist because you are creating the file with the redirection symbol `>`. If you want to append to an existing file, use the symbol `>>`.



Script Execution

- Make sure you can login into your database and run the commands or you will be behind
- Try messing around with commands in the database by looking at the tutorial files and the commands they have
 - We will be learning the syntax formally in later lectures/tutorials



Any Questions?

- Do you have any questions?
- If you have any content that you would like to be added in a Tutorial, please let us know by Friday!
 - Email requests to:
 - Saihiel Bakshi (saihiel.bakshi@mail.utoronto.ca) OR
 - Oluwaseun Cardoso (oluwaseun.cardoso@mail.utoronto.ca)