1. **Introduction to SQL Workbench**
2. Start MySQL Workbench (WB) from the Start 🡪 Programs menu.
3. Create a new connection by typing in wmc3317-2.bus.sfu.ca as the hostname,
   * username = your sfu email ID (e.g., nsaraf),
   * password = the last five digits of your student ID
4. Once logged in you will be able to see the READ ONLY databases you have access to including:
   * sakila - data of DVD rentals
   * employees
   * bigpvfc – Pine Valley Furniture
   * text – database provided by the textbook author
5. Do not run queries on tables without first checking their size. If it is huge, it will stall the server.
6. Learn to explore the **WB** functionality in terms of what the five windows are for. First, learn to browse the schemas (Tables) for the three databases. Then right click on Sakila and click on Schema inspector. This will describe the schemas (Table metadata) in the main window. The top-right windows shows the Structured Query Language syntax for exploring the data.
7. In the first couple of weeks watch the following videos. You may find it useful to watch them repeatedly during the semester.

* **MySQL Essential Training** at Lynda.com videos available in the SFU library
* **MySQL 5 Tutorial | MySQL Workbench Data Modeling Intro** (<http://www.youtube.com/watch?v=7Pwj7nV-oRM> )

1. **Extracting and summarizing data for managerial reporting using SQL**

Now we shall create preliminary SQL scripts in MySQL that will help you to explore the databases. The benefit of the Query window is that you can save the query file as a (.sql) program and use it again. Use ‘#’ to start a comment line in the SQL code.

In the Query window type/copy-paste the following SQL commands that will help you navigate the databases.

1. SQL for examining metadata

#exploring sakila

show databases;

use sakila;

show tables;

describe <table name>;

Use COUNT(\*) to do various things such as counting the number of records in each table.

select count(\*) from sakila.actor;

**Find which table has the most number of records.**

1. SQL for viewing, summarizing data

Read and understand what the code below does and execute it.

use sakila;

show tables;

describe film;

#view the data

select \* from sakila.film;

select title, release\_year from sakila.film LIMIT 0, 1000;

1. **Using your own workspace on the MySQL server**
2. Each of you have been given an empty database to play with (named using your sfu email id – see on the left panel of WB after you log into wmc3317-2). I will refer to this as YOUR database. You have full privileges to add tables, populate it with data, and delete those tables. However, it is important that you keep track of the disk space your database uses. Below is the query for that. Run this periodically and identify tables that are voluminous – and delete or trim them – or download them to your backup drive. The total disk space you can consume at any time is 100 MB.

**#keep track of your database size:**

SELECT table\_schema, sum( data\_length + index\_length ) / 1024 / 1024 "Data Base Size in MB" FROM information\_schema.TABLES GROUP BY table\_schema ;

**#Delete all tables from your database space**

SET FOREIGN\_KEY\_CHECKS = 0;

SET @tables = NULL;

SELECT GROUP\_CONCAT(table\_schema, '.', table\_name) INTO @tables

FROM information\_schema.tables

WHERE table\_schema = 'db\_testing'; -- specify DB name here.

SET @tables = CONCAT('DROP TABLE ', @tables);

PREPARE stmt FROM @tables;

EXECUTE stmt;

DEALLOCATE PREPARE stmt;

SET FOREIGN\_KEY\_CHECKS = 1;

**#Empty a table of all data but not the schema**

truncate <tablename>;

1. DO NOT ever run the command “drop database <your database>”. It will erase all your data and YOUR database. Moreover, to create another database you will have to request me. I will take typically 48 hrs to create another empty database for you (depends on the day of the week). Running the Drop command on any other READ ONLY database will be OK since you do not have Drop privileges anyway.
2. To copy any READ ONLY data to YOUR database use the following query.

Create table YOUR.newtable as (select \* from bigpvfc.order\_t);

To copy a small portion:

Create table YOUR.newtable as (select \* from bigpvfc.order\_t LIMIT 0,1000);

To copy only the table definitions:

Create table YOUR.newtable LIKE bigpvfc.order\_t;

IMPORTANT: You may find it necessary to uncheck SAFE UPDATE MODE in MYSQL WB for this work.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_