COMS2002A: DATABASE FUNDAMENTALS

SEMESTER 1, 2024

LAB 1 – 12 Feb. 24

Lecturer: Mr. Mikhail Chirkoot

2339279@students.wits.ac.za

INTRODUCTION TO THE COMS2002 LABORATORY SESSIONS Welcome!

We'll be running our SQL queries on the MySQL RDBMS. The MySQL server is accessible via the Lamp server. Follow these steps to access the Lamp server.

USERNAME, PASSWORD and DATABASE name.

1. Your username and password is your student number prefixed with 's'. So, if your student number is *12345*, your username and password will both be *s12345* .
2. A database has also been created for you to work with. Your database name is your student number prefixed with 'd'. Therefore, if your student number is 12345, then your database name is *d12345* .

LOG IN TO THE LAMP SERVER and MySQL Server

1. Open a command prompt.
2. Type in `ssh username@lamp.ms.wits.ac.za`
3. To login `mysql -u username -p`
4. Now you should have access to the MySQL prompt.
5. You do not have permission to create a database, so you have to use the database already created. Type in the command
   `USE database_name`

LAB1 PART 1 - PRACTICE

Go through the ***Introduction to SQL – 1.ppt*** file that was demonstrated in class. Practice all the following SQL commands.

1. To show all databases in your server
   `SHOW DATABASES;`
2. To select a particular database to use
   `USE database_name;` (select any database of your choice)
3. To create a new table
   ```
   CREATE TABLE my_first_table( name
   varchar(30),
   age integer);
   ```
4. To describe your newly created table
   `DESC table_name;`
5. To delete your newly created table
   `DROP TABLE table_name;`

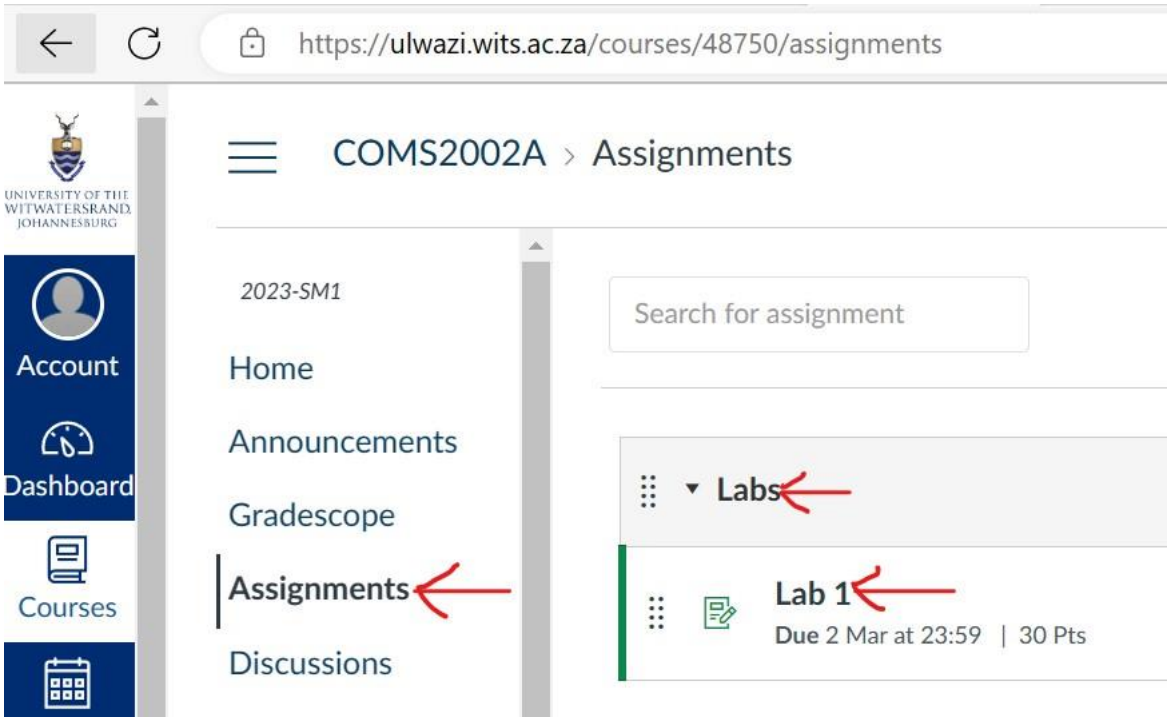
PART 2 – ANSWER THE FOLLOWING QUESTION (To be submitted on Gradescope).

1. Write the SQL code that will create the table structure for a table named ***students***. The structure is summarized in the following table. Save this query (without any additional text) as q1.txt.

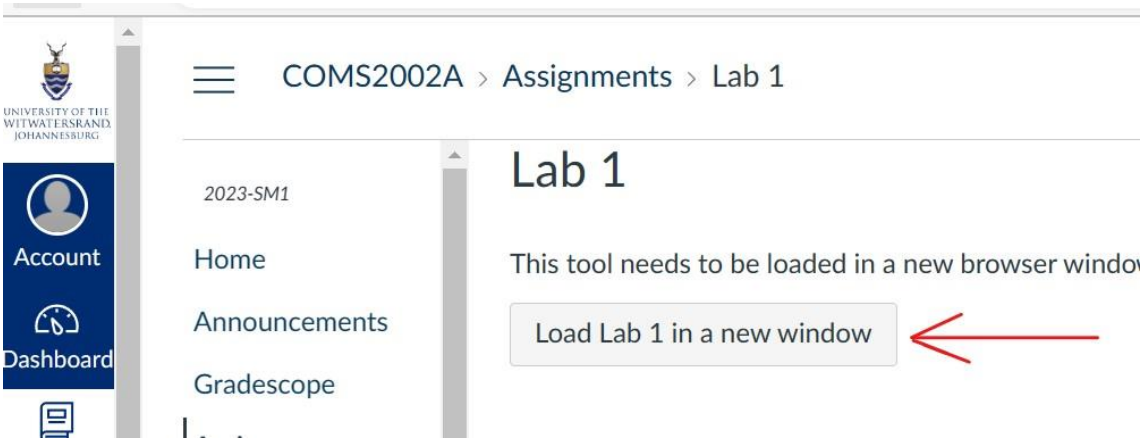
ATTRIBUTE (FIELD NAME)	**DATA TYPE**
student_num	CHAR(3)
student_lname	VARCHAR(25)
student_fname	VARCHAR(25)
enrollment_date	DATE
age	INTEGER

SUBMISSION

1. Ensure you save your query for Part 2, question 1 in a text file named **q1.txt. There should be no comments or additional text, only the query.**
2. Log in to Ulwazi, navigate to Assignments -> Labs -> Lab1. See screenshot.



3. Click 'Load lab 1 in a new window'



4. This takes you to the Gradescope site. Navigate to the assignments. Select **Lab 1** and submit your assignment. Upload your **q1.txt** file.

5. After a few minutes, you should get the result of your submission. Your score and details of the test cases. The maximum grade is 30. Test cases passed will be in green while test cases failed would be in red. The names of the test cases and the error messages you get should indicate what is wrong with your code. Please ask for help if needed.

6. You have unlimited attempts until the due date. Try as much as possible to get the full grade. You can do it!
7. See you next week!