Fundamentals of Data Management

Pass Tasks 5.1.1: SQL - Data Definition Language

Overview

In this tutorial, you will practise using SQL DDL statements to CREATE, ALTER and DROP tables in databases.

Purpose

Learn to write SQL DDL statements to create tables.

Task

Solve the tasks given below.

Time

This task should be completed in your fifth lab class and submitted for feedback in the fifth lab.

Resources

- Elmasri & Navathe, Fundamentals of Database Systems
- Connolly & Begg, Database Systems, Chapter 7
- Online resources, e.g.
    - Several topics on SQL at this link: http://www.w3schools.com/sql/default.asp

Feedback

Discuss your solutions with the tutorial instructor.

Next

Get started on Task 5.1.2.

Pass Tasks 5.1.1 — Submission Details and Assessment Criteria

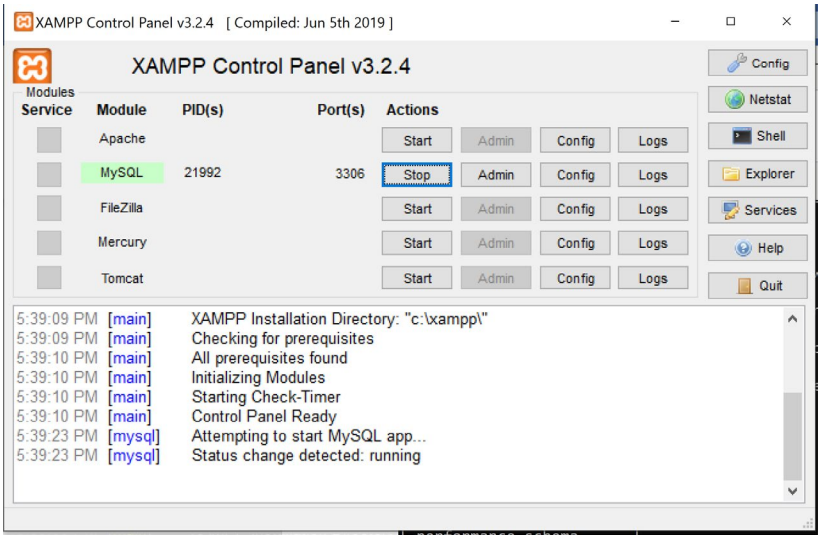
Document your solutions to the tasks using a Word processor and upload to Doubtfire as pdf. The tutors will discuss them with you in the lab.

Getting Started

1. Option: XAMPP Users

Step 1: Open XAMPP

Step 2: start MySQL as below

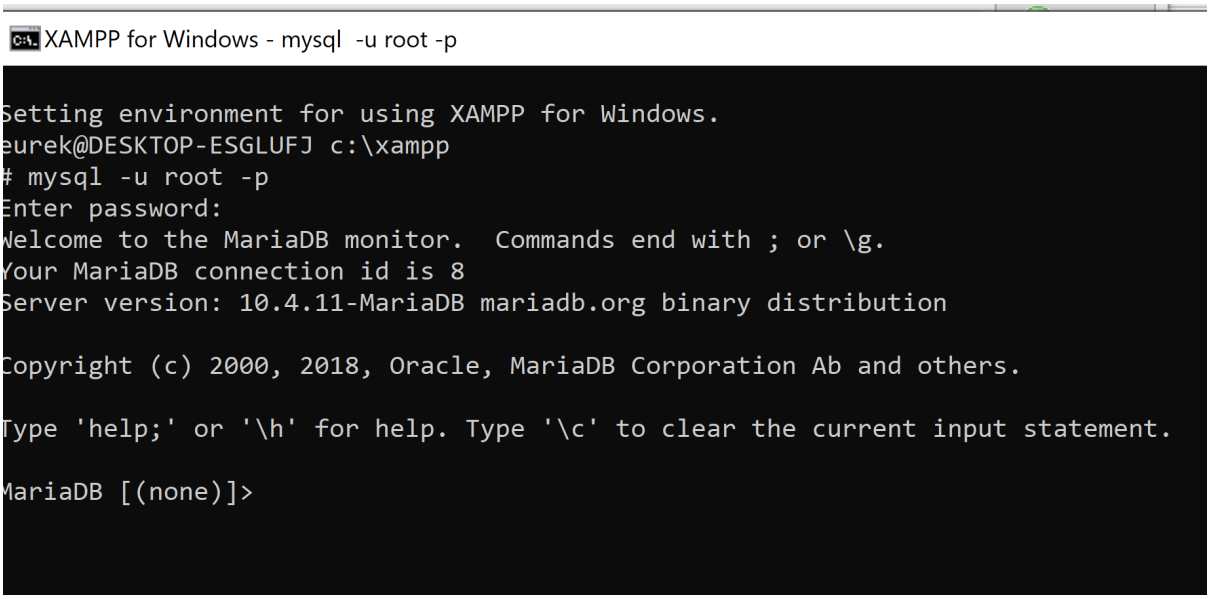


Step 3: Open the Shell

Step 4: Type mysql -u root -p

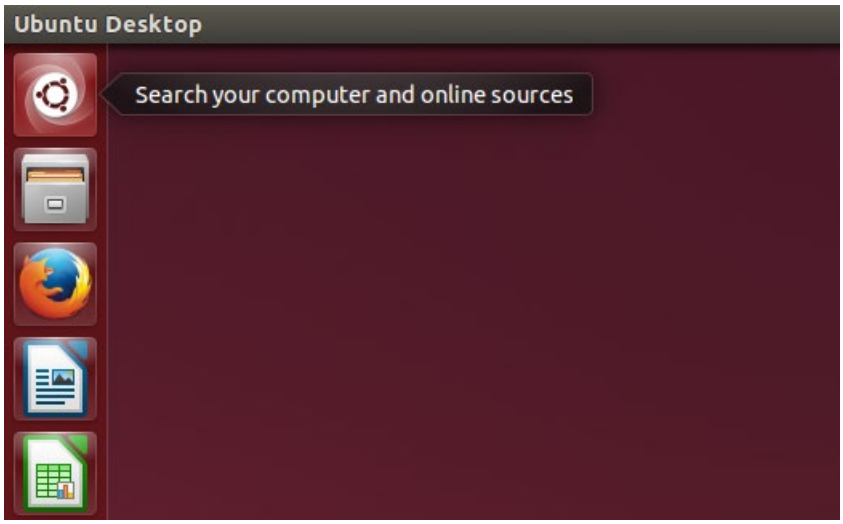
Step 5: No password (if you want to change the password follow instruction given in the website)

Step 6: *Type:* show databases; If database “test” exists then type: drop database test;



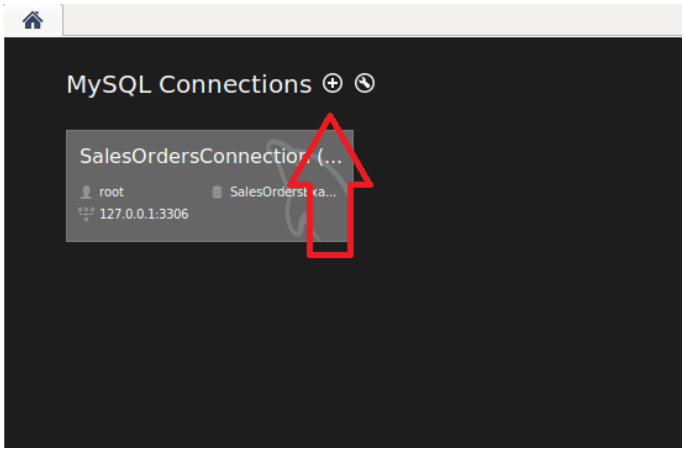
2. Option: VMWare Users

Open the VMWare Player and start the virtual machine. The password for fdm is admin. Click on the application icon (the uppermost icon on the left).

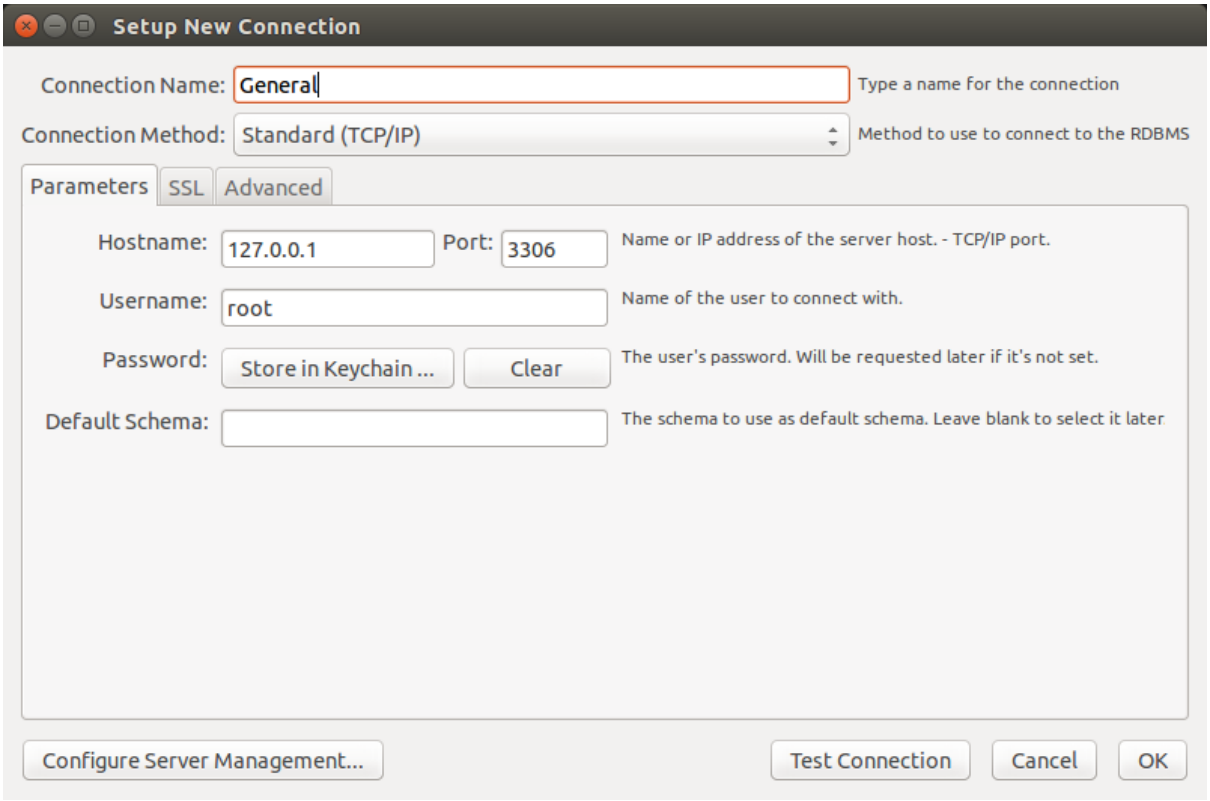


If you can't find MySQL Workbench, type it into the search field:

Open MySQL Workbench. Click on the plus sign next to MySQL Connections to make a new connection



Make a new connection (you can name it any way you like) by leaving all the defaults. Don't specify a default schema:



Subtask 5.1.1

Open the new connection.

Type

CREATE SCHEMA test;

OR

`CREATE DATABASE test;` (or any other name for your database)

Type

USE test

This sets ‘test’ as your working schema (environment).

Consider the following:

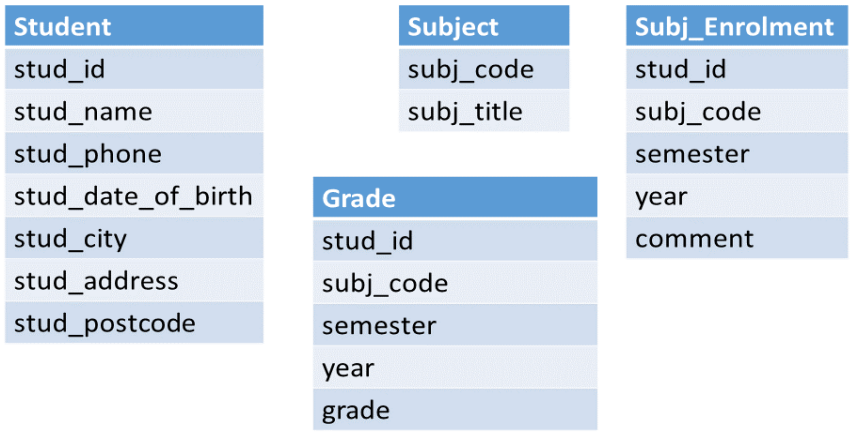


Figure 1: Parts of the University Database

For each relation in the University database in figure 1 define the data type for each attribute. You can use the data types of the SQL standard (see w3schools), MySQL or any other relational database product.

Make a table for each database relation and list the attributes with types. For the string types, make a decision whether char or varchar is more appropriate, and define the maximal length of the strings. Make sure you can reason why you chose the type of data.

Example:

STUDENT Table

Attribute	Data type
Name	Varchar (30)
Student_Number	Number(7)

Document the solution and upload it.