

CP5804 Database Systems

Week 1: Lab activities

Getting Started with MySQL Workbench

MySQL¹ is one of the most popular and widely used open-source relational database management system (RDBMS). The source code of MySQL is available under the terms of GNU General Public License² as well as it also offers a variety of proprietary agreements. MySQL covers a broad subset and extension of ANSI SQL 99³, stored procedures, triggers, cursors, updatable views as well as other advanced functionalities to ensure concurrency, replication and database security.

MySQL Workbench⁴ is a visual tool which can be used by any database professionals for data modelling, SQL development, database administration and much more. MySQL Workbench is offered in different versions among which the community edition is open-source and free to use under the GPL license.

This manual outlines how to install MySQL server and MySQL Workbench in your personal computers. It also describes the process of testing the installation by connecting to the database.

1. INSTALLING MYSQL AND MYSQL WORKBENCH IN YOUR PC

In order to use MySQL Workbench, you also need MySQL server accompanied. The simplest and recommended method to install both MySQL server and MySQL Workbench, is to download MySQL Installer (for Windows) and let it install and configure everything on your system. MySQL installer can be downloaded from: <https://dev.mysql.com/downloads/workbench/>. The installation process can be completed by following the MySQL Installation wizard's instructions. Eventually, the installation process will install several MySQL products including MySQL Workbench and start the MySQL server. (Installation package is available for other OS than Windows from the same site)

Download and install the recent MySQL Workbench package available.

2. TESTING THE INSTALLATION USING COMMAND PROMPT (IN YOUR PC)

After completion of the installation, we can test whether everything installed successfully or not. To do so, we can open a command prompt from the start menu. Then we need to change the directory to the one where MySQL is installed. (In most of the lab machines, you will find MySQL in this directory: C:\Program Files\MySQL\MySQL Workbench 8.0 CE)

After changing the directory to the appropriate one, we can execute the following command to connect to the MySQL server.

```
mysql -u root -p <password>
```

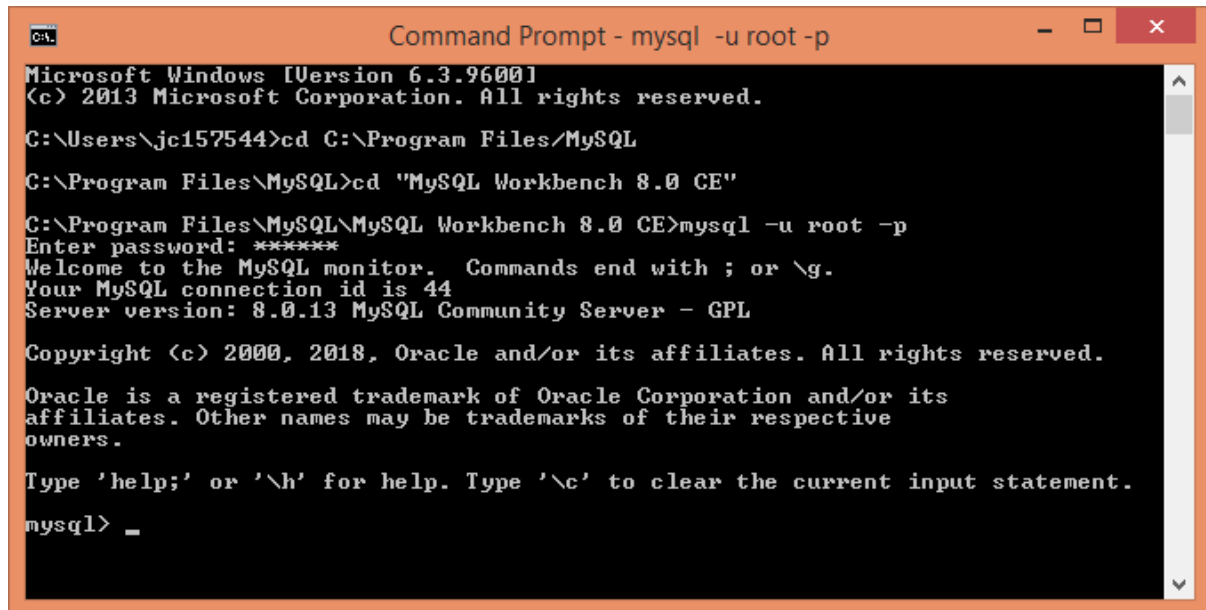
¹ <https://www.mysql.com/>

² <https://www.gnu.org/licenses/gpl-3.0.en.html>

³ <https://en.wikipedia.org/wiki/SQL:1999>

⁴ <https://www.mysql.com/products/workbench/>

If you have not set any password for 'root' account then just type: `mysql -u root`. The following figure (Figure 1) shows the steps above we discussed.



```
Command Prompt - mysql -u root -p
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

C:\Users\jc157544>cd C:\Program Files\MySQL
C:\Program Files\MySQL>cd "MySQL Workbench 8.0 CE"
C:\Program Files\MySQL\MySQL Workbench 8.0 CE>mysql -u root -p
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 44
Server version: 8.0.13 MySQL Community Server - GPL

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
mysql> _
```

Figure 1: Connecting to MySQL through command prompt

We are now connected to your MySQL server successfully. In this mysql prompt, we can also write queries. **You can type exit to end this connection.**

3. TESTING THE INSTALLATION USING MYSQL WORKBENCH (IN YOUR PC)

We can also check the installation by connecting to your MySQL database (server) through MySQL Workbench. MySQL Workbench can be initiated from the start menu. Figure 2 shows the user interface of MySQL Workbench.

You can create a new connection to the MySQL server by clicking on that + icon as indicated in Figure 2. Clicking on that icon will result in a new window to appear as shown in Figure 3.

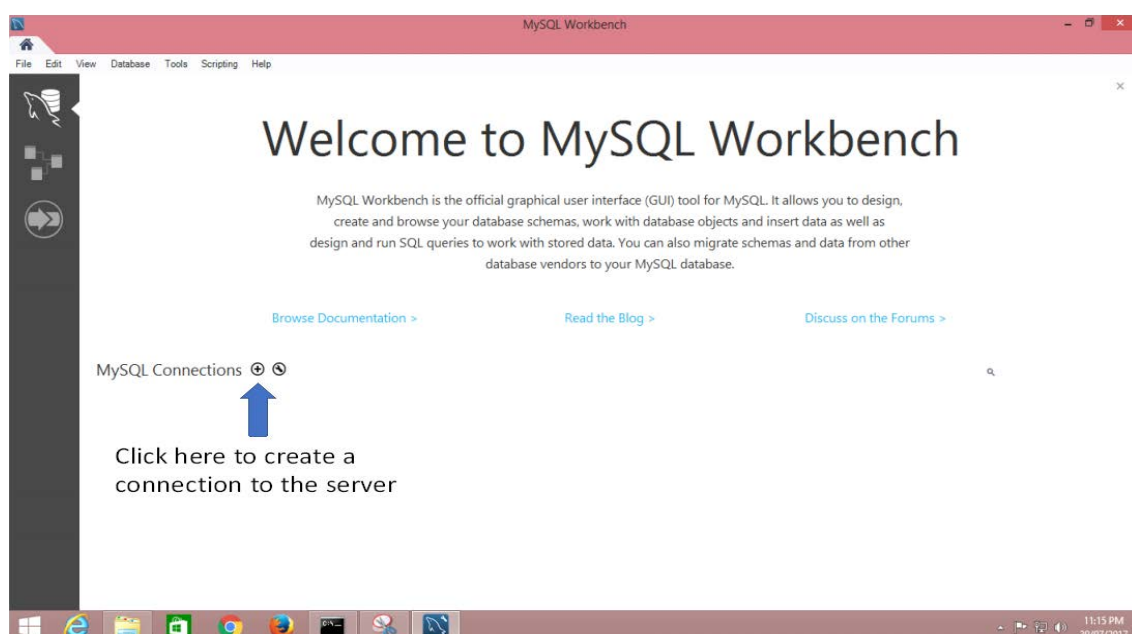


Figure 2: MySQL Workbench interface

Figure 3 explains the steps to setup a new connection to the server. After providing necessary inputs, the user can click the test connection button to test the connection. If the connection is successful, it will be notified to the user. When the user presses OK button, the connection will be saved for later use.

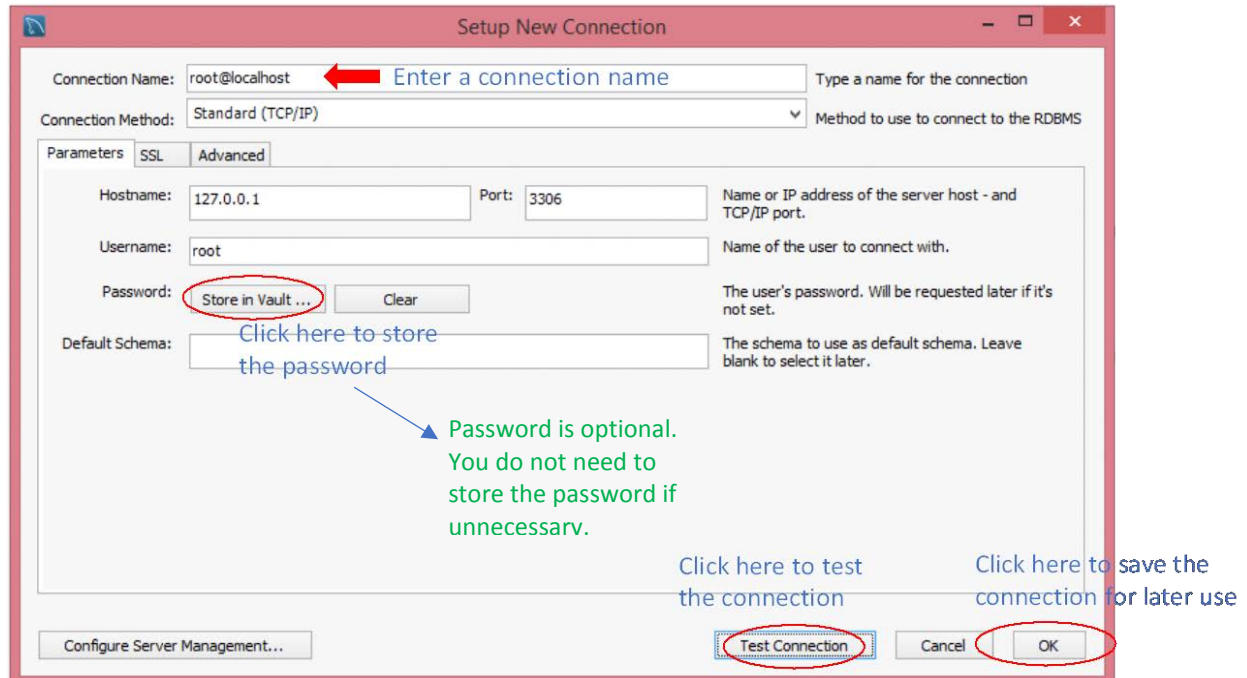


Figure 3: Setting up a new connection

Figure 4 shows the MySQL Workbench interface after saving the connection. Congratulations, you are now ready to interact with the database through MySQL Workbench.

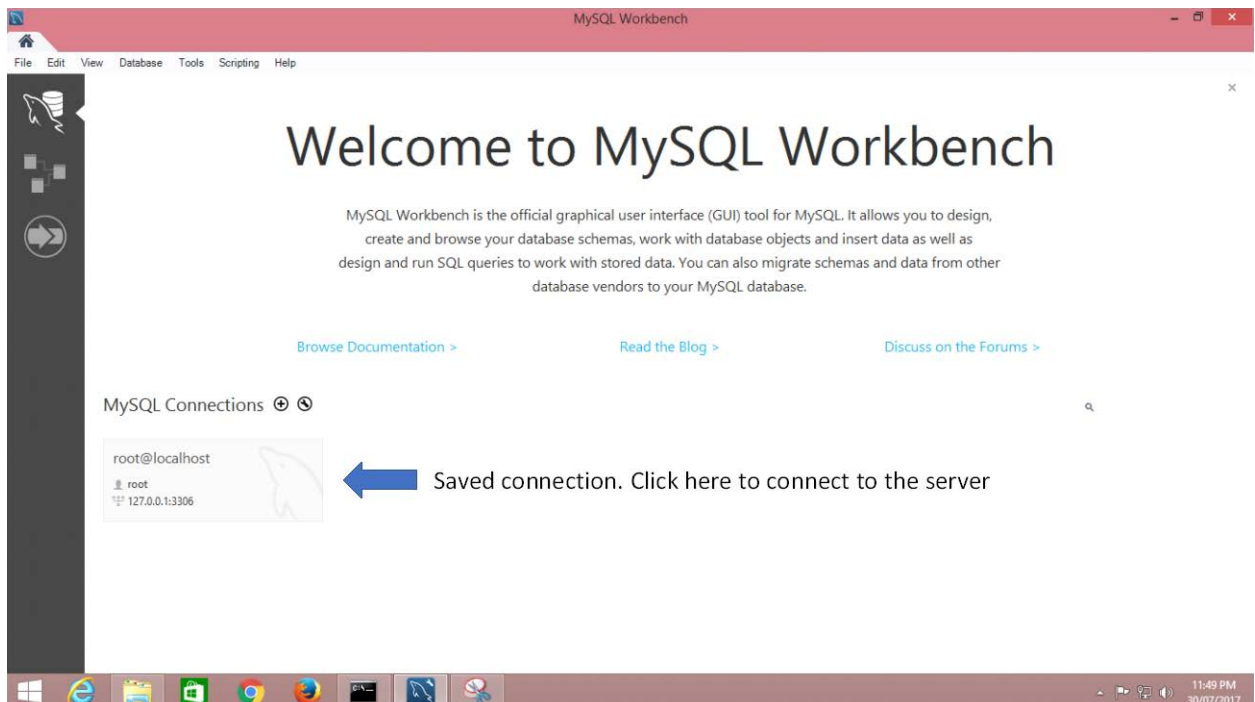


Figure 4: Saved connection for later use

This is the end of this week lab activity, and this activity is not to be assessed. From the next week, weekly lab activities will include lab tasks which will be assessed.