

MySQL Setup

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- In order to use TermCluster, you first must install and configure MySQL, a free database from <http://www.mysql.com/>
- If you already have MySQL setup on your computer, skip the slides pertaining to download and installation. However, you will still need to reference the slides dealing with setting up the termcluster-specific database

Downloading MySQL Installer

- Download the latest version of MySQL installer. I am using 5.6.17:
<http://dev.mysql.com/downloads/installer/>
- If you have multiple download options, go for the larger one (see below)

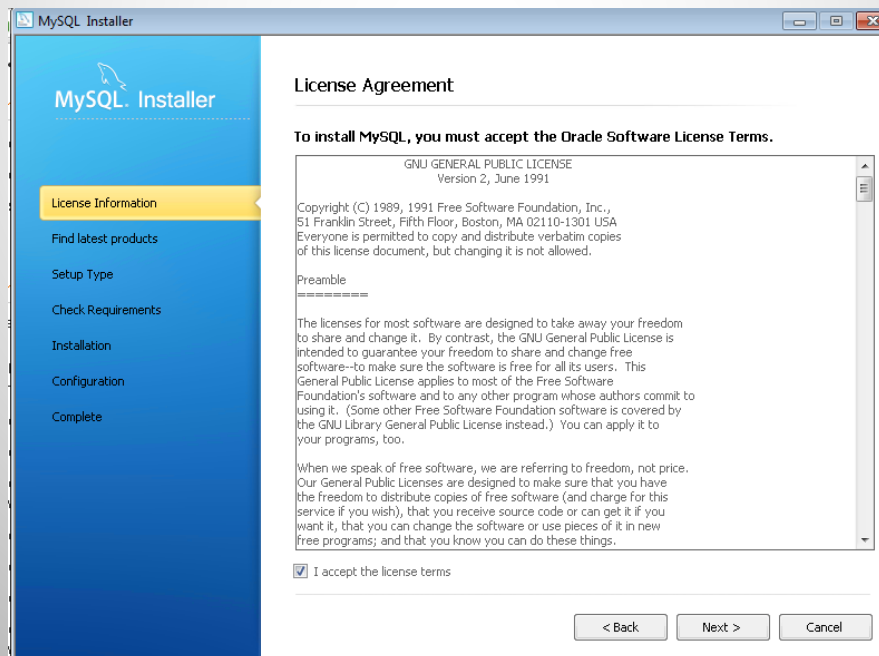
Select Platform: Looking for previous GA versions?

Microsoft Windows ▾

Windows (x86, 32-bit), MSI Installer (mysql-installer-web-community-5.6.17.0.msi)	5.6.17	1.5M	Download
Windows (x86, 32-bit), MSI Installer (mysql-installer-community-5.6.17.0.msi)	5.6.17	234.7M	Download

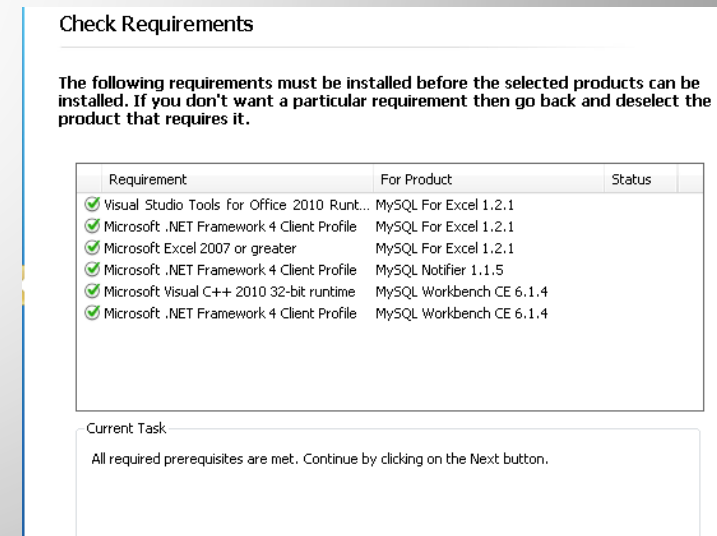
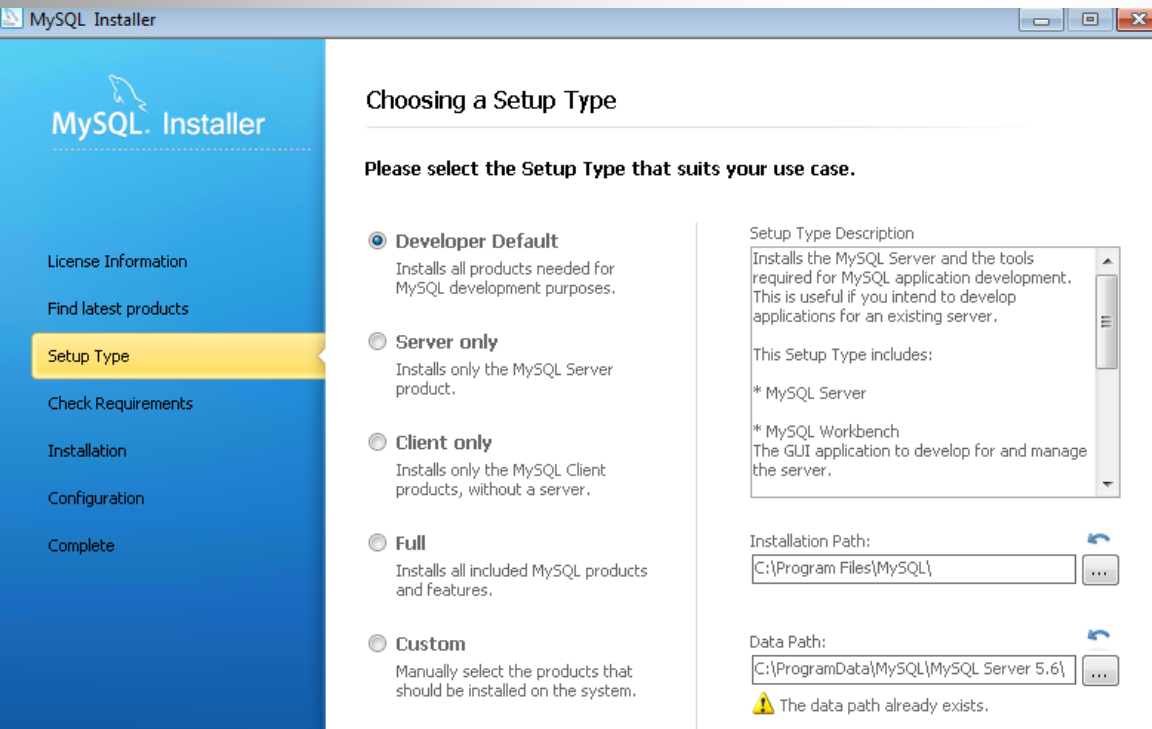
Run the Installer

- Run the installer after you install it. You should see a window that looks something like this:



MySQL Installer













- After agreeing to the license agreement, proceed to the “Find latest products” step to search for downloads
- Press next after the search completes. I’d recommend picking the “Developer Default” setup.
- Afterwards, install any requirements that it prompts you to install



Install MySQL Products

- The next step is to install the actual MySQL products that will allow us to use the database. The installer should populate a list of products for us. Download all their recommendations.
- If you run into an error on the Connector/ODBC, don't worry about it. We won't need that for termCluster

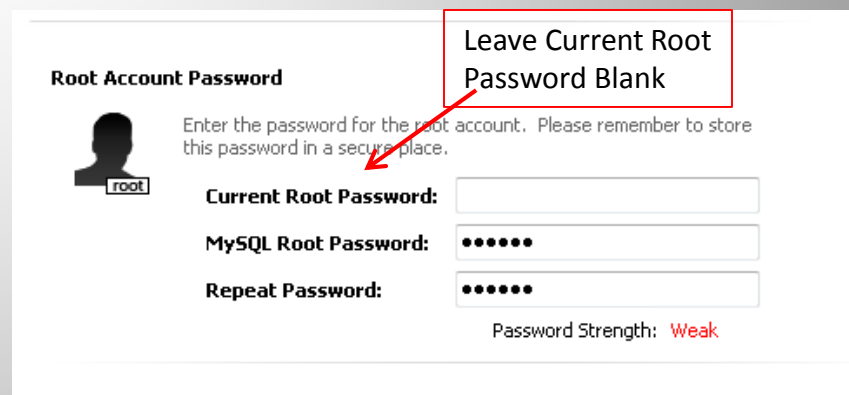
The following products will be installed or updated.

Product	Status	Progress	Notes
 MySQL Server 5.6.17	To be installed		
 MySQL Workbench CE 6.1.4	To be downloaded		
 MySQL Notifier 1.1.5	To be installed		
 MySQL For Excel 1.2.1	To be downloaded		
 MySQL Utilities 1.3.6	To be installed		
 Connector/ODBC 5.3.2	To be downloaded		
 Connector/C++ 1.1.3	To be installed		
 Connector/J 5.1.30	To be downloaded		
 Connector/NET 6.8.3	To be installed		
 MySQL Connector/C 6.1.3	To be installed		
 MySQL Documentation 5.6.17	To be installed		
 Samples and Examples 5.6.17	To be installed		

Click [Execute] to install or update the following packages

Configuration

- Proceed to the Configuration Step. I recommend choosing the “Development Machine” configuration with the default port number of 3306.
- On the next page, you will be asked to provide a root password. I recommend using “123456”. It is a very weak password, but if you are using MySQL only for termCluster, there shouldn’t be a security concern.
- If you do choose to use MySQL for another purpose and want a strong password , this is fine. TermCluster allows for a manual password entry, as well.




Windows Service Details

- Last, you will setup the windows service that starts MySQL automatically.
- I recommend using MySQL56 as your default service name.
- Use the below configuration settings:

MySQL Server Configuration


Windows Service Details

 Please specify a Windows Service name to be used for this MySQL Server instance. A unique name is required for each instance.

Windows Service Name:

Start the MySQL Server at System Startup

Run Windows Service as ...

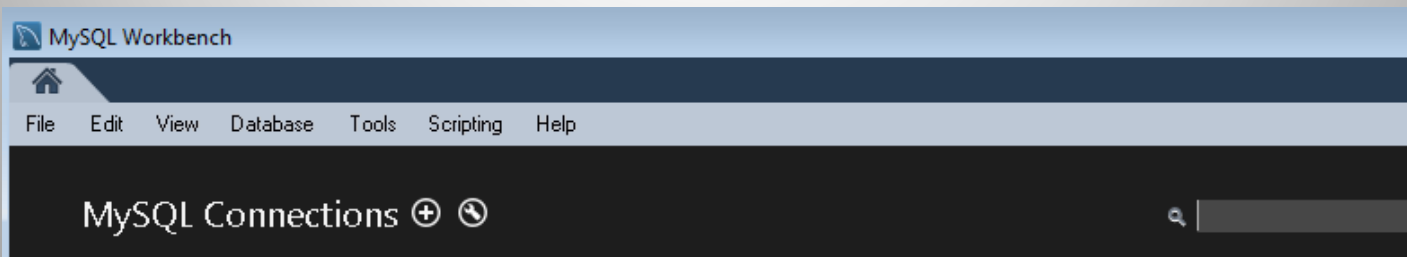
 The MySQL Server needs to run under a given user account. Based on the security requirements of your system you need to pick one of the options below.

Standard System Account
Recommended for most scenarios.


Custom User
An existing user account can be selected for advanced scenarios.

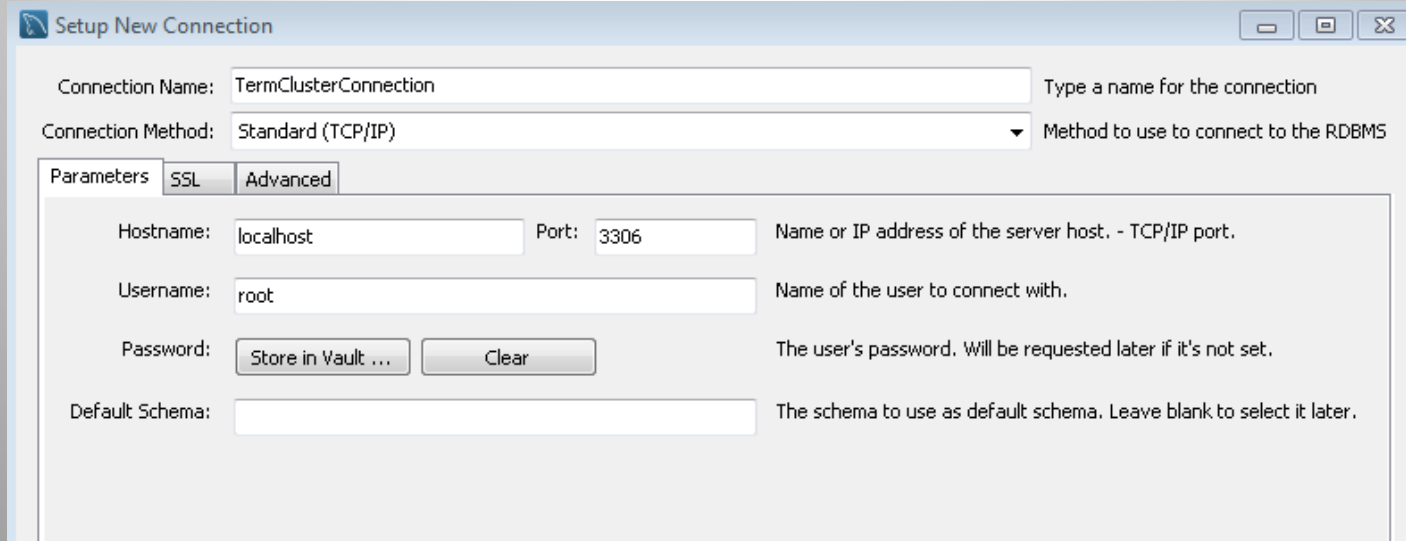
Introducing Workbench

- Press Next to allow the installer to finish the configuration process.
- Congratulations! You have now installed MySQL on your computer
- If it does not launch automatically, open MySQL Workbench. It should have been automatically installed to your computer. This will be your portal to access all your database information.



Connect to Database

- Click on the plus icon () next to the “MySQL Connections” text. The following dialog box should appear. If you set everything up correctly, the following parameters should work:
 - Hostname: localhost
 - Port: default (3306)
 - Username: root
- Don't worry about the SSL or Advanced tabs
- Name the Connection whatever you want



Setup New Connection

Connection Name: Type a name for the connection

Connection Method: Method to use to connect to the RDBMS

Parameters

Hostname: Port: Name or IP address of the server host. - TCP/IP port.

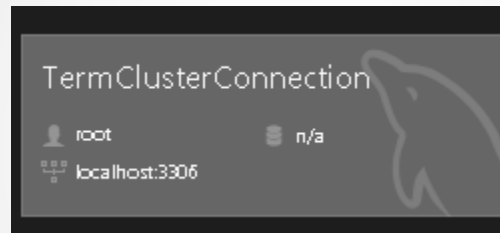
Username: Name of the user to connect with.

Password: The user's password. Will be requested later if it's not set.

Default Schema: The schema to use as default schema. Leave blank to select it later.

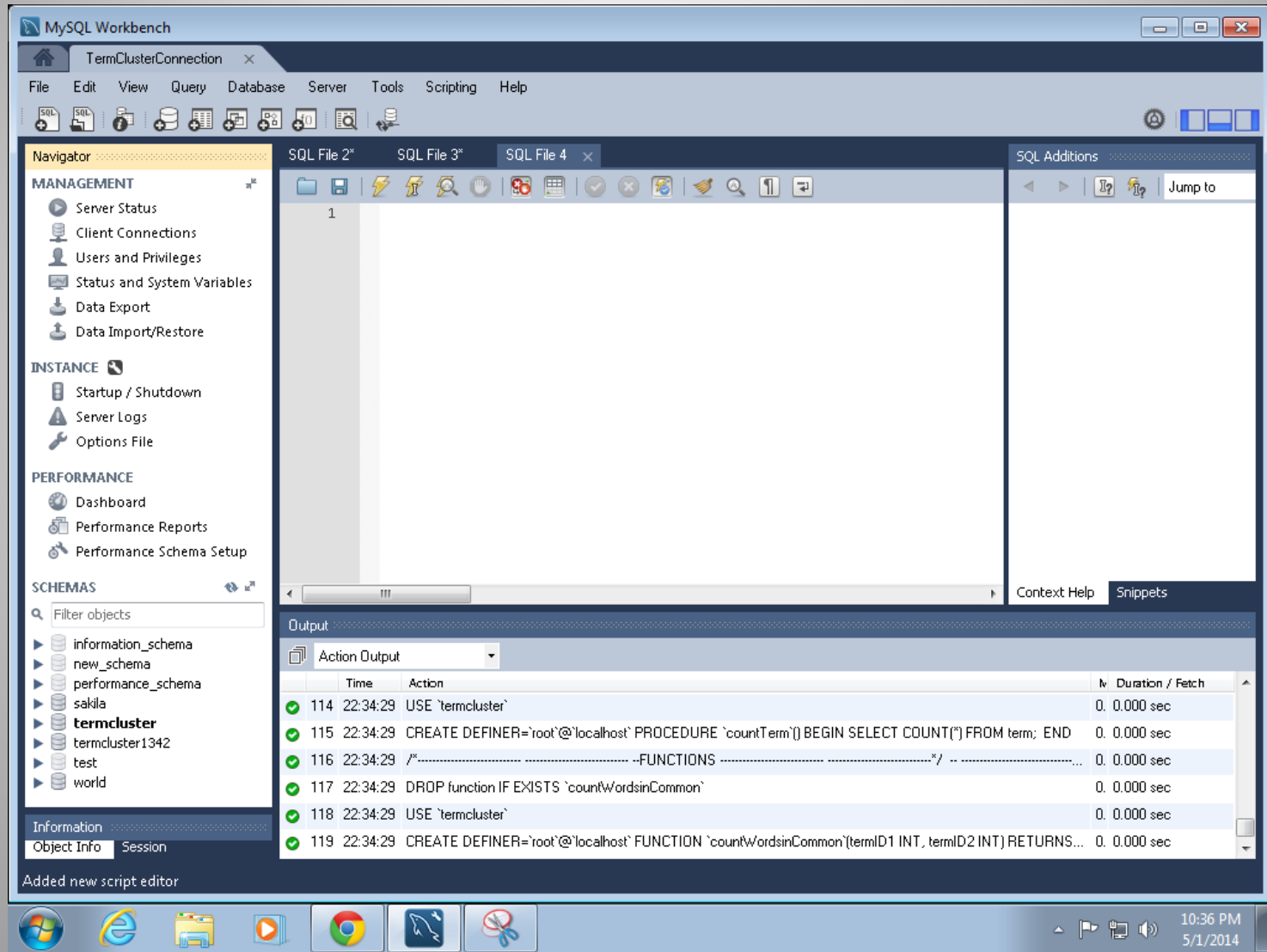
Setting up the termcluster database

- If everything worked properly, you should see the following icon on the resulting screen:



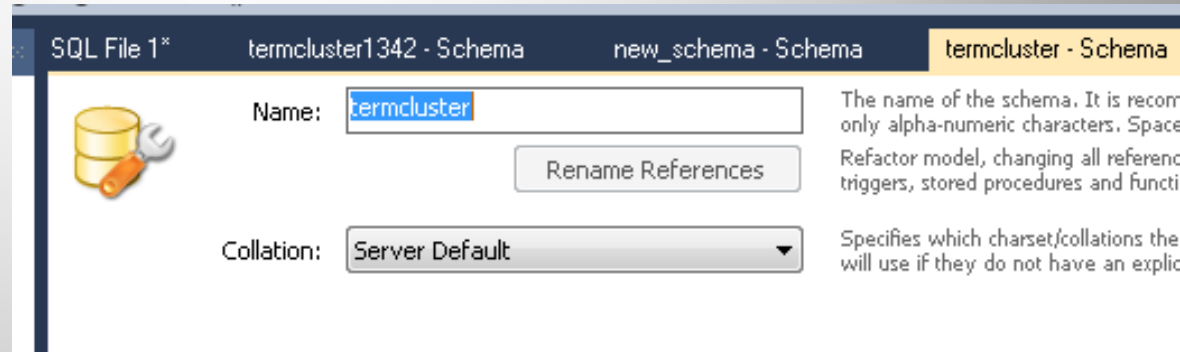
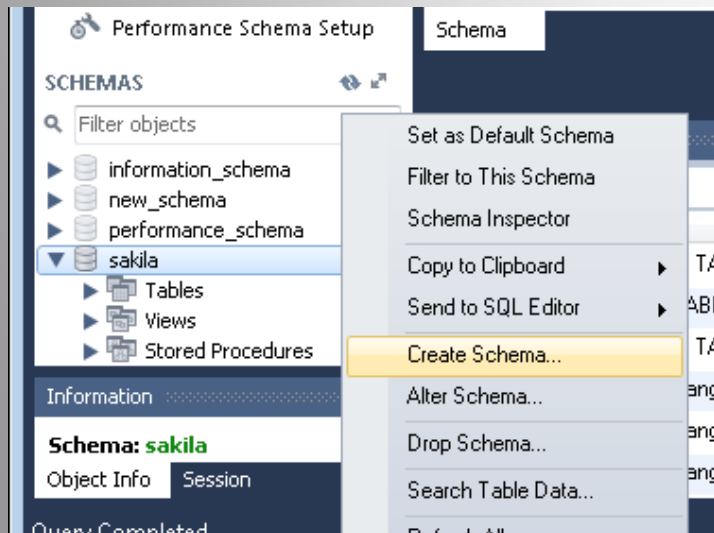
- Click on this and input your password from the configuration step (123456) to open your connection.

Your Resulting Screen Should Look Like This:

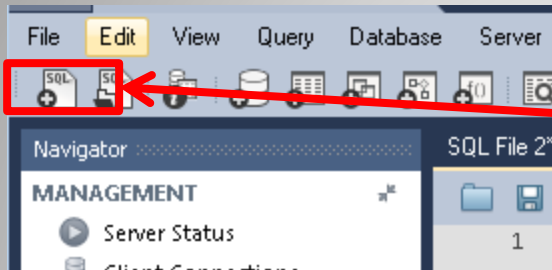


New Schema

- On the bottom left corner of the resulting window, you should see a list of schemas that come default with your MySQL installation. Right click on one of them and select “Create Schema”.
- Name the new schema “termcluster”
- Press Apply. Then press Apply in the resulting screen.
- If everything worked, your new schema should be listed with the others in the bottom left of the screen.

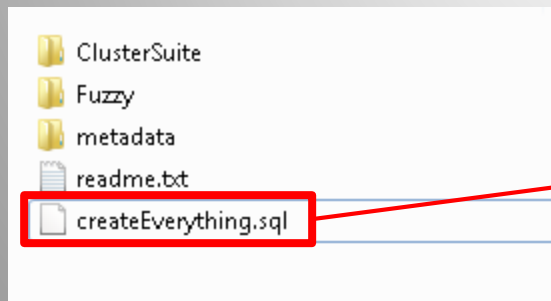


Create Tables and Procedures



New Query
Button

- The last step remaining is to create the specific tables and stored procedures that we will be using in termCluster.
- Click on the New Query button in the top left corner to open a blank query window
- Navigate to the root ClusterSuite folder (the same folder where you found readme.txt). Open “createEverything.sql” with a simple text editor like Notepad or Notepad++



```
createEverything.sql - Notepad
File Edit Format View Help
/*
MySQL Data Transfer
Source Host: localhost
Source Database: termcluster
Target Host: localhost
Target Database: termcluster
Date: 2013-10-24 0:15:04
*/

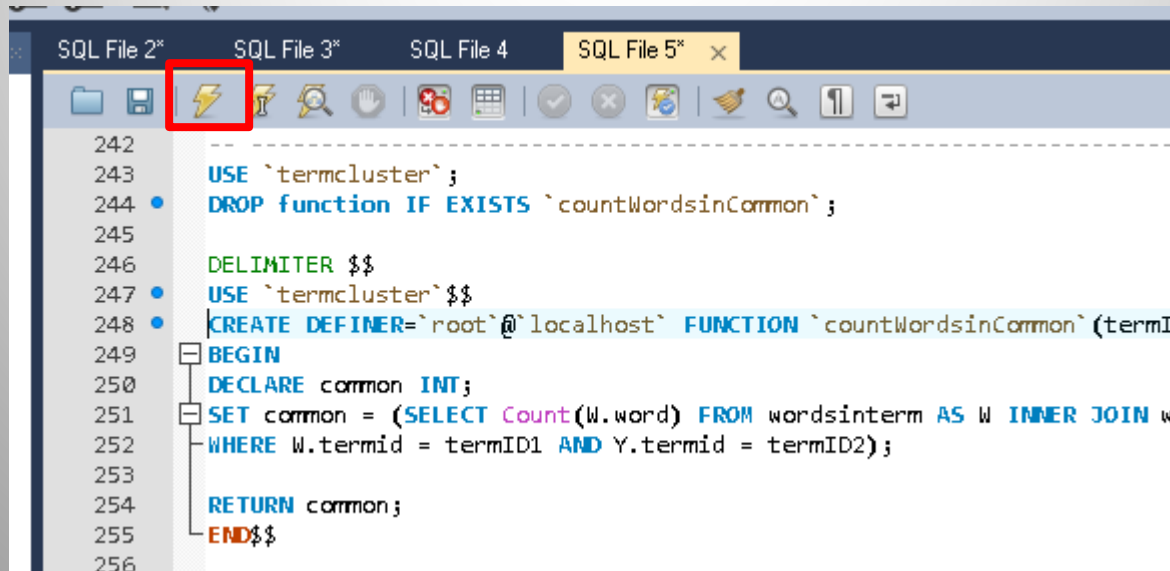
-----
TABLES
-----

SET FOREIGN_KEY_CHECKS=0;
-- Table structure for cluster3
DROP TABLE IF EXISTS `cluster3`;
CREATE TABLE `cluster3` (
  `id` int(11) NOT NULL AUTO_INCREMENT,
  `GroupName` text
  `NumSharedwords` varchar(45) DEFAULT NULL,
  `Prevalence` varchar(45) DEFAULT NULL,
  (`Termid4`),
  CONSTRAINT `Termid4` FOREIGN KEY (`Termid4`) REFERENCES `term` (`id`
  ACTION) ENGINE=InnoDB AUTO_INCREMENT=52032 DEFAULT CHARSET=utf8;

-----
-- Table structure for similarity
```

Execute Create Table Commands

- Select everything (Ctrl+A) from the createEverything file.
- Copy (Ctrl+C) and Paste (Ctrl+V) everything to the blank Query window in MySQL.
- Execute the SQL Query by clicking on the lightning bolt icon

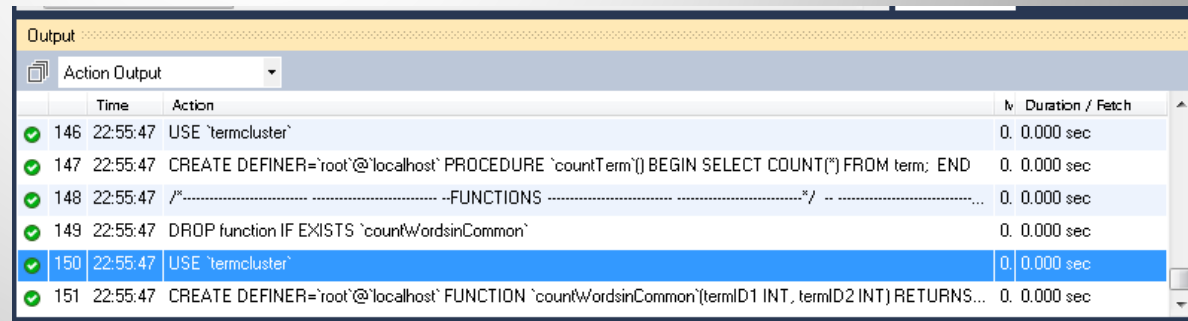
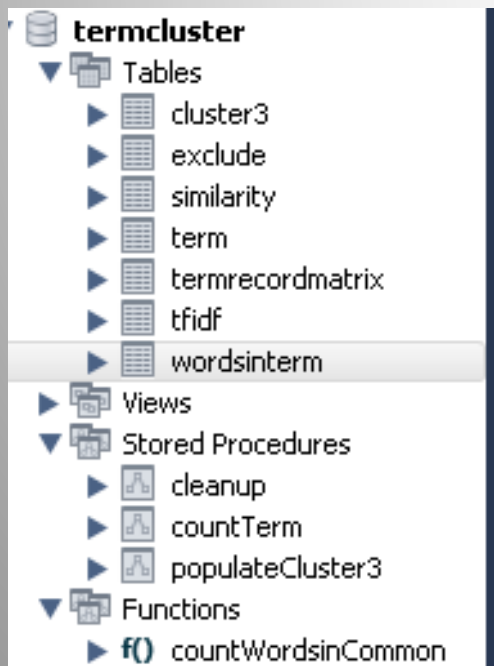


The screenshot shows a MySQL IDE window with several tabs labeled 'SQL File 2*', 'SQL File 3*', 'SQL File 4', and 'SQL File 5*'. The active tab is 'SQL File 5*'. The toolbar contains various icons, with a lightning bolt icon (representing 'Execute') highlighted by a red square. Below the toolbar, the SQL code is displayed with line numbers 242 through 256. The code includes a USE statement, a DROP function statement, a DELIMITER statement, another USE statement, a CREATE DEFINER statement, a BEGIN block, a DECLARE statement, a SET statement with a subquery, a WHERE clause, a RETURN statement, and an END statement.

```
242
243 USE `termcluster`;
244 • DROP function IF EXISTS `countWordsinCommon`;
245
246 DELIMITER $$
247 • USE `termcluster`$$
248 • CREATE DEFINER=`root`@`localhost` FUNCTION `countWordsinCommon` (termID
249 BEGIN
250 DECLARE common INT;
251 SET common = (SELECT Count(W.word) FROM wordsinterm AS W INNER JOIN wo
252 WHERE W.termid = termID1 AND Y.termid = termID2);
253
254 RETURN common;
255 END$$
256
```

Verify Success

- Check to make sure that everything installed properly
- You should now see the below tables, procedures, and function under the termcluster schema in the bottom left
- In the Output window, you should see a list of successful commands with green check icons (an occasional yellow icon near a drop table statement is okay)



Tutorial Complete!

- Congrats! You have now successfully setup MySQL and your termcluster database.
- Please refer to the TermCluster tutorial to begin using the program
- If you need to ever access the data directly, use the MySQL Workbench. Keep in mind that termCluster truncates all tables before and after it runs, so don't be surprised if you don't see any data after running termCluster. To disable this, you will have to open the termCluster source files and comment out the `aa.cleanUp();` command in the `getProcessData`, `getStart`, and `getStartDefault` methods inside the `MainFrame` class.