

COMP30680

Web Application Development

Practical 7 – part b.

Setting up the database for assignment 3.

David Coyle
d.coyle@ucd.ie

The database

We are going to use a sample database the contains information about a wholesale company that sells miniature models for classic cars, planes etc.

The database file is available on Moodle as a zip file.

Download and then unzip this file.

That should leave you with a file call “mysqlsampledatabase.sql”.

You can import to the MySQL database server on your localhost.

You can import the file using the PHPMyAdmin interface that is included with XAMP.

XAMPP includes
a database admin
Tool called
phpMyAdmin

XAMPP Apache + MariaDB + PHP + Perl

Welcome to XAMPP for OS X 5.6.19

You have successfully installed XAMPP on this system! Now you can start using Apache, MariaDB, PHP and other components. You can find more info in the [FAQs](#) section or check the [HOW-TO Guides](#) for getting started with PHP applications.

Start the XAMPP Control Panel to check the server status.

Community

XAMPP has been around for more than 10 years – there is a huge community behind it. You can get involved by joining our [Forums](#), adding yourself to the [Mailing List](#), and liking us on [Facebook](#), following our exploits on [Twitter](#), or adding us to your [Google+](#) circles.

Contribute to XAMPP translation at translate.apachefriends.org.

Can you help translate XAMPP for other community members? We need your help to translate XAMPP into different languages. We have set up a site, translate.apachefriends.org, where users can contribute translations.

Install applications on XAMPP using Bitnami

Apache Friends and Bitnami are cooperating to make dozens of open source applications available on XAMPP, for free. Bitnami-packaged applications include Wordpress, Drupal, Joomla! and dozens of others and can be deployed with one-click installers. Visit the [Bitnami XAMPP page](#) for details on the currently available apps.



- New
- information_schema
- mysql
- performance_schema
- phpmyadmin
- test

General settings

Server connection collation: utf8mb4_unicode_ci

Appearance settings

Language: English

Theme: pmahomme

Font size: 82%

[More settings](#)

Database server

- Server: Localhost via UNIX socket
- Server type: MariaDB
- Server version: 10.1.10-MariaDB
- Protocol version: 10
- User: root@localhost
- Server charset: UTF-8 Unicode

Web server

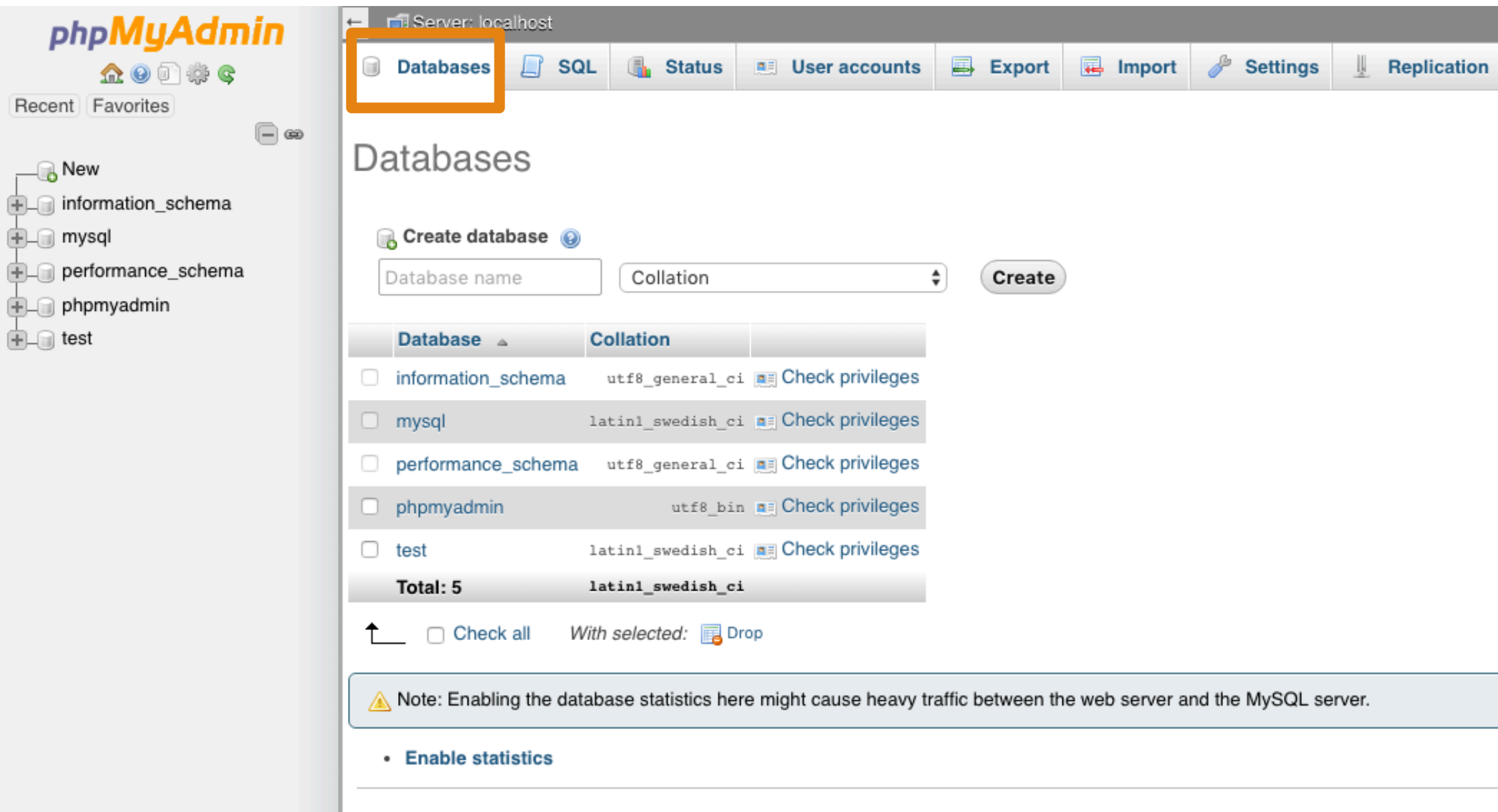
- Apache/2.4.18 (Unix) OpenSSL/1.0.1e PHP/5.6.19
- Database client version: libmysqlclient-5.6.19
- PHP extension: mysqli
- PHP version: 5.6.19

phpMyAdmin

- Version information: 4.5.2, latest
- [Documentation](#)
- [Wiki](#)
- [Official Homepage](#)
- [Contribute](#)
- [Get support](#)
- [List of changes](#)

A newer version of phpMyAdmin is available and you should consider upgrading. The newest version is 4.6.0, released on 2016-03-22.

Click the Databases tab to see a list of databases on your localhost.



The screenshot shows the phpMyAdmin web interface for a localhost server. The 'Databases' tab is highlighted with an orange rectangle in the top navigation bar. On the left sidebar, a tree view shows the database structure with 'New' at the top, followed by 'information_schema', 'mysql', 'performance_schema', 'phpmyadmin', and 'test'. The main content area is titled 'Databases' and features a 'Create database' section with input fields for 'Database name' and 'Collation', and a 'Create' button. Below this is a table listing existing databases with checkboxes for selection, the database name, the collation, and a 'Check privileges' link. The table lists five databases: information_schema, mysql, performance_schema, phpmyadmin, and test. At the bottom of the table, a 'Total: 5' row is shown. Below the table, there are controls for 'Check all' and 'Drop' for the selected items. A note at the bottom states: 'Note: Enabling the database statistics here might cause heavy traffic between the web server and the MySQL server.' with a link to 'Enable statistics'.

phpMyAdmin

Recent Favorites

Server: localhost

Databases SQL Status User accounts Export Import Settings Replication

Databases

Create database ?

Database name Collation Create

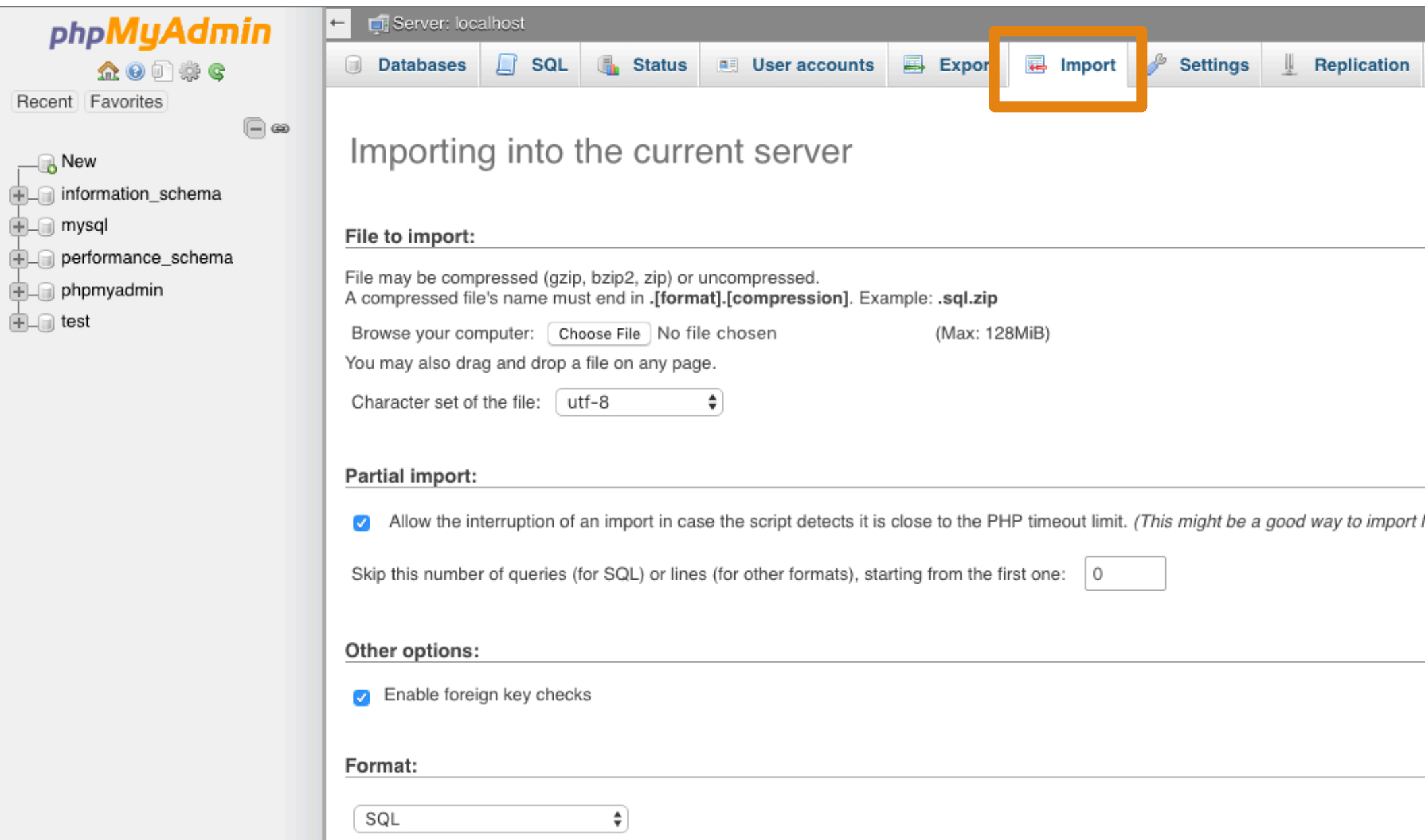
	Database	Collation	
<input type="checkbox"/>	information_schema	utf8_general_ci	Check privileges
<input type="checkbox"/>	mysql	latin1_swedish_ci	Check privileges
<input type="checkbox"/>	performance_schema	utf8_general_ci	Check privileges
<input type="checkbox"/>	phpmyadmin	utf8_bin	Check privileges
<input type="checkbox"/>	test	latin1_swedish_ci	Check privileges
Total: 5		latin1_swedish_ci	

↑ ☐ Check all With selected: [Drop](#)

Note: Enabling the database statistics here might cause heavy traffic between the web server and the MySQL server.

- [Enable statistics](#)

The import tab includes functionality to import databases.



The screenshot displays the phpMyAdmin web interface. On the left sidebar, the 'phpMyAdmin' logo is at the top, followed by navigation icons and tabs for 'Recent' and 'Favorites'. Below these, a tree view shows the database structure: 'New', 'information_schema', 'mysql', 'performance_schema', 'phpmyadmin', and 'test'. The main content area at the top has a navigation bar with tabs: 'Databases', 'SQL', 'Status', 'User accounts', 'Export', 'Import' (highlighted with an orange box), 'Settings', and 'Replication'. The 'Import' tab is active, showing the title 'Importing into the current server'. Under the heading 'File to import:', there is a text box explaining that files can be compressed (gzip, bzip2, zip) or uncompressed, with an example '.sql.zip'. Below this, a 'Browse your computer:' section includes a 'Choose File' button, the text 'No file chosen', and a '(Max: 128MiB)' limit. A note states 'You may also drag and drop a file on any page.' A 'Character set of the file:' dropdown is set to 'utf-8'. The 'Partial import:' section has a checked checkbox for 'Allow the interruption of an import in case the script detects it is close to the PHP timeout limit. (This might be a good way to import large files)' and a text input for 'Skip this number of queries (for SQL) or lines (for other formats), starting from the first one:' with the value '0'. The 'Other options:' section has a checked checkbox for 'Enable foreign key checks'. The 'Format:' section has a dropdown menu set to 'SQL'.

This approach is ok for small databases. For large databases it is better to use Shell commands. They are more reliable.

The following slides show how to import the database using Terminal on a MAC or the Command Line on Windows.

This should only be necessary if the direct import using PHPMyAdmin does not work.

Import the database using Terminal on a MAC

Step 1: connect to the database.

If you have installed XAMPP in the standard location the following command should work:

`/Applications/xampp/xamppfiles/bin/mysql -u root -p`

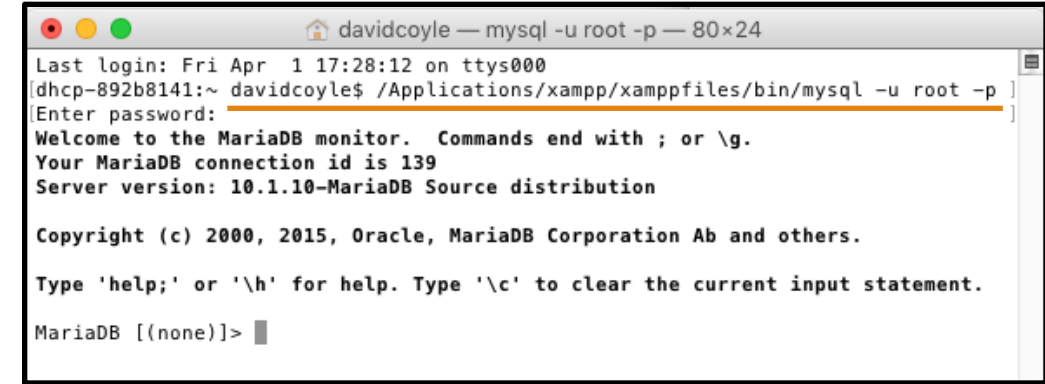
This assumes you have not changed the default XAMPP username and password for MySQL.

Step 2: UNZIP the database archive that is available on Moodle and import the sql file using the SOURCE command.

`SOURCE /Users/davidcoyle/Desktop/mysqlsampledatabase.sql`

You will need to give the full path for the file on your computer. The command will not work if you have spacing in the path for the file.

Step 3: run the command `SHOW TABLES` to make sure the database was imported.

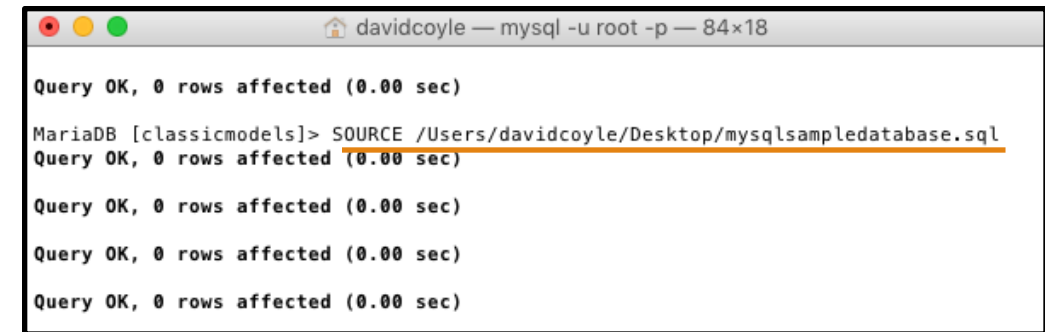
A terminal window titled 'davidcoyle — mysql -u root -p — 80x24'. It shows the command '/Applications/xampp/xamppfiles/bin/mysql -u root -p' being executed. The prompt 'Enter password:' is shown, followed by a successful connection to the MariaDB monitor. The output includes the welcome message, connection ID (139), server version (10.1.10-MariaDB), and copyright information. The prompt 'MariaDB [(none)]>' is visible at the bottom.

```
davidcoyle — mysql -u root -p — 80x24
Last login: Fri Apr 1 17:28:12 on ttys000
[dhcp-892b8141:~ davidcoyle$ /Applications/xampp/xamppfiles/bin/mysql -u root -p ]
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 139
Server version: 10.1.10-MariaDB Source distribution

Copyright (c) 2000, 2015, Oracle, MariaDB Corporation Ab and others.

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

MariaDB [(none)]>
```

A terminal window titled 'davidcoyle — mysql -u root -p — 84x18'. It shows the command 'SOURCE /Users/davidcoyle/Desktop/mysqlsampledatabase.sql' being executed. The output shows four consecutive 'Query OK, 0 rows affected (0.00 sec)' messages, indicating the successful import of the database.

```
davidcoyle — mysql -u root -p — 84x18

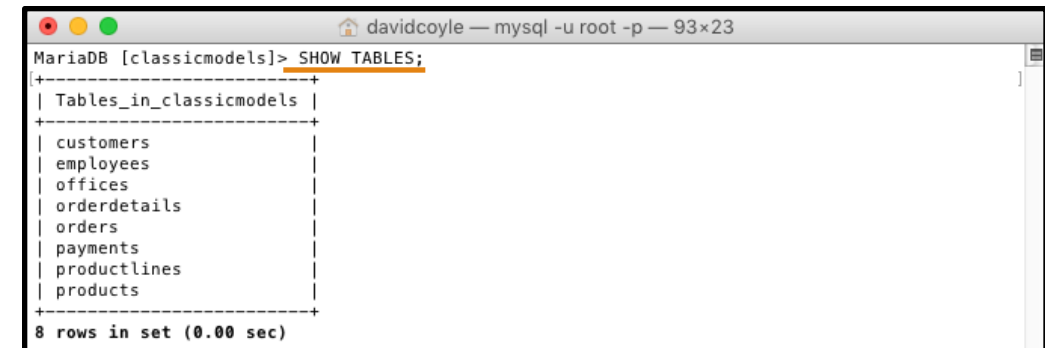
Query OK, 0 rows affected (0.00 sec)

MariaDB [classicmodels]> SOURCE /Users/davidcoyle/Desktop/mysqlsampledatabase.sql
Query OK, 0 rows affected (0.00 sec)

Query OK, 0 rows affected (0.00 sec)

Query OK, 0 rows affected (0.00 sec)

Query OK, 0 rows affected (0.00 sec)
```

A terminal window titled 'davidcoyle — mysql -u root -p — 93x23'. It shows the command 'SHOW TABLES;' being executed. The output is a table listing the tables in the 'classicmodels' database: customers, employees, offices, orderdetails, orders, payments, productlines, and products. The prompt 'MariaDB [classicmodels]>' is visible at the bottom.

```
davidcoyle — mysql -u root -p — 93x23
MariaDB [classicmodels]> SHOW TABLES;
+-----+
| Tables_in_classicmodels |
+-----+
| customers                |
| employees                |
| offices                  |
| orderdetails             |
| orders                   |
| payments                 |
| productlines             |
| products                 |
+-----+
8 rows in set (0.00 sec)
```


Import the database using Command Line on Windows

Step 1: connect to the database.

If you have installed XAMPP in the standard location the following command should work:

`C:\xampp\xamppfiles\bin\mysql.exe -u root -p`

This assumes you have not changed the default XAMPP username and password for MySQL.

Step 2: UNZIP the database archive that is available on Moodle and import the sql file using the SOURCE command.

`SOURCE C:\...\mysqlsampledatabase.sql`

You will need to give the full path for the file on your computer. The command will not work if you have spacing in the path for the file.

Step3: run the command `SHOW TABLES` to make sure the database was imported.

```
Select Command Prompt - C:\xampp\mysql\bin\mysql.exe -u root -p

C:\Users\Arjun Pakrashi>C:\xampp\mysql\bin\mysql.exe -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 5
Server version: 10.1.10-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2015, Oracle, MariaDB Corporation Ab and others.

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

MariaDB [(none)]>
```

```
MariaDB [(none)]> SOURCE C:\Users\Arjun Pakrashi\Documents\mysqlsampledatabase.sql
Query OK, 0 rows affected (0.00 sec)

Query OK, 0 rows affected (0.00 sec)

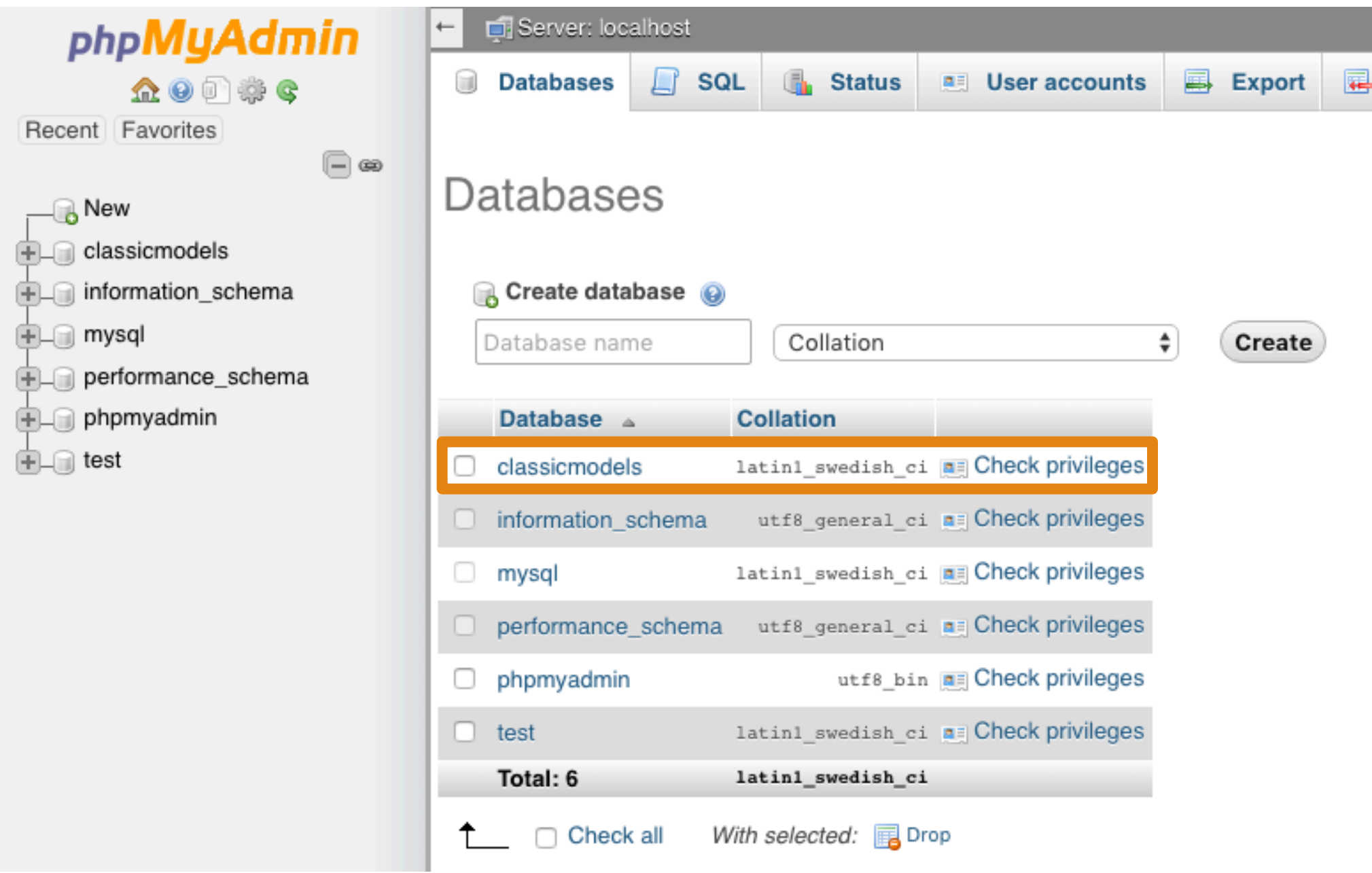
Query OK, 0 rows affected (0.00 sec)

Query OK, 0 rows affected (0.00 sec)
```

```
Command Prompt - C:\xampp\mysql\bin\mysql.exe -u root -p

MariaDB [classicmodels]> SHOW TABLES;
+-----+
| Tables_in_classicmodels |
+-----+
| customers                |
| employees                |
| offices                  |
| orderdetails             |
| orders                   |
| payments                 |
| productlines             |
| products                 |
+-----+
8 rows in set (0.00 sec)
```

You can also check in phpMyAdmin to make sure the database was imported.



The screenshot shows the phpMyAdmin web interface. On the left is a sidebar with a tree view of databases: New, classicmodels, information_schema, mysql, performance_schema, phpmyadmin, and test. The top navigation bar has tabs for Databases, SQL, Status, User accounts, and Export. The main content area is titled 'Databases' and features a 'Create database' form with fields for 'Database name' and 'Collation', and a 'Create' button. Below the form is a table listing existing databases. The 'classicmodels' database is highlighted with an orange border. At the bottom, there are checkboxes for 'Check all' and 'With selected: Drop'.

Server: localhost

Databases SQL Status User accounts Export

Databases

Create database ?

Database name Collation Create

Database	Collation	
<input type="checkbox"/> classicmodels	latin1_swedish_ci	Check privileges
<input type="checkbox"/> information_schema	utf8_general_ci	Check privileges
<input type="checkbox"/> mysql	latin1_swedish_ci	Check privileges
<input type="checkbox"/> performance_schema	utf8_general_ci	Check privileges
<input type="checkbox"/> phpmyadmin	utf8_bin	Check privileges
<input type="checkbox"/> test	latin1_swedish_ci	Check privileges
Total: 6	latin1_swedish_ci	

Check all With selected: Drop

Database Schema

The classicmodels database schema consists of the following tables:

- **Customers:** stores customer's data.
- **Products:** stores a list of scale model cars.
- **ProductLines:** stores a list of product line categories.
- **Orders:** stores sales orders placed by customers.
- **OrderDetails:** stores sales order line items for each sales order.
- **Payments:** stores payments made by customers based on their accounts.
- **Employees:** stores all employee information as well as the organization structure such as who reports to whom.
- **Offices:** stores sales office data.

Database schema

