CS6252 Web Technologies II
Lab Assignment: Setting up a Database
Due date: Feb 9, 2018, 11:55pm

Setting up phpMyAdmin

XAMPP includes a tool for working with MySQL, called phpMyAdmin. By default, phpMyAdmin stoes the username and password for MySQL's root user in its configuration file, which is not secure. Change the setting as follows so that the user is prompted for the username and password, which is then stored as a cookie, instead of storing the login credentials in the configuration file:

1. Open the file C:\xampp\phpMyAdmin\config.inc.php in a textfile.
2. Set the 'blowfish_secret' option to a random string up to 46 characters.
3. Set the 'auth_type' option to the value 'cookie'.
4. Set the user and password options to empty strings.
5. Save your changes.

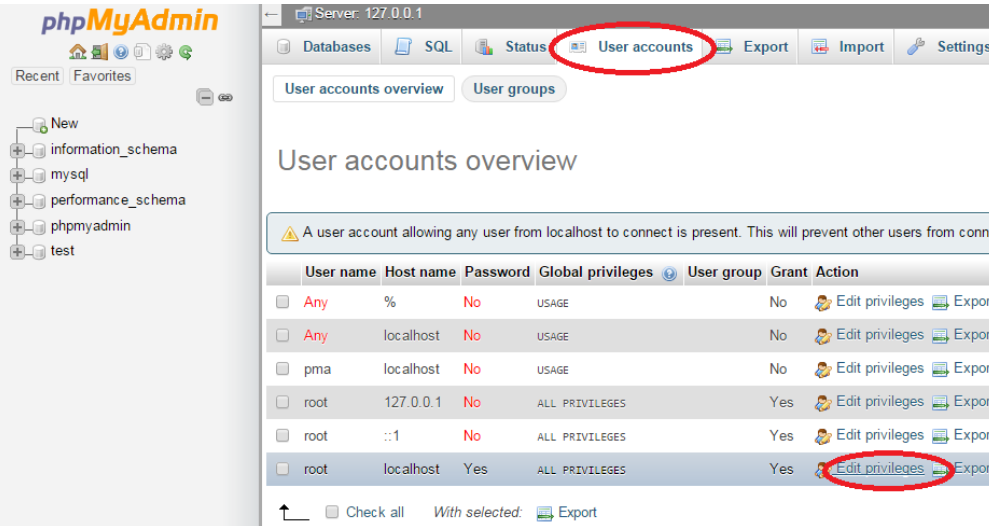
Default settings in config.inc.php:

```
$cfg['blowfish_secret'] = 'xampp'; /* YOU SHOULD CHANGE THIS FOR A MORE
SECURE COOKIE AUTH! */
…
/* Authentication type and info */
$cfg['Servers'][$i]['auth_type'] = 'config';
$cfg['Servers'][$i]['user'] = 'root';
$cfg['Servers'][$i]['password'] = '';
```

After updating the default settings in config.inc.php:

```
$cfg['blowfish_secret'] = 'm2ka5od78ewjw9034vw9snr';
…
/* Authentication type and info */
$cfg['Servers'][$i]['auth_type'] = 'cookie';
$cfg['Servers'][$i]['user'] = '';
$cfg['Servers'][$i]['password'] = '';
```

In order to change the root password, go to the tab “User accounts” and click on the link “Edit

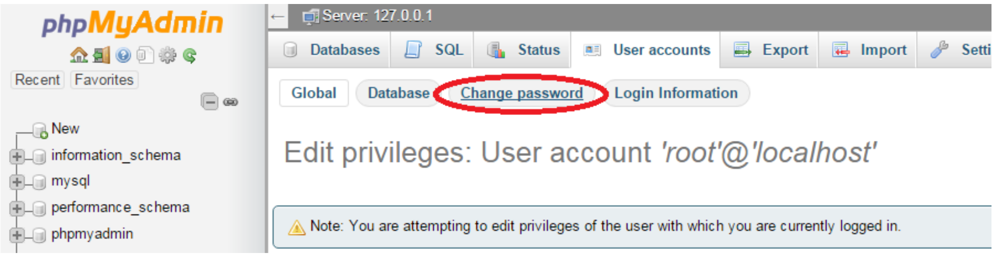


User accounts overview

A user account allowing any user from localhost to connect is present. This will prevent other users from conn

	User name	Host name	Password	Global privileges	User group	Grant	Action
□	Any	%	No	USAGE		No	Edit privileges Expor
□	Any	localhost	No	USAGE		No	Edit privileges Expor
□	pma	localhost	No	USAGE		No	Edit privileges Expor
□	root	127.0.0.1	No	ALL PRIVILEGES		Yes	Edit privileges Expor
□	root	::1	No	ALL PRIVILEGES		Yes	Edit privileges Expor
□	root	localhost	Yes	ALL PRIVILEGES		Yes	Edit privileges Expor

Then follow the change password option:



Edit privileges: User account *'root'@'localhost'*

Note: You are attempting to edit privileges of the user with which you are currently logged in.

Exploring phpMyAdmin

1. Login as user root to phpMyAdmin
2. Download the SQL script little_library.sql from the course website and import it into phpMyAdmin
3. Review database little_library:
   - View the tables and their content
   - View the table structure, including the data types of the columns, primary and foreign keys, default values
4. Select a table on the left side panel. Go to the Browse tab and try to edit and delete a row.
5. Go to the Insert tab and try to insert a row.
6. Go to the SQL tab and try to edit, delete, insert and select one or more rows by writing an SQL statement.
7. Select the table books and then go to the Privileges tab and check the privileges of the listed users.
8. In the file little_library.sql, scroll to the bottom and note how the GRANT statement is used to assign the access rights to the user librarian and patron.
9. Logout and login as user librarian with passwork b00kw0rm.
   - Note that the librarian has access to all four tables of the little_library database.
   - Try to edit a table row.
10. Logout and login as user patron with passwork r3ad3r.
    - Note that the patron has only access to three tables of the little_library database.
    - Try to edit a table row.

Creating Database Tables

Extend the given SQL script little_library.sql to add the two additional tables messages and users to the little_library database as specified below. Determine a suitable column types for each column. The table messages should have the columns

- messageID (primary key)
- name
- email
- phone
- date
- libraryID
- comments

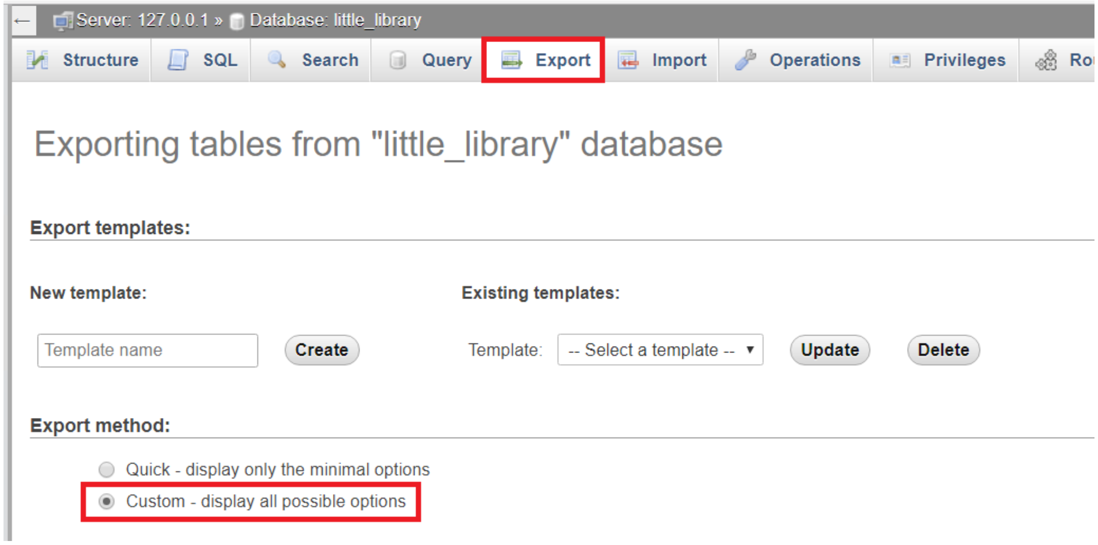
where the column messageID should be the primary key in the table messages and should be declared as an auto-increment column.

The table users should have the columns

- firstName
- lastName
- email (primary key)
- phone
- password (with a length of 60 characters)

where the column email should be the primary key in table users. If you are not sure how to declare a column as primary key or how to declare a column as an auto-increment, follow the example from the books table, which has the primary key and auto-increment column bookID.

In order to create the wanted SQL script, you can add the instructions for the new tables by adding the appropriate instructions to the file little_library.sql. Alternatively, you can create the tables within phpMyAdmin and then export the file. If you export the database, select the Custom option:



Exporting tables from "little_library" database

Export templates:

New template:

Template name

Existing templates:

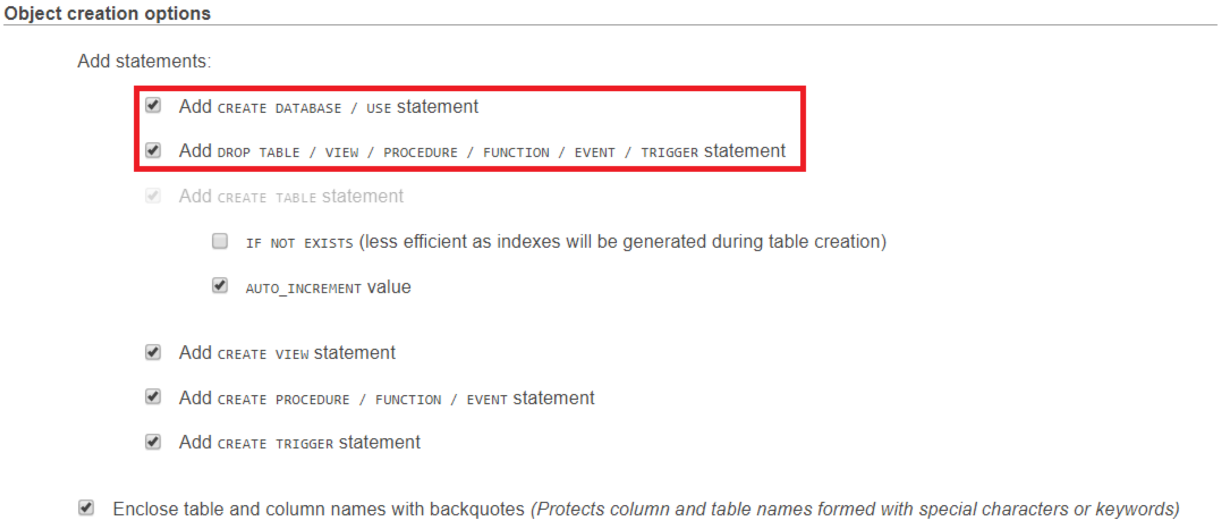
Template: -- Select a template --

Export method:

○ Quick - display only the minimal options

● Custom - display all possible options

Scroll to the section “Object creation options” and select the “Add CREATE DATABASE” and the “Add DROP TABLE” option. If you don’t do so, you will have problems when you re-import an existing table.



Object creation options

Add statements:

☑ Add CREATE DATABASE / USE statement

☑ Add DROP TABLE / VIEW / PROCEDURE / FUNCTION / EVENT / TRIGGER statement

☑ Add CREATE TABLE statement

□ IF NOT EXISTS (less efficient as indexes will be generated during table creation)

☑ AUTO_INCREMENT value

☑ Add CREATE VIEW statement

☑ Add CREATE PROCEDURE / FUNCTION / EVENT statement

☑ Add CREATE TRIGGER statement

☑ Enclose table and column names with backquotes *(Protects column and table names formed with special characters or keywords)*

Note that the exported file does not include the grant statement included at the end of the starter file little_library.sql.

After you have created or updated the SQL file, import the file into phpMyAdmin. Fix any errors that are reported by phpMyAdmin.

Submission

Upload the database script to the course website. Since it is a single file, please do not zip the file.

Grading

5 points: the tables with all required columns and proper column type are specified
3 points: the script with the new tables can be imported into phpMyAdmin
2 points: the foreign key and the primary keys are specified