Chapter 11: PHP and MySQL

Objectives

- Use PHP and MySQL to connect to a database locally
- Use PHP and MySQL to connect to a database on a webhost
- Use PHP and MySQL to display data locally
- Use PHP and MySQL to display data on a webhost

Introduction

What to read

Read all of chapter 11.

We blew through the database chapters 8 - 10. That is purposeful because we want to concentrate on PHP programming. The important part for this class is knowing how to set up your databases locally and on a webhost; writing queries is offered in CTI 110, DBA 110 and DBA 120. I will provide all of the SQL that you need in order to run any queries once we are using PHP and MySQL together. You can use these chapters as a reference or visit W3Schools, the MySQL manual or post to the forum for additional information. This chapter covers a lot of ground in just a few pages.

Prepared and bound statements

There is some difficult material in this chapter and I will provide a couple of video tutorials that will help explain *how* the prepared statements and related concepts work.

Bookorama and bowling

We will start by getting PHP to work with the bookorama database.

In our next assignment we will use a bowling database. This will be the beginning of the final project where we will build a small database-driven website

Bookorama in the development environment

Last assignment we set up the **bookorama** database locally and on your webhost. Now it is time to connect to it and use it with PHP.

Local (development environment)

Create a new folder named **ch11** and store it in your **my-code** folder.

Copy the contents from the author's code from **chapter_11** and place it in your my-code**ch11**. I have also placed a zipped file with these contents in Moodle for convenience.

Next we will modify the author's code that connects to the database so that it uses your credentials. Note, we will complete two of the three examples from the chapter.

Catalog search using PDO

Make sure that XAMPP has both PHP and MySQL are running.

The catalog search uses two files

1. search_pdo.html and
2. results_pdo.php

search_pdo.html

search_pdo.html is a simple HTML file that asks the user to enter some data. You only need to note that it's action is results_pdo.php and the names of the text fields. You do not need to change any code.

results_pdo.php

This file does all of the heavy lifting. The first part we are interested in is making any necessary changes to the database connection information. Here is what this information looks like

```
// set up for using PDO

    $user = 'root';

    $pass = '';

    $host = 'localhost';

    $db_name = 'bookorama';
```

Your information may be a little different depending on your setup. This example will work if you have not changed the root user in MySQL.

Save your changes and try running the file **web182/my-code/ch11/search_pdo.html**.

Here is a link to my example using the same code as the book.

Errors

For these exercises, if you receive an error it is usually because your login credentials are not correct since the only item we are changing is the login information.

Putting new information in the database

Continue reading through the chapter and see that will be adding new records to your database. For this section you will need two files from the author's code

1. newbook.html
2. insert_book.php

newbook.html

You won't need to make any changes in the HTML file. Take a quick look at it in your editor so you can get an overview.

insert_book.php

There is just one line to change in this file to make it work with your local development setup. Look for the following line

```
@$db = new mysqli('localhost', 'bookorama', 'bookorama123', 'books');
```

Note: The @ sign at the beginning of the line suppresses PHP from displaying any errors.

Change the code so it matches your database login credentials. For instance, here is what I used. Again, you may have something a little different depending on your setup.

```
@$db = new mysqli('localhost', 'root', '', 'bookorama');
```

This is not much different than what you did for the previous exercise.

Once successful with this section it is time to push this to your webhost.

Bookorama on your webhost

Your database should be set up on your webhost from the previous assignment.

Change the database connection information so that it works with your web host. In my case I'll need to change the database name from **bookorama** to **charlxxx_bookorama.**

Here is what I have left in my results_pdo.php file. I comment out whatever login information I am not using. NOTE: There are more secure ways to connect to a database but we are just concerned about getting it working at this point. We will cover database connection security later in the term.

```
// set up for using PDO locally

    $user = 'root';

    $pass = '';

    $host = 'localhost';

    $db_name = 'bookorama';



 // set up for using PDO for webhost

// use the superuser you created and not root

    $user = 'charl394_admin';

    $pass = 'x'; // use your password not x

    $host = 'localhost';

    $db_name = 'charl394_bookorama';
```

Use FTP to push your ch11 folder to your webhost.

After uploading to your host, check to make sure that the code runs as expected. You should be able to use the search feature and the insert a new book entry.

What about all that prepared statement stuff?!

There is a lot of information about adding some security to your site. This is pretty technical stuff. We will go over it in class and in addition I will provide some video tutorials on how it works. Just go with it for now.

Submitting Your Work

Upload your working code from ch11 to your site. Test it on your host to make sure that it runs as expected.

Zip up your ch11 folder and name the zipped file ch11-yourLastName.zip. There is no need to dump the database contents and submit those.