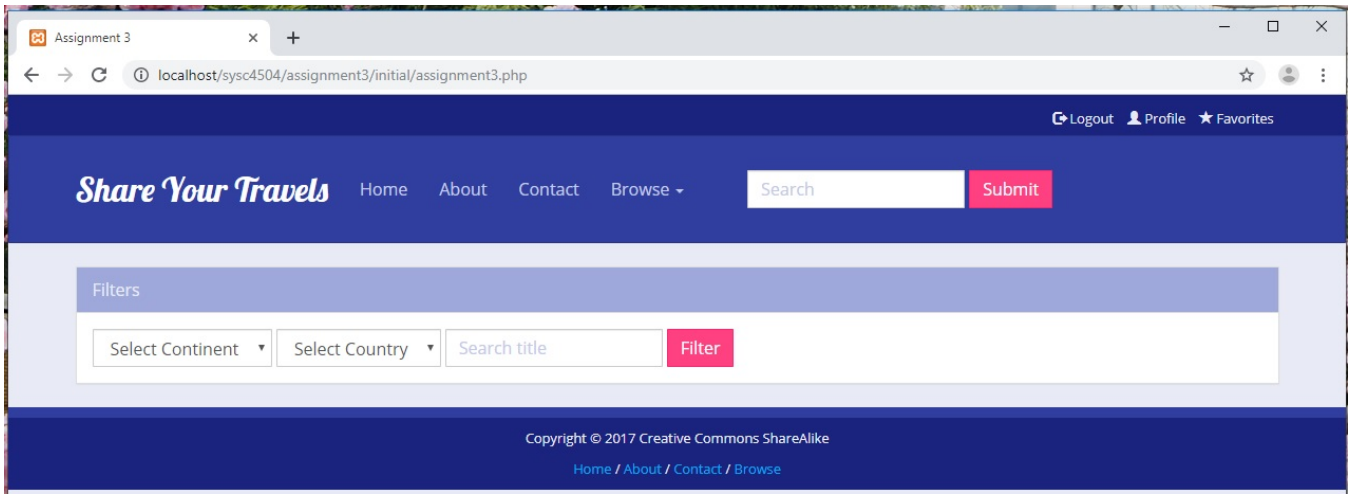
SYSC 4504: Fundamentals of Web Development
Programming Assignment 3: PHP and SQL Queries
Due: December 3, noon

Assignment Description

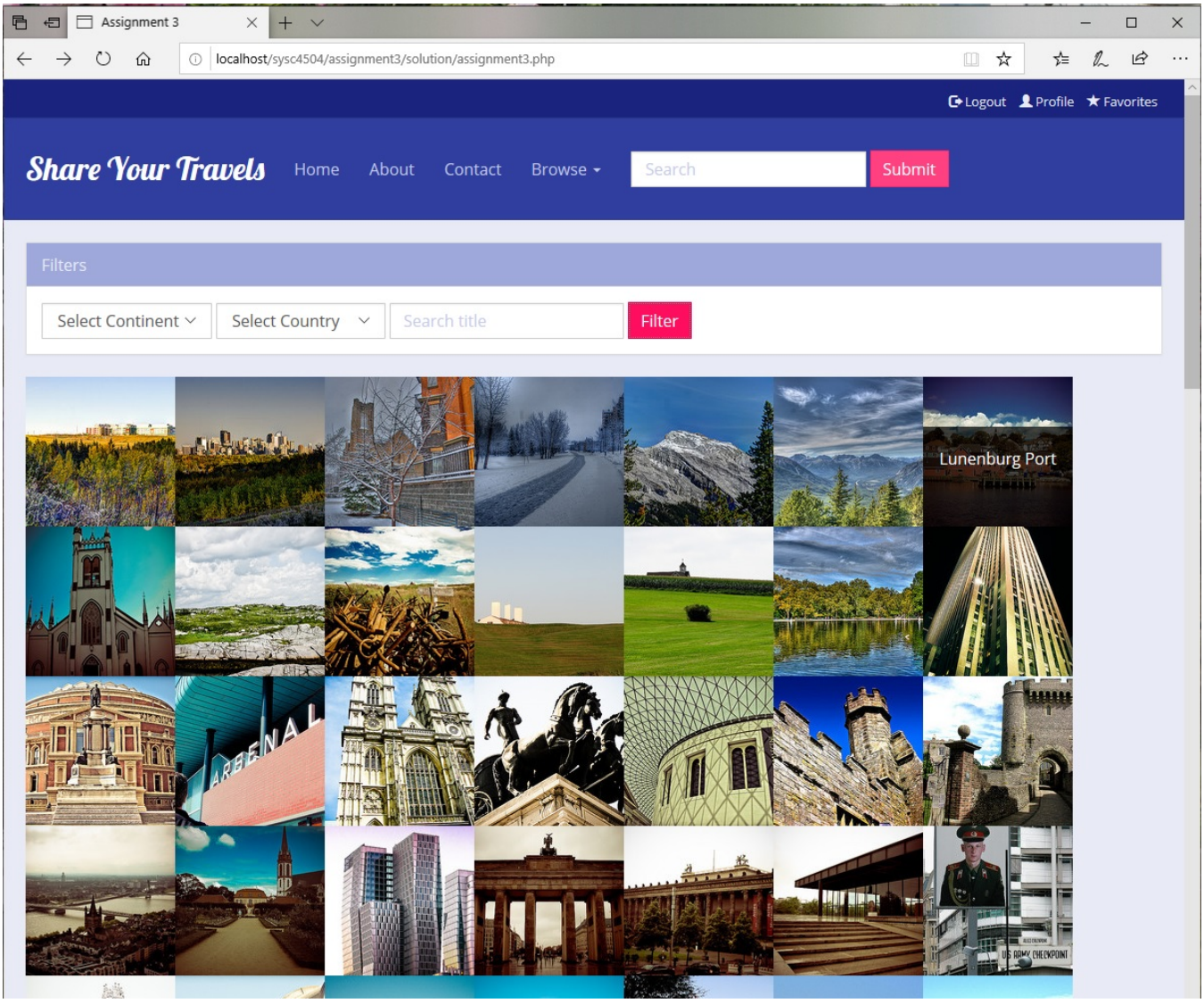
Assignment 3 concludes the set of assignments using the Travel blog running example. An initial set of files is provided as ZIP archive on `cuLearn`, containing `assignment3.php` and a number of subdirectories with (hopefully) obvious names and purpose. When you open `assignment3.php` in a web browser, it should look as follows (here using Google Chrome):



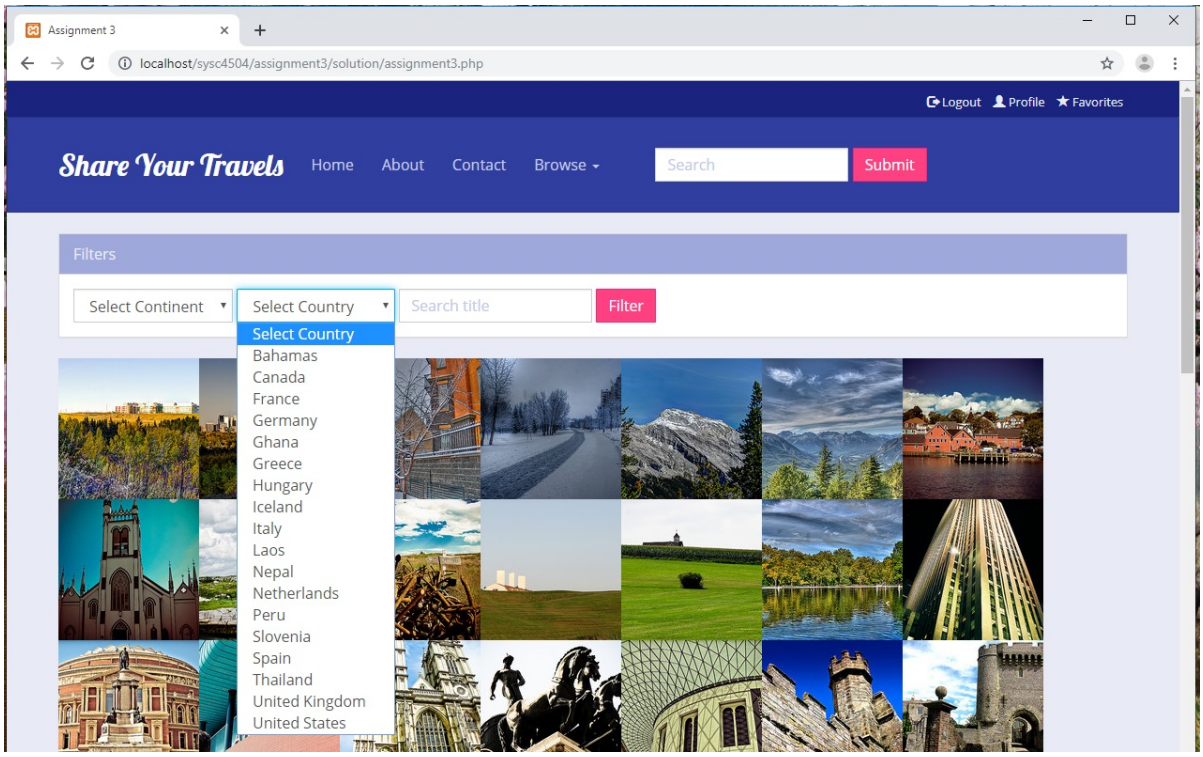
To complete the task, you need to deploy this application on a web server (for the PHP code to be executed). To complete the assignment (but not to run the initial PHP code), you also need to have the database server up and running, with the `travel-small.sql` database loaded. The database should be set up to allow for access by a user with userid `testuser` and password `mypassword` (as was done in Lab 5 as well).

You will need to retrieve information from three tables in the `travel` database: `continents`, `countries`, and `imagedetails`. The goal is to populate the middle of the canvas with images, either all images, or images filtered by various criteria. More specifically:

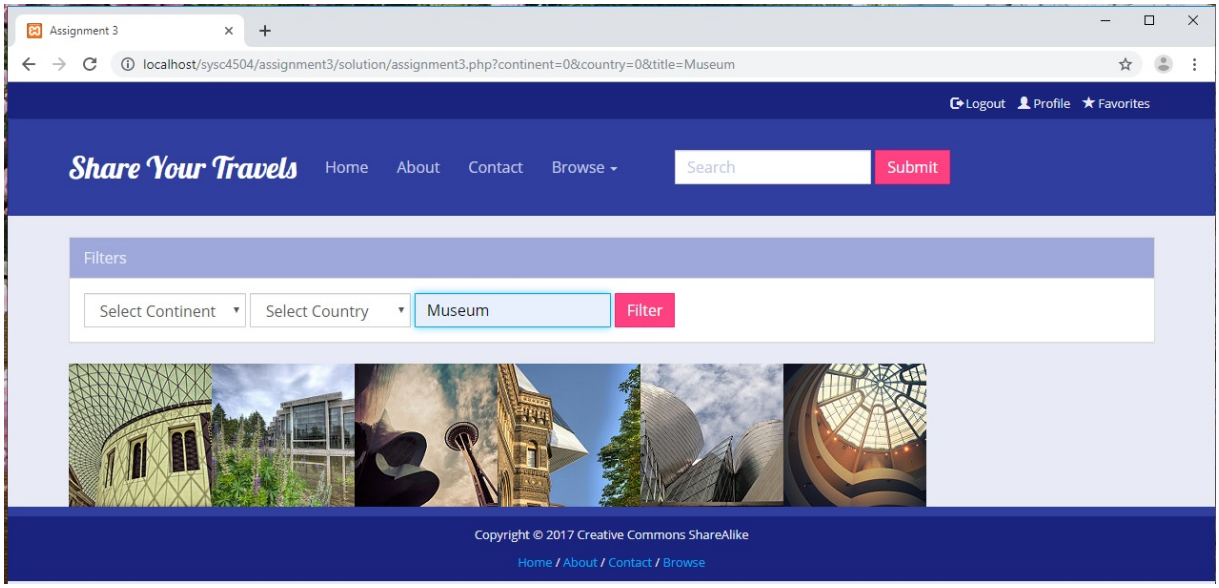
1. Initially, display every image (use the version from the `square-medium` folder) in the `imagedetails` table. The `Path` field contains the filename of the image. Each image should be a link to `detail.php` with the `ImageID` field passed as a query string. For the purposes of this assignment, we won't have an actual implementation of `detail.php`. The textbook describes a possible implementation of such a page as part of Project 2 in Chapter 12, but we will ignore this for this assignment. When a user hovers over an image, the `Title` field should be displayed (as shown in the screenshot for the rightmost picture in the top row), when the user actually selects/clicks on an image, an error will occur. If you implemented that part, the page will look similar to the screenshot below (showing only the top part).



2. The filter section near the top of the page intended to filter/reduce the number of images displayed in the image list. The user should be able to display only those images from a specific continent, country, or images whose `Title` field contains a search word, after the user clicks the Filter button.
3. Display every record from `continents` within the `<select>` list that appears in the filter section. Each `<option>` element should display the `ContinentName` field, the `ContinentCode` field should be used for `option` values.
4. For the Countries `<select>` list, display only those countries that have a matching record in `imagedetails`. This will require an `INNER JOIN` along with a `GROUP BY`. Again, the `<option>` element should display the `CountryName`, the option value should be the value from the `ISO` field. The image below shows the complete `<select>` list, given the information in the database. Also note that, based on these definitions, a user may choose a continent that will have no matching entries in the database, but this will not be possible when filtering on a country.



5. When the user clicks the Filter button, the page should display ONLY those images whose `CountryCodeISO` or `ContinentCode` or `Title` fields match the specific value in the filter area. For the `Title` field, match any record records whose `Title` field contains whatever was entered into the search box (you have to use SQL `Like` along with wildcards characters to achieve that in your query). The image below shows the result on filtering the Title on the word `Museum`. If nothing is specified for any of the three filter criteria, the page should display all images in the database.



Submission Requirements

Submit your assignment using `cuLearn`, under `Assignment 3 Submission` for the course. Create a ZIP archive of all files that make up your solution, including the files we provided. Once the TAs unzip your submission, they should simply be able to open `assignment3.php` with a browser of their choice to test your submission. DO NOT submit your solution as a RAR or any other form of archive, nor submit individual files.

Marks will be based on:

- Completeness of your submission
- Correct solution to the problem
- Adhering to the submission requirements

The due date is based on the time of the `cuLearn` server and will be strictly enforced. If you are concerned about missing the deadline: multiple submissions are allowed. So you can always submit a (partial) solution early, and resubmit an improved solution later. This way, you will reduce the risk of running late, for whatever reason (slow computers/networks, unsynchronized clocks, failure of the Internet connection at home, etc.).

In `cuLearn`, you can manage the submission until the deadline, taking it back, deleting/adding files, etc, and resubmitting it. The system also provides online feedback whether you submitted something for an assignment. It may take a while to learn the submission process, so I would encourage you to experiment with it early and contact the TA in case you have problems, as only assignments properly and timely submitted will be marked and will earn you assignment credits.