

INFS3202/7202 Practical 4 –SQL and Databases

(9 marks)

Overview and objectives

Recall the meta-data associated with the locations on your website. Initially this data was static and hard-coded into the HTML. In Prac 3 you took the first step towards making this data more secure and much more easily modifiable, storing it in files. This Prac we take the next leap and store the meta-data in a database. This is generally much more secure, modifiable and efficient than our solutions to date.

You should be working on this practical in Weeks 7 and 8. You must present the results to your Lab tutor during your scheduled Lab session in Week 9, beginning the 05/05/2014. The Prac could be done either in the Lab or at home. But your work must be assessed in your Lab session. You must also **upload** your code that you have shown to the tutor to Blackboard by 6pm on the day of your Prac session.

This practical exercise is divided into three tasks:

- Creating the database (1 mark);
- Modifying the data through an Admin Page (5 marks);
- Search functionality (3 marks).

Preparation

Before attempting this practical you should have a good working knowledge of HTML, PHP or JSP as well as SQL and databases. Please ensure you that you have covered the material in Lectures 1-5.

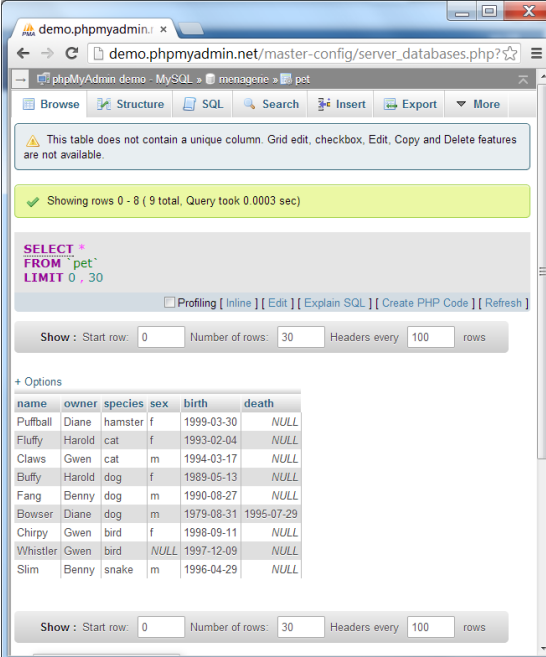
As a reminder you should place any HTML and PHP files in the dedicated directory of your personal web server (zone): [/var/www/htdocs/](#).

For the zones there is a copy of phpmyadmin already provided in your [/var/www/htdocs/](#) folder. If you visit <http://infs3202-xxx.uqcloud.net/phpmyadmin> (where xxx is specific to you) you can access this. The login to the mysql server (and thus to phpmyadmin) is the zone's name as the username (eg. infs3202-xxx) and you will need to contact your tutor for root password. Conversely you may work from and present on your own machine (this may require you to install appropriate database software).

Task 1 (1 mark): Creating a database

Create a new database to store the meta-data associated with the locations on your webpage. You are only required to have one table in your database. The attributes (columns) of the table should be the meta-data attributes, e.g. name, price, due time, location, etc. The entries (rows) will each be location on your website. You may wish to prepopulate your table with some location data.

You should be able to show your table in phpmyadmin to your tutor.



The screenshot shows the phpMyAdmin interface for a database named 'demo'. The 'pet' table is selected, and the SQL query 'SELECT * FROM `pet` LIMIT 0, 30' is displayed. The table contains 9 rows of data, including pet names, owners, species, sex, birth dates, and death dates (some NULL).

name	owner	species	sex	birth	death
Puffball	Diane	hamster	f	1999-03-30	NULL
Fluffy	Harold	cat	f	1993-02-04	NULL
Claws	Gwen	cat	m	1994-03-17	NULL
Bufy	Harold	dog	f	1989-05-13	NULL
Fang	Benny	dog	m	1990-08-27	NULL
Bowser	Diane	dog	m	1979-08-31	1995-07-29
Chirpy	Gwen	bird	f	1998-09-11	NULL
Whistler	Gwen	bird	NULL	1997-12-09	NULL
Slim	Benny	snake	m	1996-04-29	NULL

Task 2: Editing the meta-data (CRUD, create, read, update, and delete operations)

The following three sub-tasks can be implemented either by modifying the admin page you created in Prac 3 or by creating a similar page in PHP. You should add an extra column 'Remove' to your table and a button 'Add' to the page.

Watches	Edit	Remove
Sunglass	Edit	Remove

Add

Task 2.1 (2 marks): Add a deal

When the admin clicks the 'Add' button a form should pop up (again similar to the pop-up on 'Edit' from Prac 3). The form should have input boxes for all the attributes in your table from Task 1. You are required to at least have inputs for category, name, price, due date, location, description, image link, and review(s). Multiple reviews should be input into the same box separated by a symbol of your choice.

When the admin submits the form, first check that at least a category and name is provided. If valid add this entry to your database. Finally the page should refresh with the new entry included.

Task 2.2 (2 marks): Edit a deal

As per Task 2.1 except when the user clicks an 'Edit' link, pop up a form for them to fill out.

When the admin submits the form, again check that at least a category and name is provided. If valid modify the entry being editing in your database to reflect the changes. Finally the page should refresh with the entry modified.

Task 2.3 (1 mark): Delete a deal

When the admin clicks a 'Remove' link, pop up a form with 'Are you sure' and yes/no options.

If the admin selects yes, remove that entry from your database. Refresh the page with the entry removed.

Task 3 (3 marks): Search Functionality

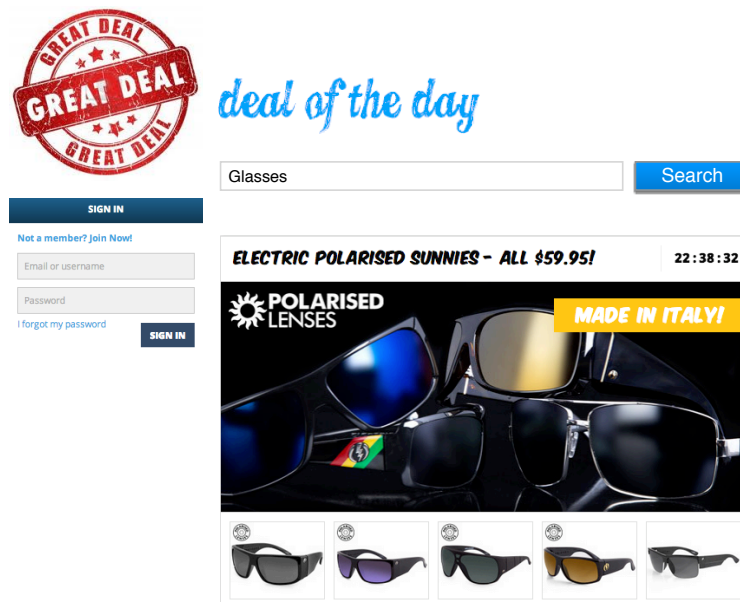
On your index/home page of the website add a 'Search' link. When this is clicked redirect the user to the Search page.

The purpose of the Search page is to allow the user to find locations that match some criteria. Your page should have input boxes for a number of the meta-data attributes of your locations, at least 'Name', 'price and 'location. The 'Name' and " inputs should be free-text.

1 bonus mark: Allow user use symbol likes ">" or "<" to perform search on price. For example if a user looking for deals which less than Au\$100, the user could key in '<100' and search for match deals. (Hits: http://www.php.net/preg_match)

Your page should also have a button 'Search'. When the user has filled out at least one of the attributes and clicks this button you should search your database for all deals that match the search criteria. Note if the user has filled out multiple attributes your search results should match all criteria.

You should then display all search result in a new page with a similar format to your gallery page. In other words have a page with the images and meta-data of all locations that matched the search. A sample result page has provided as showing at below.



If no results match print a message 'Sorry, no results matching your search were found'.

