ISIT307 Assignment 6

To be started in: week 7

Due: At the end of week 8 (5pm in the dropbox).

Description

The purpose of this assignment is to practise creation and use of a MySQL collection DB.

This assignment assumes you have a web application based on some kind of collection i.e. a music collection, a blog (collection of text), a shop (a collection of items) etc. This assignment requires that you create a small collection (at least 20 items) where each item has an ID and at least 3 attributes (dimensions). For an online "sock" shop an example record is:

ProdID	Brand	Colour	Size	Price	Sold
T01A	Reef	Black	8.5	12.50	47

A real collection would contain thousands of items. This collection will be created in a MySQL DB that you can demonstrate in the lab. It is recommended you use phpMyAdmin to create your DB and define your tables. The easiest way to load your data may be by importing records from a text file (such as a CSV file) that you create (phpMyAdmin has an import facility). Alternatively, you may use an SQL console for this if you wish or you may use a php program to import your collection data into a MySQL DB from a file if you already know how to do this (this is not a requirement).

Standard level (2 marks)
Your MySQL DB will contain at least 20 records that have an id and three categorical attributes (as in the previous assignment). You will prepare a text file that contains the following SQL queries and their result:

- A query that filters on one attribute
- A query that filters on two attributes
- A query that inserts an additional record
- A query that updates a record
- A query that aggregates on one attribute to return counts e.g an aggregation on colour would return: black (10), red (4), gray (6) for 20 records.

In the lab your tutor will read your query text file and may ask you to run a modified version of one or more of your queries on your DB. If marking is via dropbox only, ensure a full testing report is include.

Advanced level (3 marks)
Standard level plus the following:
Write a web form that initially shows for each attribute, the record counts. That is, your interface will shows for each attribute, a list of categories where each category name is followed by a count (the number of records). Your web form will allow the user to change the order of these category lists between: ordered by category name (text ordered) and ordered by count.

You will integrate the above functionality with simple filtering i.e. the user will be able to select one category in an attribute, then click a 'show' button or similar which will recalculate the counts (for that filtered subset). The user should be able to repeat this filtering for more attributes if they wish. Note selecting multiple categories in a single attribute is not required here.

Marking Scheme

Your assignment must be uploaded into the corresponding Moodle dropbox. Your submission will be two files: (i) a PDF file that contains your code and a testing report that demonstrates a number of use cases (ii) a zip file of all your code. Ensure your code is readable i.e. indented properly in both the PDF and text code files. Use a fixed width font in the PDF. Change tabs to 3-4 spaces if needed. Code that is not easy to read will receive a lower mark. In some cases, I may not be able to complete the marking of your work based on your dropbox submission, in such cases, I will complete the marking of your submission in a following lab (via Zoom).

A weak submission (some form functionality has been implemented, but it does not execute) will receive 1 mark. A standard submission will receive 2 marks if correct. An advanced submission will receive 3 marks if correct.

Sample Partial Interface for Advanced

Brand	Colour	Size
[ ] Blaq (20)	[ ] Black (10)	[ ] 7.0 (5)
[ ] HoleProof (10)	[ ] Gray (10)	[ ] 7.5 (10)
[ ] Reef	[ ] Red (10)	[ ] 8.0 (10)
	[ ] Whilte (10)	[ ] 8.5 (10)
		[ ] 9.0 (5)

(*) Sort by Name ( ) Sort by Count

[ ] = a tick box
( ) = a radio button