ISIT307 Assignment 5

To be started in: week 6

Due: by the date specified for the assignment 5 drobox in Moodle.

Description

The purpose of this assignment is to practise: use of associative arrays with a form interface.

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. To explore the collection, the user needs to control the items displayed. The typical interface will include a number of filters (for each attribute) that control what is displayed.

Standard level (2 marks)
Will support three attribute filters. A user shall be able to set zero, or one, or two or three filters (choosing a single category in each attribute such as 'red' in colour) at a time via a web form. The form filter's GUI may use a drop box for category selection or other user interface element as appropriate to your web application. The collection data will be stored in an associative array (key => attribute value) for each attribute. Filters will be implemented with these associative arrays. After a user changes any filter the web page will update to show the filtered collection.

Advanced level (3 marks)
Standard level plus the following. In addition to two or three categorical attributes at least one numeric attribute will be supported (such as price). The user will be able to choose a numeric range when filtering this attribute from a list of pre-defined ranges. At least one categorical attribute will have two 'levels' i.e. be a category tree such as size: small (6.5, 7. 7.5), medium (8, 8.5, 9.0) and large (9.5, 10, 10.5) so that filter categories can be selected at the 1st or 2nd category level. Also a filter query may include multiple categories per attribute i.e. colour is: red or orange (the standard level only requires support for filtering by a single category in each attribute). Formally the advanced level must support filter queries that are an AND (across attributes) with ORs (within an attribute) i.e. conjunction of disjunction.

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.