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| Usability Engineering | CS2511 Practical Sessions |

Dynamic Web Interfaces (vi)

The aim of this exercise is to extend the web-page you created in the last exercise so that it can filter by discrete data (e.g., brand of TV) as well as by continuous data.

Continuous parameters such as price, size, etc., can be filtered using sliders, but discrete data must be filtered using (e.g.) checkboxes, with a separate box for each possible setting of the parameter. To filter the TVs by brand, for example, you might use a set of checkboxes, one for each brand.

You may find this exercise easier if you tackle it in stages.

Create a set of checkboxes, one for each brand of TV in the array. Give them suitable ids, e.g., the brand names.

Write a function that accesses each of the entries in the array in turn, using (e.g.) a for loop, and determines the brand. Test the function by having it report the brand of each entry using an alert().

Extend the code so that it finds the checkbox with the corresponding brand-name and determines whether that box is checked or not.

If the checkbox is a checked, the object should be present, i.e., if it already exists it should be left in place and if it doesn't already exist it should be created. Write code that checks whether the object associated with the current line of the array exists or not, and if not, creates it.

If the checkbox is NOT checked, objects representing TVs of that brand should not be present, i.e., if they already exist they should be removed. Write further code that, when the checkbox is not checked, determines whether the object associated with the current line of the array exists or not, and if it does, removes it.

Arrange your code so that checking or un-checking any of the checkboxes updates the display. You can do this by adding a suitable event-handler to each checkbox and having it call your function. For example, if you use onchange, the function will be called whenever the status of a checkbox changes. However, note that the onchange event doesn't occur until the focus is moved away from a checkbox (e.g., you change the status of the box, then click somewhere else on the page). This may not be the behaviour you require, in which case try using (e.g.) onmouseout instead.

Finally, modify your code so that the slider and the checkboxes work correctly together, i.e., moving the slider does not introduce objects of brands that are not selected on the checkboxes, and checking boxes does not add objects that are below the slider threshold.