## WAD LABORATORY 7

## 1 Objectives covered in this laboratory

- Practise to save state information
- Practise to use XML to transfer data between server and client

## 2 Exercises

NOTE: Questions (a) and (b) are required exercises for all students, while Question (c) is an additional exercise.

a) Copy the code of shopping cart example from Canvas. The file is located in Lec7Examples.rar. Add the ISBN number to the data that is sent to the client for display in the shopping cart, and also display the total cost of the order (see Figure 1).

(hint: one approach is that the session variable was an associative array: title => Qty, you may change it to the new associative array: title => array of [ISBN, Qty, Total]. That is a 2D associate array. Another approach is to a XML file for storing title,ISBN, Qty,Total)

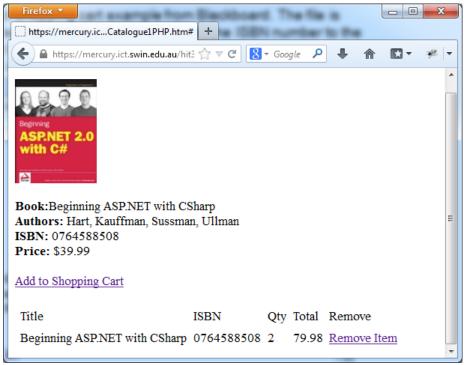


Figure 1 display shopping cart with ISBN and total cost

b) Based on a), modify the system so that when a user deletes an item, it should only delete ONE COPY of the BOOK rather than emptying the cart. If the last copy is deleted, then the shopping cart should no longer be displayed (see Figure 2and Figure 3).

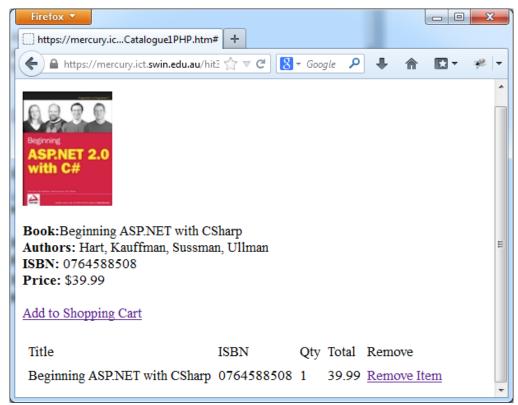


Figure 2 the shopping cart content after clicking "Remove item" in Figure 1

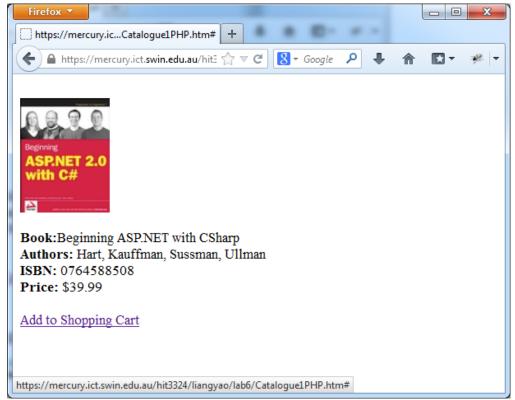


Figure 3 the shopping cart content after clicking "Remove item" in Figure 2

c) Modify the system based on b) so that it could handle any number of books. Use an XML document to store the catalogue of all books on the server. When the client page loads, the data should be read from the server, and displayed in the client.

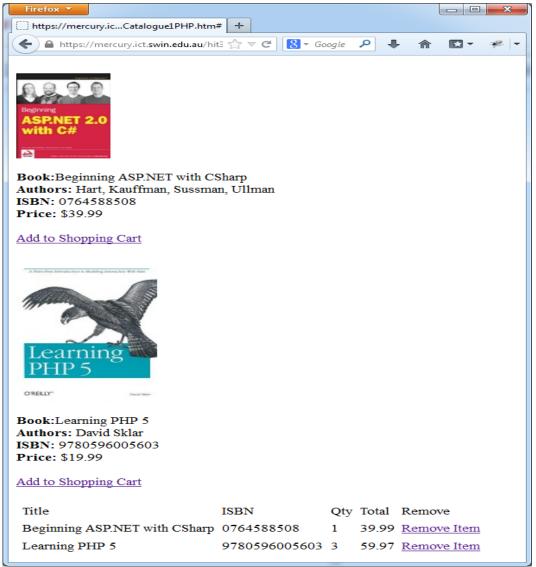


Figure 4 handling multiple books