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**Department of Computer Science**

CS 252/242 Data Structures

**Lab #1**

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Assume you are a programmer in a company for developing applications. Most of your client needs online shopping systems. Such systems have several components. One of them is the shopping cart. When a user is shopping, she/he can add items to the shopping cart. The user also can remove and view items. At this point, assume the items have id, price, and quantity. Note that, the details of items depend on the application type. These details are stored in files.

You have to design a shopping cart for two applications online furniture and online book store. Use the scenarios below to build the two systems.

The online furniture shop system should enable the user to view the products in the store, add a product to the shopping cart, remove a product item from the shopping cart, and view the products in the shopping cart.

The online book store system should enable the user to view the books in the store, search by book title, add a book to the shopping cart, remove a book from the shopping cart, and view the books in the shopping cart.

**Tasks**

* Draw the class diagrams for the two systems.
* Implement and test the two systems. Use a driven menu to display the above requirements properly.

**Note:** The details of the items are in the folders Furniture and Book. You need to check these files to design your classes correctly.