## Product inventory system:

Overview: Create a product inventory system which allows user to search current inventory, remove an item, add an item, or edit the remaining quantity

Requirements:

Inventory: the product inventory is maintained on a text file. A product line contains a unique product id, product name and amount in inventory.

## Your application should:

1. Provide a appropriate menu system to allow a user to search, edit, add, or delete inventory
2. A user should be able to see all items in inventory sorted by product id
3. Search
   1. Search by product id or product name
   2. Search looks at the text file and either returns the item, complete with id, name and qty
   3. Product name should return a sorted list of items that match the search criteria
      1. For example a search for “blue” should return  
         b100 blue denim pants 25  
         p325 cardigan blue sweater 35
4. Edit
   1. User will enter a product id and be allowed to change the qty of inventory on hand and/or the item description
5. Add
   1. User can enter a new item which will be written to the inventory text file
   2. Ensure that the item does not already exist in the text file
      1. An item is considered a duplicate if the product ids match
6. Delete
   1. User can search for an item based on the product id and delete an item from inventory

## Your solution should demonstrate:

* Use of classes to create product objects
* Use of encapsulation in creating product objects
* Use of exception handling
* Ability to read and write to text file Chapter 12