Homework Assignment #7
Course: COP 3223C – Intro to Programming with C
Semester: Fall 2015
Credit Value: 7% of Final Grade
Due Date: December 7, 2015

Building a Complex Linked List

You are moving to California for your new job and need to move your household furniture. You have a small truck and a lot of stuff to move, so it is unlikely that you will be able to fit everything in your truck. Therefore, you need to build a list of your household stuff and a priority for how important each item is. Therefore, you will need to write a prioritized list, with those items in the top of the list having the highest priority. The priority should be 0 to 100, with 100 being the highest and zero the lowest. Because you have so many items to move, a handwritten list won't do. You decide to write a linked list on your computer to keep track of the stuff.

Write a program that builds a linked list containing the name of the household item and its priority for taking it with you. The program should include the functionality to build and maintain the list. You will need an **insert** function, a **delete** function, a **search** function, a **serve** function that will tell me the priority of a specific item, and a **print** function that will print out all the contents of the list to screen. Moreover, you would like to store the list in an external file. Therefore, you will need a **load** function where the list can be loaded from an external file and a **save** function that will write out the contents of the list to an external file for future use. You do **NOT** need to worry about changing the priority of an item and having it position itself in its new location. You can overwrite the file when saving the list out to the same file, and need **NOT** worry about appending or building a random access file.

Start with a file that contains the following information: The format of the external file is up to you.

Desktop-computer 100
Desktop-screen 100
Desktop-keyboard 100
TV set 80
Audio-system 75
Bed 65
Night-table 65
Lamp 50
Hibachi 35

For the sake of ease of grading, the name of the input and output file should be `California.txt.` This file will be posted in the assignment section for your use.

Note: You must use at least two files for your source code.