Project 9

1. In project 8, a t-shirt is added to end of the linked list. Each t-shirt was stored with the student organization name, size, price, and quantity in inventory. In this project, you will modify the add_to_inventory function so a t-shirt is added to an ordered linked list. Name your file *tshirt_store2.c*.

   a. Instead of adding to the end of the linked list, a t-shirt is added to an ordered linked list **by student organization name and then by size**. The list remains ordered after the t-shirt is added.

   For example, a t-shirt for Association for Computing Machinery of size XS should be before a t-shirt for Society of Competitive Programmers of size L; a t shirt for Association for Computing Machinery of size XS should be after a t-shirt for Association for Computing Machinery of size L.

2. Modify project 7 so that it uses quick sort to sort the states by percentage of population whose ages are equal or greater than 65 years old. Instead of using the sorting function you wrote for project 7, use the quick sort library function and implement the comparison function. Name your file *demographics2.c*.

Testing guidelines:

Change the file permissions of the test script with the following command:

   chmod +x try_tshirt_store2

   chmod +x try_demographics

2. Compile and test your solution:

   gcc -Wall -std=c99 tshirt_store2.c

   ./try_tshirt_store2

   gcc –Wall demographics2.c

   ./try_demographics