

## HW11 – Structures

Due on Dec. 6th, 6:00pm

1. Write “inventory.c” program to maintain a parts database from “ch14. Structures”.

- insert:            Insert a new part – a new part number, part name, and initial quantity on hand.  
                     If the part is already in the database or the database is full, print an error message and prompt the user to enter an operation code.
- search:           Given a part number, find the part in the database and print the name and quantity on hand of the part.  
                     If the part is not in the database, print an error message and prompt the user to enter an operation code.
- update:           Given a part number, change the quantity on hand.  
                     If the part is not in the database, print an error message and prompt the user to enter an operation code.
- print:             Print a table showing all information in the database. Parts must be displayed in the order in which they were entered.
- quit:              Terminate program execution.

2. Modify “inventory.c” program by adding a **category** member (e.g., computer, printer, etc.) to the **part** structure. The maximum length of a category is 25. The **insert** function should ask the user for the category of a new item. The **search** and **print** functions should display the category.

3. Modify “inventory.c” program by adding a new function **delete** that allows the user to delete a part that is not available any more. Given a part number, delete the part (Write the code continuing from the second question).

- delete:           Given a part number, delete the part from the database. After deleting the part, the database must be re-ordered to maintain the parts consecutively.  
                     If the part is not in the database or the database is full, print an error message and prompt the user to enter an operation code.