2E3 Lab 3

You have two weeks for this lab exercise.
Your goal is to create a program to help the user to edit a shopping list.
The list will record the name, the unit price and the number of units for each item.
The list will be printed ordered by the names of the items.

You will earn more marks if your implementation uses structs to hold the values of each item, and if you implement a dynamically allocated linked list to hold all the items (as opposed to using an array of of fixed size of shopping items) - see the description at the end of this document.

This is an example of the behaviour of the program:

Your list is empty.

Make a choice: (1) Add item, (2) Remove item, (3) Exit
1
Enter new item: Bread
Enter quantity: 1
Enter unit price (EUR): 2.50

Your list contains 1 item for a total of 2.50 EUR
1) Bread, 2.50 EUR X 1, Tot: 2.50 EUR

Make a choice: (1) Add item, (2) Remove item, (4) Exit
1
Enter new item: Beer
Enter quantity: 2
Enter unit price (EUR): 1.70

Your list contains 2 items for a total of 5.90 EUR
1) Beer, 1.70 EUR X 2, Tot: 3.40 EUR
2) Bread, 2.50 EUR X 1, Tot: 2.50 EUR

Make a choice: (1) Add item, (2) Remove item, (3) Exit
1
Enter new item: Spaghetti
Enter quantity: 1
Enter unit price (EUR): 0.80

Your list contains 3 items for a total of 6.70 EUR
1) Beer, 1.70 EUR X 2, Tot: 3.40 EUR
2) Bread, 2.50 EUR X 1, Tot: 2.50 EUR
3) Spaghetti, 0.80 EUR X 1, Tot: 0.80 EUR

Make a choice: (1) Add item, (2) Remove item, (3) Exit
2
Which item do you want to delete? 1

Your list contains 3 items for a total of 3.30 EUR
1) Bread, 2.50 EUR X 1, Tot: 2.50 EUR
2) Spaghetti, 0.80 EUR X 1, Tot: 0.80 EUR

Make a choice: (1) Add item, (2) Remove item, (3) Exit
3
Bye!

The marks for this lab will be assigned as follows:

0 = did not attend the lab session
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1 = attended the lab session but have no or very little working code or **THE CODE DOES NOT COMPILE. Your code MUST compile in order to get a mark higher than 1.**
3 = implement a dynamically allocated linked list
2 = use structs to hold items
1 = correctly adding items to the list / correctly computing all totals
1 = correctly removing items from the list / correctly computing all totals
1 = the list is correctly ordered
1 = no other errors

Max 10 points

The program needs to be DEMONSTRATED for marks to one of the demonstrators before the end of your lab session on October 28th/29th AS WELL AS SUBMITTED ONLINE AS LAB NUMBER 3 by Friday Oct 30th 5pm on Blackboard
(**submit only source files**).