Project Assignment

Module: Memory Management/Arrays

Title: A Shopping List

Description:

By necessity or preference, online grocery shopping is all the rage. In this exercise, you will get NULL-terminated strings from the user and copy them into an array. The array represents a shopping list! When the user is finished entering items, sort them alphabetically, and print them out.

Instructions:

Outside of your main() program, declare an array to hold the items in the list. The storage in this array is allocated statically, and will exist from the time your program starts until the time that it ends. Declare your array like this:

```
char shopping_list[20][100];
```

With an array like this, there is room for twenty items. Each item has up to 99 characters (plus the NULL terminator). The address of a particular string in this list is `shopping_list[i]`. You will use functions from <stdio.h> and <string.h> to collect input from the user and copy it into each item.

Use a loop to collect your list from the user. For each item on the list, ask for the name of the item and store it into your array with strcpy (or strcpy_s).

You will have to consider a few issues:

- How do you know when the user is done entering items?

- How do you print out only the items that have values?

- How do you know how many items are actually in the list?

- How do you guarantee that every string in your array has a NULL terminator at the end?