

Lab Exam 1

Due Feb 28 by 5:20pm **Points** 20 **Submitting** a file upload
Available Feb 28 at 2:30pm - Feb 28 at 5:20pm about 3 hours

This assignment was locked Feb 28 at 5:20pm.

----- EXPLANATION OF TEXT FILES GIVEN TO YOU -----

Assume you have been given three files ([day1.txt](#) , [day2.txt](#) , [day3.txt](#) )

These files contain purchase information for three separate days.

Each purchase is in the following format:

CustomerNumber,ItemNumber;

The customer number is separated from the item purchased by a comma and at the end is a semicolon, signifying the end of the purchase.

Each file contains multiple purchases and each purchase is separated by a semicolon like so:

customer1,item1;customer2,item2;customer3,item3;

In the example above, there are a total of three purchases made by three customers. Keep in mind that a single customer can make multiple purchases in the same day, meaning you can have the same customer listed multiple times:

customer1,item1;customer2,item2;customer1,item3;

----- WHAT I WANT YOU TO DO -----

1. Create a class called "Purchase", this class will have two member variables:
 - a. Customer
 - b. Item

You can add any member functions you find necessary, however, for whatever functions you add to your class, I want you to comment in your header file a reason for why you are including it. IF YOU DO NOT GIVE A REASON I WILL DEDUCT POINTS FOR NOT KEEPING MINIMAL FUNCTIONALITY.

2. Create an array of type purchase. There is a combined total of 15 purchases.
3. Parse all purchase data from all three files and store into your purchase array.

4. Sort the array in ascending order(do not use STL)

The array should be sorted by the following criteria:

1. Customer Number - Customer 100 should come before customer 200, and both of those customers should come before customer 300.
2. Item Number - If two or more purchases are made by the same customer, then you must sort according the item number.

For example, assume you have the following:

100,1A;200,1B;100,1C;100,1B;

When parsed and sorted, your array should look like the following:

```
arr[0]: Customer: 100, Item: 1A  
arr[1]: Customer: 100, Item: 1B  
arr[2]: Customer: 100, Item: 1C  
arr[3]: Customer: 200, Item: 1B
```

Hint: overloading relational operators (< or >) would really help you out.

5. Print out the array onto the console

----- FINAL COMMENTS -----

If you cannot figure out how to parse from the text files, then edit the files so that the format is easier for you to work with. However, this is just to help you turn something in. If the input files are changed there will be a few points deducted.

Please submit all files used and include the console output either as a comment in main or as a screenshot. I will not accept console output as a comment on Canvas. FAILURE TO INCLUDE THIS WILL RESULT IN -2 POINTS.

It does not matter whether you turn the exam in as a zip file or as individual files.

Good luck.