COM S 213 – Fall 2004

Assignment #10

Grade Ledger

Due November 30, 2004

This will be your last assignment (I will still drop the two lowest assignments, but your assignment average will now be based on 8 assignments instead of 10). The assignment is listed as being due November 30th, which is the Tuesday after Thanksgiving (and the first class after the second prelim). If you would like to submit the assignment on the 18th (this Thursday), I will grade it and get it back to you in one way, shape or form prior to the prelim on the 23rd. Otherwise it will be returned on the last day of class (December 2).

As this is the last assignment I will be very vague with the requirements in order to see how you can apply everything we've learned to date. The only requirement I will place on the assignment is that an STL container is used as part of the solution:

Consider a simple grade keeping system. It assumes a data text file in a particular format exists—that is it does not need to create the initial file. The file contains information on 10 students and 10 grades (call them Assignment 1 – Assignment 10). The only information you need to keep on the students is their name, but you can add data such as a "student id" if you'd like.

The system presents the user with a simple text based menu, such as this:

```
MAIN MENU
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1. Load Grades
2. Save Grades
3. Show Grades
4. Change Grade
5. Quit

Please enter your choice (1-5):
```

The menu options perform the following functions:

FUNCTION	DESCRIPTION
Load Grades	Prompts user for the data file name (remember, this creation of this file is outside the scope of this assignment, just use a text editor to create an initial file) and reads the data into memory—storing each students grades in an integer array, and storing the mapping of the student name to the grades array in an STL `map`

	container.
Save Grades	Prompts the user for a data file name to save the grades back into. Then, saves the grades to that file.
Show Grades	Prints out a summary of all grades for all students. The grades are printed out neatly in a 'grid format"
Change Grade	Allows the user to enter a student name and an assignment number, then allows input of a new grade for that assignment.
Quit	Self explanatory. If changes have been made since the last save, the user should be asked "Are you sure you want to quit? Some data will be lost!"

The only restriction being placed on you is that you must use an STL map to store the student/grade information in memory. That would be a key-value pair where the student name is the key and an array of integers is the value.

This assignment incorporates things we've done in past assignment along with the requirement to use the STL map. Grading for this assignment will be based more on your ability to apply concepts covered in previous assignments to this one.

As always, please email me with questions!