Lab Document and Questions
Name: _____

Lab #8, 10/24/2013
WFU Username: _____

CSC 111E: Lab #8 – Files

Lab Date: Thursday, 10/24/2013 Due Date: Friday, 10/25/2013 @ 5:00pm

Purpose: The purpose of this lab is to have you gain experience with making use of files in your programs.

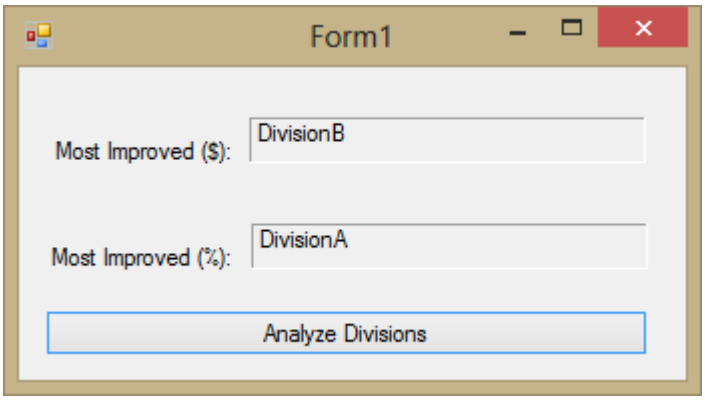
Program 1: Most improved
Make sure to read this entire description before starting any work problem solving and programming.

You have been asked to review the different divisions in your company to find the "most improved" divisions over the last year. You have been provided a file called *divisionSummary.txt which* has the following format:

```
DivisionName
ProfitLastYear
ProfitThisYear
DivisionName
ProfitLastYear
ProfitThisYear
DivisionName
ProfitLastYear
ProfitThisYear
```

Note there is no line at the top of the file indicating how many divisions there are. You are guaranteed there will be at least one division listed in the file (covering 3 lines of text), but there could be many more.

You are asked to determine the recipients of two "most improved" awards: one to the company division that had the largest increase in profit in raw dollars, and the second award to the division that had the largest percentage increase. In the GUI of the program, you should fill in the names of the divisions that win these awards in the appropriate output labels.



The shell of a program and a data file have already been created for you in the file *Lab8Program1.zip* available in Sakai. *Helpful hint:* Write the program first working on just discovering the division that had the largest increase in profit in raw dollars. Once that is working correctly, go back and add in extra instructions to analyze for percentage increase.

For the input file you are given (shown below), DivisionB has the largest improvement in raw dollars, while DivisionA has the largest percentage improvement (see the test set on the next page).

DivisionA
1000
2000 Increase of $1000, which is 100%
DivisionB
1500
2600 Increase of $1100, which is 73.3%
DivisionC
500
800 Increase of $300, which is 60%
DivisionD
2000
2500 Increase of $500, which is 25%

Program 2:
Make sure to read this entire description before starting any work problem solving and programming.
You have been asked to evaluate a client list, stored in a file called *clientSummary.txt*, and determine what percentage of the clients are "low volume", "medium volume", and "high volume" buyers.

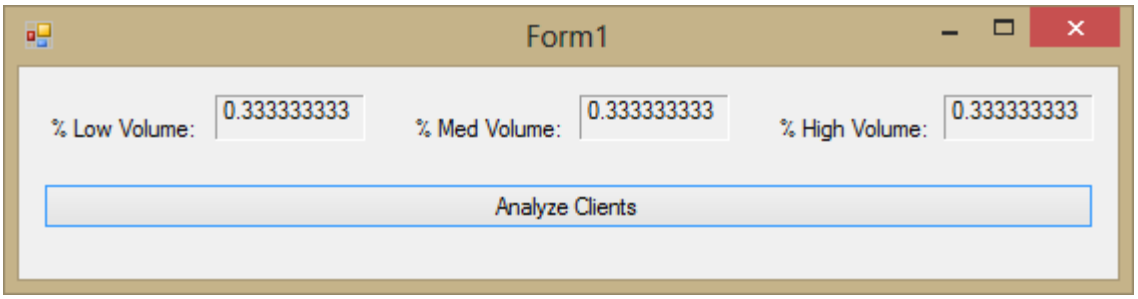
The file you will be given has a format that matches the following:
# of clients
Client name
Units purchased for that client (name, units repeated on following lines as needed)

As an example,
3
Nicole Kidman
250000
Tom Cruise
2000000
Katy Perry
1500

The definitions of low, medium, and high volume are as follows.

Low	Less than 100,000 units
Medium	100,000 to 999,999 units
High	1 million or more units

The shell of a program and a data file have already been created for you as *Lab8Program2.zip*. The GUI will appear as follows:



The output shown above is appropriate given the example input file that has Nicole Kidman, Tom Cruise, and Katy Perry listed.

Submission

To submit this lab for grading, do the following by Friday, 10/25, at 5:00pm:

- Zip each of the projects separately.
- Upload the projects into Sakai under the Assignments, Lab8 link.

Your grade will be based on the following rubric:

Objective	Points Available	Points Earned
Program 1: Correctly opens and closes file	8	
Program 1: Reads entire file using appropriate mechanism	12	
Program 1: Correctly computes most improved (raw $)	13	
Program 1: Correctly computes most improved (%)	13	
Program 1: Correctly shows results in GUI	8	
Program 2: Correctly opens and closes file	8	
Program 2: Reads entire file using appropriate mechanism	12	
Program 2: Generates appropriate percentages of each type of customer	13	
Program 2: Correctly shows results in GUI	8	
Programs 1 and 2: Compile without error	5	