Assignment 1 - Quiz Grader

Date assigned: Wednesday, February 4, 2009
Date due: Wednesday, February 11, 2009
Points: 30

The results of a true-false quiz given to a Computer Science class over the WWW have been saved in a file called cs150quiz1.txt. The information available for each student in this particular example consists of a student identification number and the student's answers for 10 true-false questions. The first line of data consists of the number of true-false answers and the actual true-false answers to the Quiz where a 1 stands for true and 0 stands for false. Each subsequent line contains a student ID number and the student's answers to the Quiz. There will be no more than 100 students and 25 questions.

You are to write a C++ program that will print for each student, the student's ID number, the Quiz percent, and a list of the questions missed on the Quiz by question number. The questions missed must be separated by commas if more than one question was missed.

As summary statistics your program must print:
1. The class average
2. The highest percent score achieved
3. The lowest percent score achieved

The following is a sample data file that might be used in your program:

```
10   0 1 0 0 1 0 0 1 0 1
1080 0 1 1 0 1 0 1 1 0 1
1340 0 1 0 1 0 1 1 1 0 0
1462 1 1 0 1 1 1 0 0 1 0
1512 1 0 1 0 1 0 1 0 1 0
1341 0 1 1 0 1 1 1 1 1 1
1401 1 1 0 0 1 0 0 1 1 1
1463 1 1 1 1 1 1 1 1 1 1
1464 0 1 0 0 1 0 0 1 0 1
```

Your output must be in the order of ID, percent, and then missed questions. Your output must be in the following form:

```
          STUDENT GRADES

ID      PERCENT   MISSED QUESTIONS
-----   -------   ----------------
1080      80.0    3, 7
1340      50.0    4, 5, 6, 7, 10

and so on

        SUMMARY STATISTICS
        ------------------
        CLASS AVERAGE:   XX.XX
        HIGHEST SCORE:   XX.XX
        LOWEST SCORE:    XX.XX
```

Goals for Assignment 1:

1. Get back into coding using Visual Studio
2. Use arrays and read from files
3. Design & implement your solution using well-defined functions

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- Note1: I will run your program on the test data supplied and one or two more files that I will not hand out.

- Note2: Save your program as 01PUNet.cpp fully documented in a project folder called 01PUNet. So as an example, I would save this program as 01khoj0332.cpp in a folder called 01khoj0332.

- Note3: Your code is to be written using Visual Studio and placed in the CS250 Drop Box by 9:15am on the day in which the assignment is due. See me if you need to install Visual Studio on your computer.

- Note4: You are to follow the same set of coding standards used in CS150 for this assignment. I am more than happy to take a look at your code and give you feedback, but I will be taking off points if the code does not conform to the coding standards. The coding standards are available on the website.

- Note 5: The file name is to be hard coded in your program. Your program must display an error message if the file cannot be opened.

Welcome back and happy coding ☺