**For Loop and Text Files**

**Student Grades**

On disk is a file named scores.txt. The first part of it might look like this:

6

Alexander Graham Bell

92 94 84 80 93 83

Carl Linnaeus

76 62 46 93 81 41

Mary Anning

90 100 89 90 98 86

Ada Lovelace

78 63 80 88 76 91

The first line of the file consists of a positive number representing how many scores each student has received. All the following lines are in pairs, with the first containing a student’s name and the second containing a list of scores. You may assume the data file contains no errors. Each score is guaranteed to be a whole number between 0 and 100 inclusive. Each name is guaranteed to be less than 25 characters in length. Every student is guaranteed to have the number of scores given in the first line of the file. The file is guaranteed to have at least three lines, but there is no way to know in advance how many lines the file contains.

Your assignment is to create a program to open and read the data file. For each student, you are to locate or calculate:

* the average score
* the highest score
* the lowest score
* the letter grade, based on a 90-80-70-60 scale

Your program must create a report in a text file named grade\_report.txt that looks like this, in tabular form with averages displayed with two decimal points:

Alexander Graham Bell 80 94 87.67 B

Carl Linnaeus 41 93 66.50 D

Mary Anning 86 100 92.17 A

Ada Lovelace 63 91 79.33 C

[Here](http://borax.truman.edu/180/lab07forfile/scores.txt) is a data file you can use for testing, but you are encouraged to add other values to make sure all cases are tested (e.g., a name with 24 characters, a student who has all zeros, a student who has all 100s, etc.).

You are *VERY STRONGLY* encouraged to write this program incrementally, stopping and testing each piece of functionality as you develop it. For example, your first iteration should do nothing more than open the file, echo its contents to screen, and close the file. The second iteration might capture the first line of the file as the variable number\_of\_scores and echo it separately, etc.