

Lab Assignment 13 - 04/23/2009

Name: _____

Section: 8:00 11:00 12:30 6:30

Problem 1: Working with Data Sets

On the course webpage, download the data file `lab13data.txt` and store it in your Z: drive (or wherever you will run your program). This file contains a list of numbers. The first is an integer specifying how many more numbers are in the file. After that, the other numbers should be interpreted as `double` type.

You will write a program `loader` that will open this file, read its contents, and compute some statistics on the contents:

1. The *minimum* value among the numbers.
2. The *maximum* value among the numbers.
3. The *average* value among the numbers.

These numbers must be computed using file input appropriate for any file of this format. This can also be done without arrays. Here is a method to use:

1. Open the file.
2. Read in the first integer as a number `n`, the number of elements.
3. Define variables `min`, `max`, `sum`, and `first` and initialize them all to zero.
4. Write a `for` loop to iterate the following block `n` times:
 - (a) Read a `double` value `x` from the file.
 - (b) If `first` is zero, then set `min` and `max` to `x`.
 - (c) If `x` is smaller than `min`, then set `min` to `x`.
 - (d) If `x` is bigger than `max`, then set `max` to `x`.
 - (e) Add `x` to `sum`.
5. Calculate *average* by dividing `sum` by `n`.
6. Output the values of `min`, `max`, and *average*.