Assignment 1

Programming Usable Interfaces - Spring 2009
Assigned: 17 Feb
Due: noon 3 Mar

Objective

The goal of this assignment is to demonstrate that you can use Flex by creating three small programs. This will require going through a simple tutorial and then playing with the system and reading more on your own about Flex. Warning! This should be an easy assignment if you start early. It's ugly if you don't. Students who do not complete this assignment on time will be assumed to not have the pre-requisites for the course and will not be allowed to continue in the course.

Resources

You must use Adobe Flex Builder to do this assignment, which can be downloaded from Adobe's website and used 60 days for free. Make sure you have access to Flex, either on your own machine or on the public PC. Do this today!

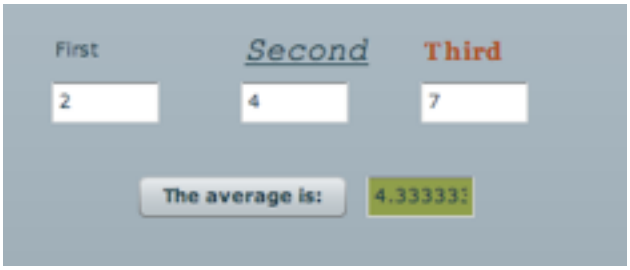
There is no textbook specified for Flex for this course, but there are many excellent online references. See the resources/tutorial information at the end of this document.

Since this is a graduate course, I expect you to be using the WWW, and all other available resources, at all times, and to be letting me know on the forum of any particularly good resources you find. You should also examine the online documentation for Flex, and check out the wide variety of Flex books available in any well-stocked bookstore. Let me know what is particularly useful or useless.

Your Three-Part Task

Part 1

Write a Flex program that, when a button is pressed, computes the average of 3 numbers which are typed in, and looks like this (please match the appearance closely enough to demonstrate you can move/resize/change font etc, but don't worry about an exact match). You must check to make sure that the user has typed in valid numbers.



Part 2

Download and modify the existing project "SortDown" so that when a button is clicked, it sorts a list of text strings in decreasing alphabetical order. The existing project has a list and a button; when the button is clicked, the program finds the lexicographically largest and smallest text strings and switches their positions. The existing program is a Flex project (which

means it contains multiple files and directories), and can be downloaded from the course website. Once you have downloaded the ZIP file, open FlexBuilder and click on File->Import->Flex Project and point to the ZIP file you just downloaded.

Part 3

Write a Flex program that does anything you like, but impresses us with its utility or entertainment value. Even with the small set of Flex that you know now, you can do something clever if you try! Be prepared to explain why you invested your time in the particular program you spent time on. Note that we'll be judging you on utility or entertainment value, not on the quality of the programming per se. This way is more fair (and more fun!). Please don't go crazy loading megabytes of media (images, etc); go for a clever program, not a piggish multimedia extravaganza.

Hints

- For part 2, feel free to add and delete any of the code that is in the sample project. There are many ways to solve this problem, and many of them don't use all the code in the sample project. Mostly the purpose of the sample code is to show you how access and manipulate lists in Flex.
- Also when you are comparing two strings in Flex, it is comparing them alphabetically. For example: Alligator < Billy and Joe > Cal.
- There is no need to modify any of the code in the helper function SwapLocations
- Be sure to add comments that explain how you are sorting the strings.

Grading

The first part of the assignment is pass/fall; the others will be graded on programming correctness and style (part #2) and creativity (part #3). All your code should be commented to help explain what you are doing. Students who find they cannot complete this assignment on time are likely to find the remaining assignments very difficult, and should carefully consider whether they wish to continue with the class. Start early!

Here are 3 things that students had trouble with on the first Flex assignment in the past. Be sure to address these in this and all the other assignments:

1. little to no commenting of code
2. leaving widget names wit default names rather than renaming with meaningful names
3. using a combo box as a drop-down menu but with text entry still enabled so users can write in their own entries, but the software isn't able to do anything with that entry.

Turning In:

Before the start of class on the due date, submit three zip files (one for each part of the assignment) by email to the instructor. Each zip file should contain your full project. To create the zip files, open your project in Flex Builder, and click on File->Export->Flex Project Archive. All zip files must be named exactly as:

[yourfirsname]-yourlastname]-hw1-[partName].zip.

- vassilis-kostakos-hw1-average.zip
- vassilis-kostakos hw1-sortdown.zip
- vassilis-kostakos-hw1-impress.zip

In addition, please bring to class a hard copy printout of your code for the sortdown program (the only part we need is the part that is actually doing the sorting). Please make sure your name is on that hard copy.

Further Resources

- Flex resources:
  - Flex Builder documentation. Search through help, and also follow the built-in links to online tutorials.
  - http://www.adobe.com/devnet/flex
  - http://www.flextutor.org