

# Homework 2

CS 1331

Due 8PM Friday, January 24th 2014

## 1 Introduction

Whoa, new clean format, yay!

This assignment will contain two coding problems. One will have you make an applet, the other will have you practice the basic coding skills you've learned so far in lecture.

## 2 Applet

Congrats! You've been hired by your favorite sports team to design their new logo! Of course, with your awesome Computer Science Degree from Georgia Tech, you are going to mock-up the new logo using a Java Applet. We want you to be as creative as possible with your applet, so we are only going to require the following things from you:

1. Draw at least 3 different types of shapes
2. Use both the unfilled, and filled options on one of your shapes
3. Put the location and the name of your team somewhere (I.E. 'Boston' and 'Red Sox')
4. Use at least 3 different colors in your applet
5. 2 of your colors must be created using the Color constructor (I.E. `Color c = new Color(int red, int green, int blue)`)
6. The size needs to be at least 400x400 (but make it so it can still fit on the screen please :))
7. You may use outside images for *extra flair* but they will not count towards any of these requirements

Go nuts with this, and have fun :)

Some tips to remember...

- You should type your HTML page that shows your applet with a plain text editor (Notepad, Sublime Text etc...). Code for the HTML page should be in your book, and it was also covered in lecture.
- It might also be a good idea to compile your code using the command line as opposed to an IDE button. Remember the command for compiling Java is: `javac`
- After you compile your code, be sure to run your applet with the AppletViewer command. For example: `appletviewer Logo.html`. We will be using AppletViewer to look at and grade your HTML pages.

### 3 GPA Calculator

Write an application that prompts the user for the number of As, Bs, Cs, Ds, and Fs that they have received, then do the necessary calculations to determine their GPA.

Here is how we are going to use to calculate GPA:

The weight of the grades is defined as:  $4.0 \times (\text{Number of As}) + 3.0 \times (\text{Number of Bs}) + 2.0 \times (\text{Number of Cs}) + 1.0 \times (\text{Number of Ds}) + 0.0 \times (\text{Number of Fs})$

The sum of the grades is simply:  $(\text{Number of As}) + (\text{Number of Bs}) + (\text{Number of Cs}) + (\text{Number of Ds}) + (\text{Number of Fs})$

GPA is the weight divided by the sum

We aren't going to worry about credit hours here : )

A sample input/output of the program is shown below:

```
javac GPACalc.java
java GPACalc

A: 4
B: 4
C: 2
D: 1
F: 0
GPA: 3.0
```

Things to remember here:

- You need to get input from the user for each grade, what have we used in lecture that gets input from the user?
- You can assume for this homework that we will only give valid input (I.E. no letters, negative numbers or whatnot)

## 4 Turn-in Procedure

Submit all of the Java source files you created to T-Square and your HTML page for your Applet. Do not submit any compiled bytecode (`.class` files). When you're ready, double-check that you have submitted and not just saved a draft.

## 5 Verify the Success of Your Submission to T-Square

Practice safe submission! Verify that your HW files were truly submitted correctly, the upload was successful, and that the files compile and run. It is solely your responsibility to turn in your homework and practice this safe submission safeguard.

1. After uploading the files to T-Square you should receive an email from T-Square listing the names of the files that were uploaded and received. If you do not get the confirmation email almost immediately, something is wrong with your HW submission and/or your email. Even receiving the email does not guarantee that you turned in exactly what you intended.
2. After submitting the files to T-Square, return to the Assignment menu option and this homework. It should show the submitted files.
3. Download copies of your submitted files from the T-Square Assignment page placing them in a new folder.
4. Recompile and test those exact files.
5. This helps guard against a few things.
  - (a) It helps insure that you turn in the correct files.
  - (b) It helps you realize if you omit a file or files.<sup>1</sup> (If you do discover that you omitted a file, submit all of your files again, not just the missing one.)
  - (c) Helps find last minute causes of files not compiling and/or running.

---

<sup>1</sup>Missing files will not be given any credit, and non-compiling homework solutions will receive few to zero points. Also recall that late homework will not be accepted regardless of excuse. Treat the due date with respect. The real due date is 8PM Friday. Do not wait until the last minute!