CSCI 111, Bonus Lab 4
ASCII yourself

Individual work: All work must be your own. Do not share code with anyone other than the instructor and teaching assistants. This includes looking over shoulders at screens with the code open. You may discuss ideas, algorithms, approaches, *etc.* with other students but NEVER actual code.

ASCII art: Get yourself into print! Make a picture of yourself like the one on the next page.

This works best with a high contrast image. Check into Bonus Lab 3, histogram equalization, to see how to make a high contrast image, or use an image processing program (there are free ones online) to make a high contrast grayscale image of yourself.

It will work with an ordinary grayscale image, but won't look as good.

Then, iterate through the image and print to a file characters whose ink density corresponds to the brightness of the image. The string I used for the image on the next page was:

```
1 "  .:-=+*#%@"
```

But you can use your own, or search for others on the web!

Turn in: Your program and a text file with an asciiized picture of yourself.

There should be a function, `make_ascii(image, cols, outputfilename)`, which takes as parameters the filename of an image, the desired number of columns in the output, and the output file name.

The number of rows output should depend on the aspect ratio of your image and how many columns were requested. It should output a text file with the whole input image converted. No cropping, and no black or white bars around the outside.

There is also an aspect ratio to most fonts you should take into account. Most fonts are taller than they are wide, so if your program assumes they will be squares your picture will be stretched vertically.

I used a text aspect ratio of about 4:3 for my image, but I don't think I got it quite right. It will also depend on which font you use! Make sure you use a fixed pitch font, like courier, and not times or helvetica.

ASCII ME!