**Project 1: ASCII ART**

**EE 365: Small Computer Software**

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**Overview of the project:**

Made a WPF application using visual studio C#. The application takes in an image from the user and converts it to ASCII characters that look like the image. The user provided with 3 different fonts to choose from, each of which have 2 font size options.

To accomplish this, I had to write a program that measures the “weight” of these characters, and compares it to blocks of pixels in the image inserted. Then these blocks will be replaced by letters of similar weights.

I made the dictionary that link the weights to ASCII characters in two different ways. First is by inserting an image including characters of a certain font type and size and going throw it to measure the RGB values while mauling finding the dimensions.

The second way was by using formatted texts of certain font and size depending on the user input. The formatted text is used to draw each character on a writable bitmap. Then going throw these bitmaps to find the max width and height of the characters, and then finding the black pixels to find the weight. This is all done without the need of outside resources. This makes it much easier to use any font or font size.

The first way to make the dictionary is commented out at the end of the program, it still works to achieve the goal of the program (with a few touches).

Extras:

1. Included an About box that gives the author, date, etc.
2. Provided a list of instructions and help information.
3. Provide conversion of color photos to gray scale.
4. Additional font types
5. Additional font sizes