Design Document

Christian Gogo

Erinstagram!

Data

Field – 2D array of char (size x size)

Uncovered – 2D array of ints (size x size)

Menu choice- char

Image pixels- array of ints

File Pointers

Run Program:

Prompt user to load, display, or edit an image, and quit. If the user loads, an image of any size will be read from a file name they provide. If the user displays, the current image will display. If the user edits, they will be given an edit menu to crop, dim, or brighten the current image (and rotate). Crop will provide the user with the ability to specify a smaller section of the original image. Dim will make each pixel one step dimmer. Brightening will make each pixel one step brighter. After each edit to the image, it will display the image. After all edits, prompt user if they want to save the new image to a file name. If yes, they will be prompted for a file name. Once editing is completed they will return to the first prompt of the program.

Functions:

Main()

Data: 2D array for image size. Variables for load, edit, display, quit.

Functionality: Provide menu prompts. Call to other functions to change to load, display, edit, or quit.

loadImage()

Input Parameters: File pointer, int rows, int columns, int image 2D array

Returned Output: None

Functionality: Load values from file into image 2D array.

displayImage()

Input Parameters: int rows, int columns, int image 2D array

Returned Output: None

Functionality: Display image pixels of chars of a space, a period, lower case ‘o’, upper case ‘O’, a zero.

cropImage()

Input Parameters: int rows, int columns, int image 2D array, int row’s location, int column’s location

Returned Output: void

Functionality: Crops a smaller section of the current image.

dimImage()

Input Parameters: int rows, int columns, int image 2D array, char dim

Returned Output: void

Functionality: Dims the current image

brightenImage()

Input Parameters: int rows, int columns, int image 2D array, char brighten

Returned Output: void

Functionality: Brightens the current image

saveImage()

Input Parameters: File Pointer

Returned Output: File Pointer

Functionality: Saves current image to new or existing file.