Final Project Design

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Erinstagram

DATA

Image - 2D Array of char (unknown size)

User Input for menus- Int values

Pixel Brightness - Int values

Pixel Values - Char values

Output image - File IO

Input image - File IO

PLAN

The user will have the option to load a new or previous image, edit a current image, display a current image, or exit the program. Editing the current image would bring up another menu where the user has the option to crop, dim, brighten, or rotate the image. The image will consist of a series of pixels, which are varying characters depending on the "brightness" of the pixel.

FUNCTIONS

main()

Data: Arrays for image; Variables for user inputs in menu choices; If statements for menu choices; File to store previous images

Functionality: Display the various menus needed to load an image or get a new one, with if statements to choose what function to call or file to read depending on the user input.

displayImage

Input parameters: file pointer, int rows, int column

Output parameters: int

Functionality: This will display the image created either through editing or loading a previous image.

getImage

Input parameters: file pointer, int rows, int column, 2D field array

Output parameters: int

Functionality: This will get the input from the user for a previous image.

editImage

Input parameters: int rows, int column, int 2D field array

Output parameters: void

Functionality: This is just a menu where you will be able to choose from multiple options on whether to dim, brighten, crop, or rotate the image.

cropImage

Input parameters: int rows, int column, int 2D field array, int row location, int column location

Output parameters: void

Functionality: This will change the array size parameters so that the image will shrink in whichever direction the user inputs.

dimImage

Input parameters: int rows, int column, int 2D field array, int row location int column location

Output parameters: void

Functionality: This will decrease each pixel by one degree of brightness so that each pixel is less bright.

brightenImage

Input parameters: int rows, int column, 2D field array, int row location, int field location

Output parameters: void

Functionality: This will increase each pixel's brightness degree so that the image appears brighter.

rotateImage

Input parameters: int rows, int column, 2D field array, int row location, int field location

Output parameters: void

Functionality: This will rotate the image 90 degrees by switching the rows and columns.