

Design Document
Sabrina Jauregui
Erinstagram

Data

Image - 2D array of chars
New image - 2D array of chars
Edited image - 2D array of chars
File pointers load image
File name - string
Continue choice - int

Program Functionality

A menu will be displayed to the user with 4 different options: load a new image, display the current image, edit the current image, or exit the program. If the user chooses the first option, they will be prompted to provide a file name for the new image. If the user chooses to edit the current image, they will be taken to another menu. In this menu, another 4 options will be displayed: they can crop the image, dim the image, brighten the image, or rotate the image. After one of the above options is complete, they will be prompted to save their edited image to a file. If they agree to save the image, the user will be prompted to provide a file name and then they will be taken back to the first menu. The user will be able to continue altering or displaying the image until they choose to exit the program from the main menu.

Functions

main()

Data: 2D array for pixelated image, menu options, and variable for user choice.

Functionality: Display menu to user with the options to either load a new image, display the current image, edit the current image, or exit the program. Will continue to prompt the user until they decide to exit the program.

loadNewImage()

Input parameter: char *fileName

Returned Output: void

Functionality: The user will provide a file name and then the program will read the contents of an image of any size and display it to the user.

displayCurrentImage()

Returned Output: void

Functionality: The program will display the current saved image to the user.

editingMenu()

Returned Output: void

Functionality: The user will be taken to another menu to edit the current image by cropping, dimming, brightening, or rotating (EC) it. Once one of the menu options is complete, the user will be asked if they'd like to save the image to a file. If they choose to do so, they will be prompted to provide a file name and then returned to the first menu.

cropImage()

Returned Output: void

Functionality: The user will be provided with a way to select a smaller section of the original image that they would like to use as the edited image.

dimImage()

Returned Output: int

Functionality: The program will dim the image by making each pixel one step "dimmer".

brightenImage()

Returned Output: int

Functionality: The program will brighten the image by making each pixel one step "brighter".

Extra Credit:

rotateImage()

Returned Output: int

Functionality: The program will rotate the current image 90 degrees.