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Design Document

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Photo Editor

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Data:

Image: 2D array of arbitrarily large size.

Edited Image: Separate 2D array of arbitrarily large size.

Continue / Exit: Int

Save Image: File Pointer

User Choice: Int

Functionality of Program:

The user will begin by being presented with the options to display a new image that differs from the one prompted, display the current image, edit the current image, or to completely exit the program. When the user selects their choice, the program will follow their directions, to display a new image, the user must provide a file name they wish to gain their image from, displaying the image will show the image to the user as is, to edit the image, there are 4 options (crop, dim, brighten, and rotate 90 degrees) that the user will choose which to accomplish, and simply terminate the program once the user chooses to exit. Once an option is chosen, the user will have the option to save their current image to a file and be returned to further have fun with images!

Functions:

Function Due Dates: All functions due by May 3rd.

main() (Ervin)

Data: Arrays with the choices from the users and the potential chosen image. Variables for each choice (Load new image, display current image, edit current image, exit program).

Functionality: In a loop load an image from a file, be able to load new image from a differing file, display a currently selected image, allow editing to be done to current image, allow user to terminate the program.

defaultMenu() (Alexus)

Input Parameters: None

Returned Output: User Choice

Functionality: Display the menu choice for the user to choose and get the users choice.

newImage() (Ervin)

Input Parameters: File pointer, int currentImage 2D array, int row, int column.

Returned Output: None

Functionality: Render a new image from the file given by user, change array into the new image.

displayCurrentImage() (Ervin)

Input Parameters: File Pointer, int currentImage 2D array, int row, int column.

Returned Output: None

Functionality: Display the current image in the 2D array to the user.

editImage() (BOTH/ Alexus)

Input Parameters: File Pointer, int currentImage 2D array, int row, int column.

Returned Output: none

Functionality: Allow the user to pick what specific editing they would like to do to the current image, edit the image that matches the choice of the user to the current image.

cropImage() (BOTH/ Alexus)

Input Parameters: File Pointer, int currentImage 2D array, int row, int column.

Returned Output: none

Functionality: Crop the current image to the user's specification.

adjustBrightness() (BOTH/ Ervin)

Input Parameters: File Pointer, int currentImage 2D array, int row, int column.

Returned Output: none

Functionality: Allows the current image to either be dimmed by one step or brightened by one step. (Table specification in Final Project Design assignment).

rotateImage() (BOTH)

Input Parameters: File Pointer, int currentImage 2D array, int row, int column.

Returned Output: none

Functionality: Creates an edited image of the original being rotated 90 degrees clockwise.

saveEditedImage() (Alexus)

Input Parameters: File Pointer, int currentImage 2D array, int row, int column

Returned Output: None

Functionality: Prompt the user if they would like to save their edited image to another file, if they do, save it to the users provided file, otherwise, return to original menu.