Design Document
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Erinstagram

Data

Menu Choice - char [(L)oad, (D)isplay, (E)dit, e(X)it]
Edit Menu Choice - char [(C)rop, (D)im, (B)righten, (R)otate]
Modified Image Array - int
File Pointers (brightness, image loading, image saving)

Functionality

User is displayed a menu with the following options: load a new image, display the current image, edit the current image, or exit the program. If they decide to load a new image, attempt to read the contents of a file name they provide. If they decide to edit the current image, allow the following options: crop, dim, brighten, and (potentially) rotate. After an edit has been performed, prompt the user to save the edited image to a file. If they agree, ask for a file name. After, return to the original menu.

Functions

main() - assigned to: both, due: May 6, 11:59PM
Data: Menu choices (regular and editing), modified image array, file pointers
Functionality: Maintain a runtime loop for the provided functions until prompted to exit and allow for selection of menu choices and re-prompting for invalid options.

menu() - assigned to: Aidan, due: May 2, 11:59PM
Input Parameters: N/A
Returned Output: char
Functionality: Display the menu to the user and allow input of an option to load, display, or edit an image, along with an option to exit the program.

display() - assigned to: both, due: May 4, 11:59PM
Input Parameters: int (image pixel array)
Returned Output: N/A
Functionality: Access the array of integers relating to the “color” of each pixel of an image and display for the user.

editMenu() - assigned to: Aidan, due: May 2, 11:59PM
Input Parameters: N/A
Returned Output: char
Functionality: Display the editing menu to the user and allow input of an option to crop, dim, brighten, or rotate an image.

crop() - assigned to: Jordan, due: May 3, 11:59PM
Input Parameters: int (image pixel array)
Returned Output: int (modified image pixel array)
Functionality: Accept the entry of the image to modify, then accept an input (or 2) of which borders to crop the image to.

dim() - assigned to: Jordan, due: May 4, 11:59PM
Input Parameters: int (image pixel array)
Returned Output: int (modified image pixel array)
Functionality: Accept the entry of the image to modify, then accept an input of which brightness level to dim to. Compare the value from the brightness value file and repeat the prompt if the desired level is brighter/equal to the current brightness, then modify the image accordingly.

brighten() - assigned to: Jordan, due: May 4, 11:59PM
Input Parameters: int (image pixel array)
Returned Output: int (modified image pixel array)
Functionality: Accept the entry of the image to modify, then accept an input of which brightness level to brighten to. Compare the value from the brightness value file and repeat the prompt if the desired level is dimmer/equal to the current brightness, then modify the image accordingly.

rotate() - assigned to: Jordan, due: May 7, 11:59PM
Input Parameters: int (image pixel array)
Returned Output: int (modified image pixel array)
Functionality: Accept the entry of the image to modify, then prompt the user for a direction to rotate the image and apply the rotation algorithm (rearranging of pixels) in the specified direction.

save() - assigned to: Aidan, due: May 5, 11:59PM
Input Parameters: int (image pixel array)
Returned Output: file
Functionality: Accept the entry of the image to modify, then prompt the user for a filename to save the file with.

Due Dates:
May 2: menu(), editMenu()
May 3: crop()
May 4: display(), dim(), brighten()
May 5: save()
May 6: main()
May 7: rotate()