Final Design Project
Image Editing/Processing
CS135, Computer Science I, Spring 2024
Rajat Sharma

Data:
"Image" - 2D Array, stored using char
Image "Dimensions" - Array Size, ints of rows, ints of cols
Menu Choice - Int, stored as 1) Get Image, 2) Display Image, etc. etc.
Processing Choice - Crop, Brighten, etc.
File pointers (load and export)

Usage:
User has menu presented to the terminal, indicating whether they would like to:
- Load Image - If the image does not exist, it will quit. (This is not a necessity, but just a way of us confirming that the file does indeed exist)
- Display Image - Display the image to the terminal.
- Edit Image - Crop or reprocess the image.
- Exit

If the user selects any of these, we make sure that the file exists. If the file does not exist, we quit. Otherwise, we get the image. We then either, simply display the image or choose to edit it. If the user selects edit, we display new options: crop, brighten, dim, etc. Once the changes are done. We ask if the user would like to save the image to a file, in which it is exported (most likely back to the original file).

Functions:
loadImage of type VOID
input: filePointer, 2D Array
output: image using rows and cols
return: nothing

displayImage of type VOID
input: image dimensions, 2D Array
output: image
return: nothing

editImage of type VOID
input: image dimensions, 2D Array

output: new image
return: nothing

cropImage of type VOID
input: image dimensions, 2D Array
output: image, cropped
return: nothing

dimImage of type VOID
input: image dimensions, 2D Array
output: image, dimmed
return: nothing
brightenImage of type VOID

input: image dimensions, 2D Array
output: image, brightened
return: nothing

BONUS: rotateImage of type VOID
input: image dimensions, 2D Array
output: image, ROTATED
return: nothing

???'s / Gray Areas:
- Are we only going to do crop, dim, brighten?
- If we plan on doing the extra credit, how can we create a rotation of 90 degrees? What will we need to do?
- What if we just removed the combination of Edit and Load on the menu, and instead made a check to make sure this is already done, and add Crop, Dim, Brighten, Rotate, etc. on the main menu instead of using two different menus?
- Would we use void for all of the functions?

We can implement a switch for the menu.