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Final Project Design

Data

Image - 2D array of int
File pointers rows, columns
Menu/edit choice - char
Dimness - int
Brightness - int
Saved image - file pointer
User input - char

Design

Prompt user with an option to edit current photo or upload new photo. User should be able to upload current or new image and should be able to edit current image with either dimness, brightness, cropping and rotation. User should also be able to save the image to a file.

Functions

main()

Data: arrays, variables for user inputs, rows, columns, and menu

Functionality: Load images from files. Display menu items and prompt users with choices. After the user is done editing (done from functions), prompt the user to save the image (saved with a function).

getMenuChoice()

Input parameters: none

Output: char* userInput

Functionality: prompt user with menu. User should choose between loading a new image, displaying the current image, editing current image, and exiting the program.

getEditChoice()

Input parameters: none

Output: char* userInput

Functionality: prompt user with second menu after choosing to edit current photo. User should choose between how to edit the current photo. Options should be dimness, brightness, cropping, and rotation

displayImage()

Input parameters: int rows, int columns, int 2D arrays

Output: int image

Functionality: Function will display either current image after editing changes or display previous image

cropImage()

Input parameters: int rows, int columns, int 2D arrays

Output: int image

Functionality: Prompt user for smaller image size. If the user does not want to crop the image, the user should be able to exit crop editing. If the user wants to crop, the user needs to input what section they want to edit. Update row and column based on user input

dimImage()

Input parameters: int rows, int columns, int 2D arrays, int brightness value, into row location, int column location

Output: int image

Functionality: Set all elements in the image array to dim where each pixel dims by one brightness value

brightenImage()

Input parameters: int rows, int columns, int 2D , int brightness type, int row location, int column location

Output: int image

Functionality: Set all elements in the image array to brighten where each pixel brightens by one brightness value

rotateImage()

Input parameters: int rows, int columns, in moves 2D array, int row location, int column location

Output: void/none

Functionality: Prompt user to rotate image 90 degrees. Pixels are moved to a new array. Pixels should be updated to the new row or column

saveImage()

Input parameters: file pointer

Output: void/none

Functionality: Prompt user to save edited image to file. Image should be saved to file pointer that connects to file