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CS(6th)

Assignment No. 1:Image Processing

Description:

This program manipulates the Images provided in the assignment in order to perform different operation such as listed in Functions section.  
this program handles only PPM(Portable Pix Map) images with P6 format.  
Operations Menu:

When program runs it displays a list of operation that user can do by providing the ID provided with the operation name:

**Make Sure to provide Extension”.ppm “with every file name while performing any operation.**

1. Create Negative : (Sepia Conversion)
2. Create Gray: (Black and White img formation)
3. Create Morph( Transition Images By Combining images )
4. Combine Images ( creates Img by combination of two images based on alpha)
5. Subtract: (Subtracts 2nd img from 1st img)
6. Color Image: Converts provided image into R/G/B image.
7. Quit ( terminating Program)

Functions:

1. Read : Open the provided imgNAME in binary mode and returns true/false.
2. Write: Creates the img file and returns true in successful attempt otherwise false.
3. Allocate: Makes the memory allocation for the provided pixel double pointer.
4. Free: Deallocates the values made for the double pointer img .
5. Negative: Creates the sepia of image provided and saves as negative(imgNAME.ppm).
6. Gray: Creates the black and white img of provided img and saves as gray(imgNAME.ppm).
7. Subtract: Subtracts the 2nd image from 1st image and stores in 3rd image and saves as subtract(img1.ppm\_img2.ppm).
8. Red: function Used in Color Operation to convert provided image into its red image by making other values 0.
9. Green: function Used in Color Operation to convert provided image into its green image by making other values 0
10. Red: function Used in Color Operation to convert provided image into its Blue image by making other values 0.
11. Combine : Can be used in two scenrios:

Creates the transition images based on the alpha value provided by the user and saves as morph(0), morph(1), morph(2),. . . .

create combination of two images based on the alpha value.

Refrences:

Checking for Comment:

<https://stackoverflow.com/questions/39103188/>

Checking Gray values:

<https://stackoverflow.com/questions/596216/>

Output Images

