Garrett Tarczuk
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CSC412

Prog06 Image Focusing

How to run my code:
compile script ./run.sh
program   ./Prog image1.tga image2.tga ... imagen.tga outputimage.tga

The way my threads work I simply have each thread get the full width of the image
and only a small section of the vertical height of the image. Basically making
a series of rectangular stacks/blocks going up the image from the bottom to the top.

My program controls the mutex lock by the line before I write (version 1),
or before the loop (version 2) to write I make a call to lock the mutex lock
right after I finish writing I unlock the mutex lock. This way my threads
will see if they can lock and have permission to write before they write.
If there is a lock already they will wait till it becomes unlocked to lock it,
giving permission to write to my output image.

I did a little reasearch into different grey scale algorithms and found an algorithm
that calculates the luminance scale to the image. Luminance is used by Matlab, and Gimp
to do image processing and recognition. If you care, this is the link to the artical
on the different grey scale algorithms:
        https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0029740
I found the artical to be fairly interesting. It taked about 8 different algorithms.