CS 334 Spring 2010

Due Tuesday February 2nd, 6am

Assignment 2—2-D graphics

1. Create a 2-D graphics application with the following functionality:
    a. Load & save tiff image files
    b. 2-D triangle rasterization (constant color)
    c. Line segment rasterization (constant color)
    d. Image processing
        i. Brightness adjustment
        ii. Edge detection
    e. Graphical user interface
        i. Load and save image buttons, should ask for file name
        ii. Edge detection button
        iii. Brightness adjustment button & percentage value field
2. Demonstrate application by:
    a. Making an image that spells out your first name (first 3 letters suffice)
        i. Letters should be thick, made of 2-D triangles; black letter contour should be made of 2-D segments
        ii. Save image as name.tif
    b. Find edges in given image; save as edges.tif
    c. Increase brightness 20% in given image; save as bright.tif
3. Extra credit
    a. Contrast enhancement (2%)
    b. A cool image effect (x%)
    c. Vertex color interpolation for triangle rasterization (2%)
    d. 2-D Tetris game (5%)
    e. A cool 2-D game (x%)
4. Turn in on Blackboard
    a. Source code
    b. Executable
    c. 3 required images edges.tif, bright.tif, name.tif, and any extra credit images in root of submission archive
    d. A readme.txt file describing the usage and extra credit features attempted

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