ECE 8813A   Spring 2017
Problem Set #6

Assigned: 17-March-17
Due Date: 30-March-17

PROBLEM 6.1:

Given: Your solution to Homework 5 modify the name of the module to HW6_top and following the input/output naming convention in the attached hw6_tb.v file.

Also find the attached paper entitled "Design of Sobel Operator based Image Edge Detection Algorithm on FPGA" written by Girish Chaple and R.D. Daruwala. Follow this procedure to implement the edge detection.

Find: Implement an image transpose (rotate the image 90 degrees) if the sel_operation signal is set to 1. Implement an edge detection if the sel_operation signal is set to 0. Output the image in BOTH VGA format and the streaming pixel format that was used in HW5. Two output images will be created after this testbed has been run. One file will contain the transposed image and the other will contain the edge detected image.