CSE 5392-016 Lab 3

Due May 9

Goals:

1. Understanding of duality.

2. Understanding of convex polygon intersection.

3. Understanding of stabbing problems.

Requirements:

1. The first line of the input will be the number of segments *n* and will not exceed 25. Each of the remaining *n* lines will contain the coordinates (x1 y1 x2 y2) for two endpoints of a segment.

2. Your output will have two pages. One page should show the double wedges and the final regions for the stabbing lines. The second page will show the input segments and a stabbing line for each of the final regions.

3. Send your program (as an attachment) to `weems@uta.edu` by 5:15 pm on May 9. Please provide details on using your program.

4. In addition to sending your program, have another attachment that contains at least three test cases.

Getting Started:

1. The code in section 7.6 of O'Rourke is very useful and may be used in your code.

2. The input will be integers in the range `-500 . . . 500`. You may bound all regions for your convex polygons (and double wedges) based on this fact.

3. You may work in groups of no more than three students. Be sure to identify each member's contribution.

4. The provided paper by Edelsbrunner et. al. is very useful.