CS5405HW06 (Due Thursday October 25, 2016 in class) Your Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**This is extension of HW06.**

**Read that assignment in addition**

As in HW06, you will input parameters of triangles.

Use textField to read input, input two triangles: x1 y1 w1 h1 x2 y2 w2 h2 **(pixels are integers)**

( x1 y1 w1,h1 means that triangle vertices are (x1,y1),(x1+w1,y1), (x1+w1/2,y1+h1)). You will need polygon class to draw the triangle. Do not fill the triangles with any color.

If you decide to use any other means of input for triangle. Describe it in a prompt label above the textField ) .

Output on a label to describe what kind of intersection takes place: interiors disjoint (DC- disconnected), interiors disjoint and touching externally (EC- externally connected), proper overlap PO), equal (EQ), NTPP and TPP are distinguished as TPP (Triangle 1 is inside triangle2 and touches the boundary of triangle 2, where as NTPP (Triangle 1 is inside triangle2 and does not touch the boundary of triangle 2,conversely NTPPc and TPPc are distinguished as TPPc (Triangle 2 is inside triangle1 and touches the boundary of triangle 1, where as NTPPc (Triangle 2 is inside triangle1and does not touch the boundary of triangle 1)

Now instead of five cases DR ,PO,EQ,PP,PPc you have eight cases DC,EC, PO, EQ, TPP, NTPP, TPPc, NTPPc

Follow the same submission requirements. Turn in the Demo.jar file on the Canvas.

Turn in the printed copy of source code and sample screenshots of program output in the class.

**Use javadoc style comments*. No UML diagram required*. Use java conventions for naming classes, methods and variables. Name your program and files names accurately. You may use any java code from the examples in the book or demos on the Canvas. Any other source should be cited accurately to credit the original author(s).**

8. Have the ability to use current techniques, skills and tools necessary for computing practice and be able to apply or evaluate a computer-based system to solve a problem. (ABET Criterion 3: c, i)

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| HW | The program doesn’t have correct interaction and produces incorrect results. Does not meet naming specifications. Not turned in on time. Or Does not compile as specified. | The program had correct interaction, does not produce correct results, does not meet specifications. | The program has correct interaction, produces correct results. It does not meet all the requirements like, naming conventions, documentation. | The program has correct interaction, produces correct results. It meets all the requirements like naming conventions, documentation. |
| Syntax(Prog) | Inadequate  0-5 | Need help  5-6.5 | Adequate  6.5-8.5 | Excellent  8.5-10 |
| Your Score |  |  |  |  |

**Self assessment**

**[1] Does it have author page**

**[1] Does it have Problem Description**

**[1] Does it have references**

**[4] Does it cover all 8 cases – check mark the following**

**DC EC PO EQ TPP NTPP TPPc NTPPc**

**[2] Does it have Demo.jar file**

**[1] Does Demo.jar have source code**

**[1] Does printout have sample out of all the cases.**

Write, compile, test and turn in your program as one jar file Demo.jar. **Late Homework will not be graded.**

Extra 5 points if your program accepts *arbitrary* triangles as (x1,y1, x2,y2, x3,y3) and (a1,b1, a2,b2, a3,b3) and works correctly.