

Software Eng. 2AO4 - Software Design I - 2001

Laboratory 1

For weeks starting September 14 and September 21.

Write and test the following program:

1. a procedure, `overlap`,

that takes 8 integer arguments: $(x_{A0}, y_{A0}, x_{A1}, y_{A1}, x_{B0}, y_{B0}, x_{B1}, y_{B1})$

representing two rectangles, A and B. The first pair gives the x,y coordinates of the upper left corner of rectangle A. The second pair gives the x,y coordinates of lower right corner of rectangle A. The third pair gives the x,y coordinates of the upper left corner of rectangle B. The fourth pair gives the x,y coordinates of lower right corner of rectangle B. The procedure **`overlap`** must return a code that indicates the relationship of the two rectangles. The code should be:

- 1 if all points within A are within B,
- 2 if all points within B are within A,
- 3 if there are no points within both rectangles,
- 4 if A and B overlap,
- 5 if A and B are identical, and
- 6 if A and B are tangent, that is they share a side or part of a side.