Southeastern European Regional Programming Contest
Bucharest, Romania
October 21, 2000

Problem F
Rectangles

Input File: F.DAT
Program Source File: F.PAS or F.C or F.CPP

A specialist in VLSI design testing must decide if there are some components that cover each other for a given design. A component is represented as a rectangle. Assume that each rectangle is rectilinearly oriented (sides parallel to the x and y axis), so that the representation of a rectangle consists of its minimum and maximum x and y coordinates.

Write a program that counts the rectangles that are entirely covered by another rectangle.

The input file contains the text description of several sets of rectangles. The specification of a set consists of the number of rectangles in the set and the list of rectangles given by the minimum and maximum x and y coordinates separated by white spaces, in the format:

nr_rectangles
$xmin_1$ $xmax_1$ $ymin_1$ $ymax_1$
$xmin_2$ $xmax_2$ $ymin_2$ $ymax_2$
….
$xmin_n$ $xmax_n$ $ymin_n$ $ymax_n$

The output should be printed on the standard output. For each given input data set, print one integer number in a single line that gives the result (the number of rectangles that are covered). An example is given in Figure 1.

input	output
3 100 101 100 101 0 3 0 101 20 40 10 400 4 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20	0 4

Figure 1