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

## Problem F <br> Rectangles

Input File: F.DAT<br>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}2\mp@subsup{\mp@code{xmax}}{2}{}\mp@subsup{y}{min}{2}\mp@subsup{y}{Mmax}{2
xmin
```

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 | 0 |
| 100101100101 | 4 |
| 030101 |  |
| $20 \quad 40 \quad 10 \quad 400$ |  |
| 4 |  |
| $\begin{array}{llll}10 & 20 & 10 & 20\end{array}$ |  |
| $\begin{array}{llll}10 & 20 & 10 & 20\end{array}$ |  |
| $\begin{array}{llll}10 & 20 & 10 & 20\end{array}$ |  |
| $10 \quad 20 \quad 10 \quad 20$ |  |

Figure 1

