Problem D. Four Elements

Input file:	*standard input*
Output file:	*standard output*
Time limit:	2 seconds
Memory limit:	512 mebibytes

You have a set A of non-negative integers that is a union of n ranges $[l_i; r_i]$. How many 4-element subsets with sum equal to s does A contain? Output this number modulo 998 244 353.

Input

The first line of the input contains two integers n and s ($1 \le n \le 400$; $0 \le s \le 8 \cdot 10^8$), denoting the number of ranges and the required sum.

Each of the following n lines contains two integers l_i and r_i ($0 \le l_i \le r_i \le 2 \cdot 10^8$; $r_i < l_{i+1}$), denoting the boundaries of the i-th range.

Output

Display the number of 4-element subsets of A with sum equal to s, modulo 998 244 353.

Example

standard input	standard output
2 17 1 3 5 8	4

Note

In the example test case, $A = \{1, 2, 3, 5, 6, 7, 8\}$. Its 4-element subsets with sum equal to 17 are $\{1, 2, 6, 8\}$, $\{1, 3, 5, 8\}$, $\{1, 3, 6, 7\}$, and $\{2, 3, 5, 7\}$.