

CSES Problem Set

Movie Festival Queries

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Time limit: 1.00 s **Memory limit:** 512 MB

In a movie festival, n movies will be shown. You know the starting and ending time of each movie.

Your task is to process q queries of the form: if you arrive and leave the festival at specific times, what is the maximum number of movies you can watch?

You can watch two movies if the first movie ends before or exactly when the second movie starts. You can start the first movie exactly when you arrive and leave exactly when the last movie ends.

Input

The first input line has two integers n and q : the number of movies and queries.

After this, there are n lines describing the movies. Each line has two integers a and b : the starting and ending time of a movie.

Finally, there are q lines describing the queries. Each line has two integers a and b : your arrival and leaving time.

Output

Print the maximum number of movies for each query.

Constraints

- $1 \leq n, q \leq 2 \cdot 10^5$
- $1 \leq a < b \leq 10^6$

Example

Input:
 4 3
 2 5
 6 10
 4 7

Range Queries

...	
Distinct Values Queries	<input type="checkbox"/>
Distinct Values Queries II	<input checked="" type="checkbox"/>
Increasing Array Queries	<input checked="" type="checkbox"/>
Movie Festival Queries	<input type="checkbox"/>
Forest Queries II	<input checked="" type="checkbox"/>
Range Updates and Sums	<input type="checkbox"/>
Polynomial Queries	<input checked="" type="checkbox"/>
Range Queries and Copies	<input type="checkbox"/>

Your submissions

9 10
5 9
2 10
7 10

Output:

0
2
1

