Large Fezr

Stop popping my fezes - Dudu, 2016

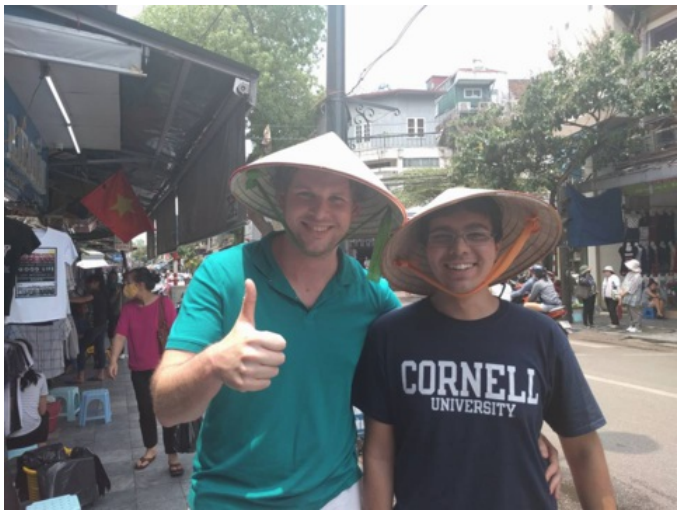
NOTE: This problem is identical to "Small Fezr", but with larger numbers.

Dudu is a great fez connoisseur, and as such he has an impressive collection of fezes. He usually keeps his hats on a stack but people keep popping his fezes.

He doesn't like when people pop his fezes, so he decided to use *Fezr*, a service that stores fezes for people. Each hat stored at *Fezr* receives a unique integer ID from 1 to N.

Dudu has a lot of fezes. He keeps track of intervals $[a, b]$ where he knows he owns all fezes with ID between a and b (inclusive). All fezes Dudu owns are inside at least one of these intervals.

Can you count how many fezes Dudu has at Fezr?



_____^^Dudu also likes other kinds of hats, like these non la^^_____

Input Format

The first line of input has two integers: N - the total number of IDs distributed by *Fezr* and M, the total number of intervals Dudu knows he owns.

Each of the following M lines will contain two numbers a and b such that Dudu owns the interval $[a, b]$.

Constraints

$1 \leq N \leq 100000$
$1 \leq M \leq 100000$
$1 \leq a \leq b$

Output Format

Output a single number, with the number of fezes Dudu owns.

Sample Input 0

```
10 1
4 8
```

Sample Output 0

```
5
```

Explanation 0

Dudu has hats 4, 5, 6, 7, and 8. A total of 5 fezes.

Sample Input 1

```
10 2
3 7
6 9
```

Sample Output 1

```
7
```

Explanation 1

Dudu has hats 3, 4, 5, 6, 7, 8, and 9. A total of 7 fezes.

Be careful not to double count Dudu's fezes.