

Contest Duration: 2025-10-04(Sat) 22:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20251004T2100&p1=248>) - 2025-10-04(Sat) 23:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20251004T2240&p1=248>) (local time) (100 minutes)

[Back to Home \(/home\)](#)

[Top \(/contests/abc426\)](#)

[Tasks \(/contests/abc426/tasks\)](#)

[Clarifications \(/contests/abc426/clarifications\)](#) [Results ▾](#)

[Standings \(/contests/abc426/standings\)](#)

[Virtual Standings \(/contests/abc426/standings/virtual\)](#) [Editorial \(/contests/abc426/editorial\)](#)

[Discuss \(<https://codeforces.com/blog/entry/146984>\)](#)



## C - Upgrade Required

[Editorial \(/contests/abc426/tasks/abc426\\_c/editorial\)](#)



Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 300 points

### Problem Statement

There are  $N$  versions of a certain OS, numbered  $1, 2, \dots, N$  in chronological order.

There are  $N$  PCs, and initially the OS version of the  $i$ -th PC is  $i$ .

Perform  $Q$  operations in order. The  $i$ -th operation is as follows:

- Upgrade all PCs whose current OS version is  $X_i$  or earlier to version  $Y_i (> X_i)$ . Then, print the number of PCs upgraded in this operation.

Note that for  $i < Q$ , the upgrades from the  $i$ -th operation are performed before proceeding to the  $(i + 1)$ -th operation.

### Constraints

- All input values are integers.
- $2 \leq N \leq 10^6$
- $1 \leq Q \leq 2 \times 10^5$
- $1 \leq X_i < Y_i \leq N$

### Input

The input is given from Standard Input in the following format:

2026-01-02 (Fri)  
05:31:04 +11:00

```
N Q
X1 Y1
X2 Y2
:
XQ YQ
```

## Output

Output  $Q$  lines.

The  $i$ -th line should contain the number of PCs upgraded in the  $i$ -th operation.

### Sample Input 1

[Copy](#)

```
8 5
2 6
3 5
1 7
5 7
7 8
```

[Copy](#)

### Sample Output 1

[Copy](#)

```
2
1
0
3
7
```

[Copy](#)

This input contains five operations.

- Initially, the versions of the eight PCs are 1, 2, 3, 4, 5, 6, 7, 8.
- In the first operation, PCs with version 2 or earlier are upgraded to version 6.
  - This operation upgrades two PCs, and the versions of the PCs become 6, 6, 3, 4, 5, 6, 7, 8.
- In the second operation, PCs with version 3 or earlier are upgraded to version 5.
  - This operation upgrades one PC, and the versions of the PCs become 6, 6, 5, 4, 5, 6, 7, 8.
- In the third operation, PCs with version 1 or earlier are upgraded to version 7.
  - This operation upgrades zero PCs, and the versions of the PCs become 6, 6, 5, 4, 5, 6, 7, 8.
- In the fourth operation, PCs with version 5 or earlier are upgraded to version 7.
  - This operation upgrades three PCs, and the versions of the PCs become 6, 6, 7, 7, 7, 6, 7, 8.

- In the fifth operation, PCs with version 7 or earlier are upgraded to version 8.
    - This operation upgrades seven PCs, and the versions of the PCs become 8, 8, 8, 8, 8, 8, 8.
- 

'#telegram)

:url=https%3A%2F%2Fatcoder.jp%2Fcontests%2Fabc426%2Ftasks%2Fabc426\_c%3Flang%3Den&title=C%20-

---

[Rule \(/contests/abc426/rules\)](#) [Glossary \(/contests/abc426/glossary\)](#)

[Terms of service \(/tos\)](#) [Privacy Policy \(/privacy\)](#) [Information Protection Policy \(/personal\)](#) [Company \(/company\)](#)  
[FAQ \(/faq\)](#) [Contact \(/contact\)](#)

Copyright Since 2012 ©AtCoder Inc. (<http://atcoder.co.jp>) All rights reserved.