

Contest Duration: 2025-04-27(Sun) 22:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250427T2100&p1=248>) - 2025-04-27(Sun) 23:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250427T2240&p1=248>) (local time) (100 minutes)

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

[Top \(/contests/abc403\)](#)

[Tasks \(/contests/abc403/tasks\)](#)

[Clarifications \(/contests/abc403/clarifications\)](#)

[Results ▾](#)

[Standings \(/contests/abc403/standings\)](#)

[Virtual Standings \(/contests/abc403/standings/virtual\)](#)

[Editorial \(/contests/abc403/editorial\)](#)

[Discuss \(<https://codeforces.com/blog/entry/142272>\)](#)



C - 403 Forbidden

[Editorial \(/contests/abc403/tasks/abc403_c/editorial\)](#)



Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 300 points

Problem Statement

There are N users on WAtCoder, numbered from 1 to N , and M contest pages, numbered from 1 to M . Initially, no user has view permission for any contest page.

You are given Q queries to process in order. Each query is of one of the following three types:

- 1 x y : Grant user X view permission for contest page Y .
- 2 x : Grant user X view permission for all contest pages.
- 3 x y : Answer whether user X can view contest page Y .

It is possible for a user to be granted permission for the same contest page multiple times.

Constraints

- $1 \leq N \leq 2 \times 10^5$
- $1 \leq M \leq 2 \times 10^5$
- $1 \leq Q \leq 2 \times 10^5$
- $1 \leq X \leq N$
- $1 \leq Y \leq M$
- All input values are integers.

Input

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

```
N M Q  
query1  
query2  
:  
queryQ
```

Each query_i is in one of the following formats:

```
1 X Y
```

```
2 X
```

```
3 X Y
```

Output

For each query of the third type, print Yes if user X can view contest page Y , otherwise print No, each on its own line.

Sample Input 1

Copy

```
2 3 5  
1 1 2  
3 1 1  
3 1 2  
2 2  
3 2 3
```

Copy

Sample Output 1

Copy

```
No  
Yes  
Yes
```

Copy

- In the first query, user 1 is granted permission to view contest page 2.
- At the second query, user 1 can view only page 2; they cannot view page 1, so print No.
- At the third query, user 1 can view page 2, so print Yes.
- In the fourth query, user 2 is granted permission to view all pages.

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- At the fifth query, user 2 can view pages 1, 2, 3; they can view page 3, so print Yes.
-

Sample Input 2

Copy

```
5 5 10
2 2
3 4 4
1 1 1
1 4 1
1 4 2
1 4 4
1 2 4
3 3 2
3 5 4
3 2 1
```

Copy

Sample Output 2

Copy

```
No
No
No
Yes
```

Copy

'#telegram)

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[Rule \(/contests/abc403/rules\)](#) [Glossary \(/contests/abc403/glossary\)](#)

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