

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)

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## C - 403 Forbidden

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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.

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# Input

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

```
 $N$   $M$   $Q$   
query1  
query2  
⋮  
query $Q$ 
```

Each query <sub>$i$</sub>  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

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

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## Sample Output 1

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```
No  
Yes  
Yes
```

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- 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

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```
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
```

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## Sample Output 2

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```
No
No
No
Yes
```

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'#telegram)

url=https%3A%2F%2Fatcoder.jp%2Fcontests%2Fabc403%2Ftasks%2Fabc403\_c%3Flang%3Den&title=C%20-

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

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