Queries

Doraemon and Nobita are playing a programming game. Doraemon gives nobita an array of length N which is initialized by zero. He said that nobita needs to answer some queries to win a new gadget from doraemon:

Query type 1: Update the value as *1* at index *k* in array *A*

Query type 2: display the least index *M* which is greater than or equal to *R* and having value *1*. If there is no such index print *-1*.Doraemon said that the Indexing of array is *1* based

Input Format:

First line contains two integers *N* and *Q* separated by a space where N is length of array and Q is the number of queries. Then Q subsequent lines nobita is given two integers a and b. A denotes the type of query i.e 1 or 2 and if the query is of type 1 then b denotes the value K and if the query is of type 2 then b denotes R.

Output Format:

For each query of type 2 print the value of M.

Constraints:

1 <= N <= 10^9

1<= Q <= 10^5

1 <= R, K <=N

Sample Input

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

Sample Output

```
-1
2
-1
2
```

Difficulty

Easy

Explanation

Query 1: No index greater than or equal index 3, with value -1, answer is -1.

Query 2: put value 1 at index 2.

Query 3: index 2 is greater than index 1 , having value 1, answer is 2.

Query 4: no index greater than or equal index 3, having value 1, answer is -1.

Query 5: index 2 is equal to index 2 , having value 1, answer is 2.