

Drawing Lines

John is a bit upset now. Today was his chemistry central viva and it did not go very well. So to cheer up he bought a notebook, a pencil and an eraser.

In the note book there are N points drawn in a row. The points are numbered from 1 to N serially.

Now, John decided to do a strange thing with those points.

At each moment, John puts his pencil or eraser at a point A and drags it to point B . As a result, some line segments may be created.

And then, Sometimes he stops and thinks of a point C and tries to find out if point C is on a line segment or not.

You have to solve a similar problem.

INPUT:

First line of the input will contain two integers N ($1 \leq n \leq 10^9$) and M ($1 \leq M \leq 10^5$) where N denotes number of points and M denotes number of queries.

Then M line follows. Each line contains a query.

Each query will be one of the following forms:

0 A B: which means an eraser has been dragged from point A to point B .

1 A B: which means a pencil has been dragged from point A to point B .

2 C: which means you are asked to answer the state of point C . There will be at least one query of this type.

(It is guaranteed that $A \leq B$ and $1 \leq A, B, C \leq N$)

OUTPUT:

For each query of the form “**2 C**”, print a single line. If point C is **NOT** on any line segment then print -1.

Otherwise, print the start and end point of the segment.

See sample input/ sample output and explanation for details.

Sample Input	Sample Output
25 14	-1
2 10	9 13
1 20 25	-1
1 9 13	9 25
2 12	21 21
2 7	-1
1 11 21	9 16
2 15	1 8
0 17 20	
0 22 25	

2 21	
2 5	
1 1 8	
2 12	
2 4	

Explanation:

In the 1st query, there are no line segments. So point 10 is not on any segment.

After 2nd query, there is 1 line segment: [20, 25].

After 3rd query, there are 2 line segments: [9, 13], [20, 25].

In the 4th query, point 12 is on [9, 13] segment.

In the 5th query, point 7 is not on any segment.

After 6th query, there is 1 line segment [9, 25]. ([9, 13], [11, 21] and [20, 25] segments will merge into only 1 segment).

In the 7th query, point 15 is on [9, 25] segment.

After 9th query there are 2 segments: [9, 16] and [21, 21].

In the 10th query, point 21 is on [21, 21] segment.

In the 11th query, point 5 is not on any segment.

After 12th query there are 3 segments: [1,8],[9, 16] and [21, 21].

In the 13th query, point 13 is on [9, 16] segment.

In the 14th query, point 4 is on [1, 8] segment.