A. Pages

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

User ainta is making a web site. This time he is going to make a navigation of the pages. In his site, there are n pages numbered by integers from 1 to n. Assume that somebody is on the p-th page now. The navigation will look like this:

$$<<\ p-k\ p-k+1\ \ldots\ p-1\ (p)\ p+1\ \ldots\ p+k-1\ p+k\ >>$$

When someone clicks the button "<<" he is redirected to page 1, and when someone clicks the button ">>" he is redirected to page n. Of course if someone clicks on a number, he is redirected to the corresponding page.

There are some conditions in the navigation:

- If page 1 is in the navigation, the button "<<" must not be printed.
- If page n is in the navigation, the button ">>" must not be printed.
- If the page number is smaller than 1 or greater than n, it must not be printed.

You can see some examples of the navigations. Make a program that prints the navigation.

Input

The first and the only line contains three integers n, p, k $(3 \le n \le 100; 1 \le p \le n; 1 \le k \le n)$

Output

Print the proper navigation. Follow the format of the output from the test samples.

Examples

input	Copy
17 5 2	
output	Copy
<< 3 4 (5) 6 7 >>	

input	Copy
6 5 2	
output	Copy
<< 3 4 (5) 6	

input	Copy
6 1 2	
output	Copy
(1) 2 3 >>	

input	Copy
6 2 2	
output	Copy
1 (2) 3 4 >>	

input	Copy
9 6 3	
output	Copy
<< 3 4 5 (6) 7 8 9	

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Finished
Practice

input	Copy
10 6 3	

output	Copy
<< 3 4 5 (6) 7 8 9 >>	

input	Copy
8 5 4	

output	Copy
1 2 3 4 (5) 6 7 8	