**Uncle Grandpa and windows**

Uncle Grandpa like to slide windows. A window that slide is called a sliding window (of course right?). To your surprise (or not), sliding window is also an algorithm (or more accurately, a technique) in the field of Algorithm.

Given a sequence of length consists of only non-negative integers, a window of length will be a subsequence of **consecutive** elements. As a result, there will be exactly windows.

For each window of length from left to right, starting from the 1st element, you have to find the **id** of the leftmost odd element (elements have id . If there is no odd element in that window, output

## Input

The first line contains two integers – the length of the sequence and the size of the window.

The second line contains integers - elements of the sequence

## Output

integers – id of the leftmost odd element of each window

## Examples

|  |  |
| --- | --- |
| Input (windows1.in) | Output (windows1.out) |
| 7 3  1 2 3 5 4 10 8 | 1 3 3 4 -1 |

|  |  |
| --- | --- |
| Input (windows2.in) | Output (windows2.out) |
| 6 1  1 2 3 4 5 6 | 1 -1 3 -1 5 -1 |

## Explanation:

For the 1st example, we have 5 windows as follows:

* [1 2 3] 5 4 10 8 Element at 1st position is the leftmost odd element
* 1 [2 3 5] 4 10 8 Element at 3rd position is the leftmost odd element
* 1 2 [3 5 4] 10 8 Element at 3rd position is the leftmost odd element
* 1 2 3 [5 4 10] 8 Element at 4th position is the leftmost odd element
* 1 2 3 5 [4 10 8] No odd element in this window, we have to output for this case

## Note:

1. A skeleton file has been given to help you. You should not create a new file or rename the file provided. You should develop your program using this skeleton file.
2. You are free to define your own helper methods and classes (or remove existing ones) if it is suitable but you must put all the new classes, if any, in the same skeleton file provided

## Skeleton File

You are given the skeleton file Windows.java. You should see the following contents when you open the file:

|  |
| --- |
| /\*\*  \* Name :  \* Matric. No :  \*/  import java.util.\*;  public class Windows {  private void run() {  }  public static void main(String args[]) {  Windows windows = new Windows();  windows.run();  }  } |