# 667. Beautiful Arrangement II

## Description

Given two integers n and k, construct a list answer that contains n different positive integers ranging from 1 to n and obeys the following requirement:

• Suppose this list is answer =  $[a_1, a_2, a_3, \ldots, a_n]$ , then the list  $[[a_1 - a_2], [a_2 - a_3], [a_3 - a_4], \ldots, [a_{n-1} - a_n]]$  has exactly k distinct integers.

Return the list answer. If there multiple valid answers, return any of them.

#### **Example 1:**

```
Input: n = 3, k = 1
Output: [1,2,3]
Explanation: The [1,2,3] has three different positive integers ranging from 1 to 3, and the [1,1] has exactly 1 distinct integer: 1
```

#### Example 2:

```
Input: n = 3, k = 2
Output: [1,3,2]
Explanation: The [1,3,2] has three different positive integers ranging from 1 to 3, and the [2,1] has exactly 2 distinct integers: 1 and 2.
```

### **Constraints:**

•  $1 <= k < n <= 10^4$