Given two integers n and k, you need to construct a list which contains n different positive integers ranging from 1 to n and obeys the following requirement:  
Suppose this list is [a1, a2, a3, ... , an], then the list [|a1 - a2|, |a2 - a3|, |a3 - a4|, ... , |an-1 - an|] has exactly k distinct integers.

If there are multiple answers, print 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.

**Note:**

1. The n and k are in the range 1 <= k < n <= 104.