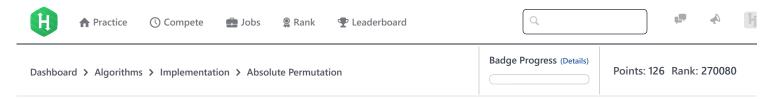
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# **Absolute Permutation**





We define P to be a permutation of the first N natural numbers in the range [1, N]. Let  $pos_i$  denote the position of i in permutation P (please use 1-based indexing).

P is considered to be an absolute permutation if  $abs(pos_i - i) = K$  holds true for every  $i \in [1, N]$ .

Given N and K, print the lexicographically smallest absolute permutation, P; if no absolute permutation exists, print -1.

#### **Input Format**

The first line of input contains a single integer, T, denoting the number of test cases.

Each of the  $m{T}$  subsequent lines contains  $m{2}$  space-separated integers describing the respective  $m{N}$  and  $m{K}$  values for a test case.

#### **Constraints**

- $1 \le T \le 10$
- $1 \le N \le 10^5$
- $0 \le K < N$

#### **Output Format**

On a new line for each test case, print the lexicographically smallest absolute permutation; if no absolute permutation exists, print -1.

### **Sample Input**

- 3
- 2 1
- 3 Ø 3 2
- **Sample Output** 
  - 2 1
  - 1 2 3 -1

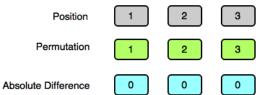
## Explanation

Test Case 0:

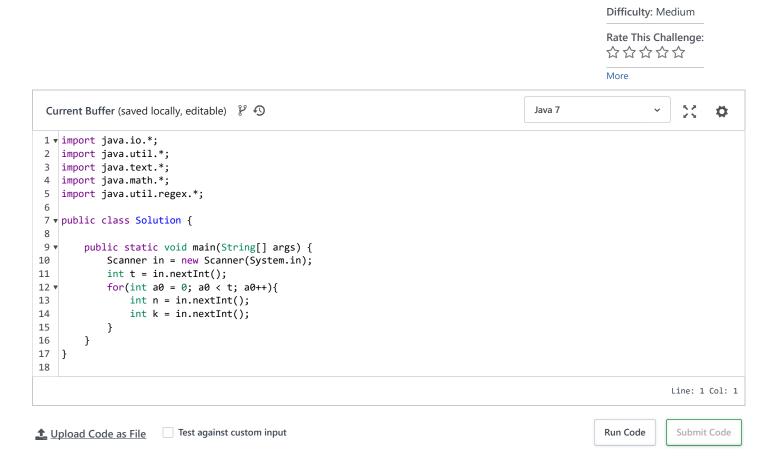


Test Case 1:

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Test Case 2: No absolute permutation exists, so we print -1 on a new line.



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f in Submissions:9350

Max Score:40