

# Richie Rich



Submissions Leaderboard Discussions Editorial
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Sandy likes palindromes. A palindrome is a word, phrase, number, or other sequence of characters which reads the same backward as it does forward. For example, *madam* is a palindrome.

On her  $7^{th}$  birthday, Sandy's uncle, Richie Rich, offered her an n-digit check which she refused because the number was not a palindrome. Richie then challenged Sandy to make the number palindromic by changing no more than k digits. Sandy can only change 1 digit at a time, and cannot add digits to (or remove digits from) the number.

Given k and an n-digit number, help Sandy determine the largest possible number she can make by changing  $\leq k$  digits.

**Note:** Treat the integers as numeric strings. Leading zeros are permitted and can't be ignored (So 0011 is not a palindrome, 0110 is a valid palindrome). A digit *can* be modified more than once.

#### **Input Format**

The first line contains two space-separated integers, n (the number of digits in the number) and k (the maximum number of digits that can be altered), respectively.

The second line contains an  $m{n}$ -digit string of numbers that Sandy must attempt to make palindromic.

#### **Constraints**

- $0 < n \le 10^5$
- $0 \le k \le 10^5$
- Each character i in the number is an integer where  $0 \leq i \leq 9$ .

## **Output Format**

Print a single line with the largest number that can be made by changing no more than k digits; if this is not possible, print -1.

#### Sample Input 0

4 1 394

## Sample Output 0

3993

## Sample Input 1

6 3 092282

## **Sample Output 1**

992299

## Sample Input 2

4 1 0011

## **Sample Output 2**

-1

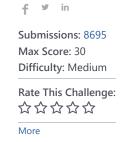
## **Explanation**

Sample 0

There are two ways to make 3943 a palindrome by changing exactly k=1 digits:

- 1.  $3943 \rightarrow 3443$
- 2.  $3943 \rightarrow 3993$

3993 > 3443, so we print 3993.



```
Current Buffer (saved locally, editable) &
                                                                                       C++
                                                                                                                        *
 1 ▼ #include <map>
 2 #include <set>
   #include <list>
 3
   #include <cmath>
   #include <ctime>
   #include <deque>
 7
   #include <queue>
   #include <stack>
 8
 9
   #include <string>
10 #include <bitset>
11 #include <cstdio>
12 #include <limits>
13 #include <vector>
   #include <climits>
14
15
   #include <cstring>
16
   #include <cstdlib>
   #include <fstream>
17
   #include <numeric>
18
19
   #include <sstream>
   #include <iostream>
21
   #include <algorithm>
   #include <unordered_map>
22
23
24
   using namespace std;
25
26
27 ▼ int main(){
28
        int n;
29
        int k;
30
        cin >> n >> k;
31
        string number;
```

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