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# Richie Rich

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Problem

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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  $n$ -digit string of numbers that Sandy must attempt to make palindromic.

## Constraints

- $0 < n \leq 10^5$
- $0 \leq k \leq 10^5$
- 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
3943
```

## 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** → **3443**

2. **3943** → **3993**

**3993** > **3443**, so we print **3993**.

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Submissions: 8695

Max Score: 30

Difficulty: Medium

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C++



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

```
32     cin >> number;  
33     return 0;  
34 }  
35
```

Line: 1 Col: 1

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