**Problem Description**

The sequence of square brackets is called valid if and only if:

1. The total number of opening brackets is equal to the total number of closing brackets;
2. For any prefix of the sequence, the number of opening brackets is greater or equal than the number of closing brackets.

Given string s of length **m** (**m ≤ n**) and want to complete it to obtain a valid  
sequence of brackets of length **n**. To balance the brackets we need pick some strings **p**and**q** consisting of square brackets and merge them in a string **p + s + q**, that is add the string **p** at the beginning of the string **s** and string **q** at the end of the string **s**.  
  
Now he wonders, how many pairs of strings **p** and **q**exists, such that the string **p + s + q** is a valid sequence of round brackets. As this number may be pretty large, he wants to calculate it modulo **10^9 + 7**.

**Input**

First line contains **n** and **m** (1 ≤ **m** ≤ **n** ≤ 100 000, **n - m**≤ 2000) — the desired length of the string and the length of the string, respectively.  
  
The second line contains string **s** of length **m** consisting of characters '[‘ and ']' only.

**Output**

Print the number of pairs of string **p** and**q** such that **p + s + q** is a valid sequence of square brackets modulo **10^9 + 7**.

**Sample Input**

4 1  
]

**Sample Output**

4