Let's play with strings consisting of lower case letters.

You're given a string S consisting of lowercase Latin letters(from 'a' to 'z') and a number k.  
Find the length of the longest substring of Sthat has exactly k different letters.  
**Or return 0 if no substring has k different letters.**

**Examples:**

* PlayWithStringsIII("abcbaaaxx",3) = 7  
  "abcbaaa" is the longest substring of Sthat has exactly 3 different letters.  
  Its length is 7 and it has 3letters('a','b','c').  
  So the answer is 7.

**Reference:**<http://codeforces.com/problemset/problem/386/C>

* **[input] string S**
  + A string with lowercase Latin letters. (1 ≤ |S| ≤ 100).
* **[input] integer k**
  + 1 ≤ k ≤ 26
* **[output] integer**
  + The length of the longest substring ofS that has exactly k different letters.

<https://codefights.com/challenge/TxgMxytmfeiX6aTch>

static int PlayWithStringsIII(string S, int k)

{

string longest = "";

for (int i = 0; i < S.Length; i++ )

{

int diferentes = 0;

string actual = "";

for (int j = i; j < S.Length; j++)

{

if (!actual.Contains(S[j]))

{

diferentes++;

}

if (diferentes > k)

{

break;

}

actual += S[j];

if (actual.Length > longest.Length)

{

longest = actual;

}

}

}

//Console.WriteLine(longest);

return longest.Length;

}