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Two Characters

locked

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Problem

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String t always consists of two distinct alternating characters. For example, if string t 's two distinct characters are x and y , then t could be $xyxyx$ or $yxyxy$ but *not* $xxyy$ or $xyyx$.

You can convert some string s to string t by deleting characters from s . When you delete a character from s , you must delete *all* occurrences of it in s . For example, if $s = \text{abaacdabd}$ and you delete the character a , then the string becomes $bcdabd$.

Given s , convert it to the longest possible string t . Then print the length of string t on a new line; if no string t can be formed from s , print 0 instead.

Input Format

The first line contains a single integer denoting the length of s .

The second line contains string s .

Constraints

- $1 \leq |s| \leq 1000$
- s only contains lowercase English alphabetic letters (i.e., a to z).



Output Format

Print a single integer denoting the maximum length of t for the given s ; if it is not possible to form string t , print 0 instead.

Sample Input

```
10
beabeefeab
```

Sample Output

```
5
```

Explanation

The characters present in s are a , b , e , and f . This means that t must consist of *two* of those characters.

If we delete e and f , the resulting string is $babab$. This is a valid t as there are only two distinct characters (a and b), and they are alternating within the string.

If we delete a and f , the resulting string is $bebeeeb$. This is not a valid string t because there are *three* consecutive e 's present.

If we delete only e , the resulting string is $babfab$. This is not a valid string t because it contains *three* distinct characters.

Thus, we print the length of $babab$, which is **5**, as our answer.

[f](#) [t](#) [in](#)

Submissions: 3106


Max Score: 15

Difficulty: Easy

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☆☆☆☆☆

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Current Buffer (saved locally, editable) 

C#



```

1  using System;
2  using System.Collections.Generic;
3  using System.IO;
4  using System.Linq;
5  class Solution {
6
7      static void Main(String[] args) {
8          int len = Convert.ToInt32(Console.ReadLine());
9          string s = Console.ReadLine();
10
11          //int len = Convert.ToInt32(Console.ReadLine());
12          //string s = Console.ReadLine();
13
14          //string s = "abcabcabcab";
15          //string s = "abaaabccab";
16          // string s = "beabeefeab";//babab -> 5
17          //string s =
18          "ggzczxoxwqei hjsxwxkuxqwcyeuxrpajcyrzahehomrlqzfesagmietjqtwsrioocnjgggppzzkmmxxqlujnqormwffsmhoatqb
19          ezymyhxwtayyilozozzbhkhewgimejokyvsyobcfrzjdgnhwi twsdssjohhvkvqwpncnanqufqbkskubxxiajpc lpraimozhvpw
20          agabhvjndinvuhfzqlcvbfnkosqsdzsznsibukhl1tcgaezcvlsrkbexelggocseryhqyntrolpskbgojetdaidcbcbiwzsemactmu
21          mjemlqkbqyqxbgjaqynnworreqbyqawpquorkodlvovyqkvqxfhbfcjabcqribrikvraivghmdssjqywbtkuzhoeltouoztkd
22          jgupiwyowglrtttgcjxnmvkihxckbayxwcjiyyrymomqclchpiorftyuuuccymzbobltxojsdzdrvtqvcvclsfbkvxsdcncgjpjw
23          jwvgyxzptjjscmujoslgx";
24          //string s = "aaaaaaaaabbbbbbbbbbccccccccccccccccddddddeeeee";
25
26          //string s =
27          "nvqredbicypfcjjlolkpeyhgydrfmxaqzhrviwwxogqtfllvztsouerbeiotzhyobsecdrscvzfmndvitkotptnphcodrcwpqwtl
28          eemoavgtswzhcfcwurfiottvqperjuoonawtvavtafytjtjritdvhmwznzjklqsuxfpdkrkaseaaqejeukckpwmnqsbcpfosobpmrp
29          uphavamqcdbsituzsfuvnnljdditlgcjfbputtztzyhqeekqmuedrkzvtjtoypfeojzieasapvphsnyhuybgwlfwjvmemullymdqcb
30          sxmxlusatbefpddktxmyabbbbhaghghxugzhjtllvugbemwabbqxodinikujcxgatrozdukykbvkugqtmzgzdrsfaoimizypzjeca
31          dsfkgcwroonzcfwksobusoopcflwmledyrwfrcmwklqtohbuncujlzbuumfigweoittnafdrwewggyloztuoabcmixhokmucjr1
32          vkjculzffenchjutphqiukfxxnnelsoueipwjxxhezndpfajextrvdi lupzcwddutnizzkmdrsqiezwz1redarocnasvxfctzei
33          whvxocstizmxvqlijgmvvwlnegscvccsgkdxjtletpqlqpjtvmvzggadtrcii rabreewrfzvbhcqiswnfhjfbathkqtxwgtuubrx
34          gqxwraoecklj1fwjodjkzucmkabktaxzhdws";
35          //string s =
36          "muqqzbcjmyknwlm1cfqujabwtekovkwsfjrwmswqfurtpahkdyqdttizqbkrsmfpxchbjrbvcunogcvragjxivasydkamtkinxpg
37          asmwz";
38
39          /* 0 */
40          //string s =
41          "nvqredbicypfcjjlolkpeyhgydrfmxaqzhrviwwxogqtfllvztsouerbeiotzhyobsecdrscvzfmndvitkotptnphcodrcwpqwtl
42          eemoavgtswzhcfcwurfiottvqperjuoonawtvavtafytjtjritdvhmwznzjklqsuxfpdkrkaseaaqejeukckpwmnqsbcpfosobpmrp
43          uphavamqcdbsituzsfuvnnljdditlgcjfbputtztzyhqeekqmuedrkzvtjtoypfeojzieasapvphsnyhuybgwlfwjvmemullymdqcb
44          sxmxlusatbefpddktxmyabbbbhaghghxugzhjtllvugbemwabbqxodinikujcxgatrozdukykbvkugqtmzgzdrsfaoimizypzjeca
45          dsfkgcwroonzcfwksobusoopcflwmledyrwfrcmwklqtohbuncujlzbuumfigweoittnafdrwewggyloztuoabcmixhokmucjr1
46          vkjculzffenchjutphqiukfxxnnelsoueipwjxxhezndpfajextrvdi lupzcwddutnizzkmdrsqiezwz1redarocnasvxfctzei
47          whvxocstizmxvqlijgmvvwlnegscvccsgkdxjtletpqlqpjtvmvzggadtrcii rabreewrfzvbhcqiswnfhjfbathkqtxwgtuubrx
48          gqxwraoecklj1fwjodjkzucmkabktaxzhdws";
49          //string s =
50          "czoczkotespkfjnkbgpfnmtgqhorrdppcebybhlcsp1qcqogqaszjgor1srppinhgpaweydclpepyfityawafupqsjrbkqakpygo1y
51          fksvqetrfrzrcmatlicxtculwgvlnslazpfpoqrgssfcrfwbtxaagj fahcgxbj11tfpprcjyivxu";
52
53          /* 6 */ //string s =
54          "czoczkotespkfjnkbgpfnmtgqhorrdppcebybhlcsp1qcqogqaszjgor1srppinhgpaweydclpepyfityawafupqsjrbkqakpygo1y
55          fksvqetrfrzrcmatlicxtculwgvlnslazpfpoqrgssfcrfwbtxaagj fahcgxbj11tfpprcjyivxu";
56
57          if (s.Length == 1)
58          {
59              Console.WriteLine(0);
60          }
61          else
62          {
63              string dist = new String(s.Distinct().ToArray());
64              // Console.WriteLine(dist);
65              HashSet<string> pares = new HashSet<string>();
66
67              int max_len = 0;
68
69              for (int i = 0; i < dist.Length; i++)
70              {
71                  for (int j = i+1; j < dist.Length; j++)
72                  {
73                      char x = dist[i];
74                      char y = dist[j];
75
76                      string p1 = x.ToString() + y.ToString();
77                      string p2 = y.ToString() + x.ToString();
78
79                      // if ( (x!= y) && !pares.Contains(p1) && !pares.Contains(p2))
80                      {
81                          pares.Add(p1);
82                          pares.Add(p2);
83                      }
84                  }
85              }
86
87              Console.WriteLine(pares.Count);
88          }
89      }
90  }

```

```

53         pares.Add(p1);
54         pares.Add(p2);
55
56         string concat = "";
57         for (int k = 0; k < s.Length; k++)
58         {
59             if (s[k] == x || s[k] == y)
60             {
61                 concat += s[k];
62
63                 if (concat.Length > 1 && concat[concat.Length - 1] ==
concat[concat.Length - 2])
64                 {
65                     concat = "";
66                     break;
67                 }
68             }
69         }
70         //if (concat.Length == 6)
71         //{
72             Console.WriteLine(x + " " + y + " " + concat);
73         //}
74
75         // Console.WriteLine(concat);
76         max_len = Math.Max(max_len, concat.Length);
77     }
78 }
79 }
80 }
81
82 Console.WriteLine(max_len);
83 }
84 }
85 }
86 }
87

```

Line: 36 Col: 17

Upload Code as File

☐ Test against custom input

Run Code

Submit Code

Testcase 0

Congratulations, you passed the sample test case.Click the **Submit Code** button to run you code against all the test cases.**Compile Message**

```

solution.cs(8,13): warning CS0219: The variable `len' is assigned but its value is never used
Compilation succeeded - 1 warning(s)

```

Compile Time

Input (stdin)

```

10
beabeefeab

```

Run Time

Your Output (stdout)

```

5

```

Expected Output

```

5

```

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