

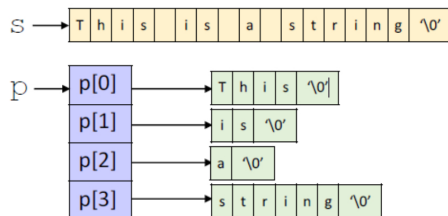
(20%) String Splitting

Description

Write a function with the following prototype that can split the given string into sub-strings based on the separator specified:

```
char** split(const char s, char c, int &n);
```

For example, if the input string s is "This is a string" and the separator c is ' ', then the function sets the variable n as 4 and returns a pointer p that points to the addresses of the 4 sub-strings as follows.



Note that p[0], p[1], p[2], and p[3] should not point to any part of the original string and they do not point to empty string. The memory addresses pointed by p and p[...] should be dynamically allocated inside the function based on the result of the split. If the separator is not found in the input string, then the result has only one sub-string (n=1) with content equal to the original string. If the input string or result is empty or NULL, then n is set to 0 and a NULL pointer is returned. For example, if the input string s is "A" and the separator character c is 'A', then p is NULL and n is 0.

以下為程式內容

其中getchar()會從standard input 取得第一個字元

僅須實作並上傳 //TEMPLATE BEGIN 和 //TEMPLATE END 括起來的部分

```
//PREPEND BEGIN
#include<iostream>
#include<cstring>

using namespace std;

char** split(const char *s, char c, int &n);

int main()
{
    char s[100];
    int n;
    char sep;
    cin.getline(s, 100);
    sep = getchar();
    char** p = split(s, sep, n);
    cout << n << endl;
    if (p) {
        for (int i = 0; i < n; ++i){
            cout << p[i] << endl;
            delete[] p[i];
        }
        delete[] p;
    }
    return 0;
}
//PREPEND END

//TEMPLATE BEGIN
char** split(const char *s, char c, int &n){
    // TODO
}
//TEMPLATE END
```

Input

The first line of input is a string pointer s.

The second line of input is the separator character c.

It is possible that c will appear as the first or last character of string s.

And it is possible that there are consecutive (連續) characters c in string s.

Output

The value of n and each of the sub-string in individual lines.

Sample Input 1

```
This,is,a,string
,
```

Sample Output 1

```
4
This
is
a
string
```

Problems

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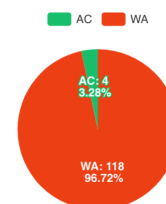
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Information

ID	4
Time Limit	20MS
Memory Limit	64MB
Created By	hungguo
Level	Low
Score	20
Tags	Show

Statistic

Details



Sample Input 2

```
This is a string
T
```

Sample Input 3

```
This,,is,a,,,string
,
```

Sample Output 2

```
1
his is a string
```

Sample Output 3

```
4
This
is
a
string
```

Language: C++

Theme: Solarized Light

```
1
```

Contest has ended

Submit

