

字符串题目练习

人员

初锦阳、田心一、吴念远、纪博涵、周纪先、赵牧之、周沁言、亓骏泽、李知朔、李瑞涵、辛孝得 到课

上周作业检查

上周作业链接: <https://www.luogu.com.cn/contest/212870>

2024-1110周日15:30

报名

编辑比赛

题目数12

报名人数14

比赛说明

题目列表

排行榜

名次	参赛者	总分	A	B	C	D	E	F	G	H	I	J	K	L
#1	田心一	1200 (1.36d)	100 (6.95min)	100 (10.08min)	100 (14.33min)	100 (20.52min)	100 (22.90min)	100 (27.08min)	100 (30.82min)	100 (34.02min)	100 (41.85min)	100 (1.46h)	100 (1.66h)	100 (1.09d)
#2	李瑞涵	1200 (3.12d)	100 (27.17min)	100 (31.17min)	100 (33.40min)	100 (35.40min)	100 (37.47min)	100 (1.01h)	100 (1.43h)	100 (1.56h)	100 (5.11h)	100 (4.71h)	100 (1.21d)	100 (1.22d)
#3	赵牧之	1200 (12.42d)	100 (3.15min)	100 (28.02min)	100 (20.93min)	100 (31.42min)	100 (33.17min)	100 (1.25d)	100 (1.27d)	100 (2.12d)	100 (2.18d)	100 (1.83d)	100 (1.84d)	100 (1.85d)
#4	刘子轩	1200 (14.19d)	100 (6.92min)	100 (22.95min)	100 (24.80min)	100 (30.37min)	100 (33.70min)	100 (41.78min)	100 (6.95d)	100 (57.23min)	100 (1.13h)	100 (1.56h)	100 (1.84h)	100 (6.90d)
#5	纪博涵	1000 (6.23h)	100 (8.85min)	100 (12.18min)	100 (19.05min)	100 (21.65min)	100 (24.23min)	100 (28.45min)	100 (34.87min)	100 (58.57min)	100 (48.25min)		100 (1.96h)	
#6	李知朔	900 (24.86d)	100 (9.23min)	100 (14.12min)	100 (21.50min)	100 (59.53min)	100 (41.80min)	100 (5.23d)	100 (6.87d)				100 (6.91d)	100 (6.93d)
#7	初锦阳	800 (5.37d)	100 (10.35min)	100 (14.63min)	100 (16.27min)	100 (23.95min)	100 (26.98min)	100 (37.82min)	100 (48.47min)	100 (5.25d)				
#8	周纪先	800 (24.86d)	100 (1.01h)	100 (1.23d)	100 (1.24d)	100 (1.24d)	100 (6.93d)	100 (6.93d)		100 (6.95d)		100 (6.95d)		
#9	辛孝得	730 (24.86d)	100 (17.98min)	100 (3.21d)	100 (3.22d)	100 (3.23d)	100 (3.65d)			100 (5.70d)			100 (4.22d)	30 (5.22d)
#10	吴念远	668 (19.00d)	100 (14.15min)	100 (19.18min)	100 (24.58min)	100 (32.65min)	100 (36.68min)	64 (6.31d)			4 (6.31d)	100 (6.29d)		
#11	亓骏泽	600 (3.25h)	100 (4.42min)	100 (11.33min)	100 (23.55min)	100 (51.92min)	100 (43.85min)	100 (59.75min)						
#12	周沁言	500 (18.94d)	100 (47.73min)	100 (52.93min)	100 (6.28d)	100 (6.29d)	100 (6.30d)							
#13	董岱诚	200 (1.35h)		100 (25.75min)	100 (55.00min)									

作业

<https://www.luogu.com.cn/contest/214308>

课堂表现

今天题目相对难一些，同学们课下一定要认真复习今天题目，上周作业没做的要记得重新完成上周作业。

今天做题做的比较快的同学有 赵牧之、李瑞涵 2 位同学，对 2 位同学提出表扬！！

课堂内容

U501787 求n个数中出现次数最多的数

cnt[1] ~ cnt[10]: 1 ~ 10 出现的次数

```
for (int i = 1; i <= n; i++) {  
    cin >> x;  
    cnt[x]++;  
}
```

找 cnt[1], cnt[2], cnt[3], ..., cnt[10] 里面的最大值 maxx

```
for (int i = 1; i <= 10; i++) {  
    if (cnt[i] == maxx) {  
        cout << i << endl;  
    }  
}
```

```
#include <iostream>
```

```
using namespace std;
```

```
int w[15];
```

```
int main() {  
    int n; cin >> n;  
    for (int i = 1; i <= n; ++i) {  
        int x; cin >> x; w[x]++;  
    }  
  
    int maxx = 0;  
    for (int i = 1; i <= 10; ++i) {  
        if (w[i] > maxx) {  
            maxx = w[i];  
        }  
    }  
  
    for (int i = 1; i <= 10; i++) {  
        if (w[i] == maxx) {  
            cout << i << endl;  
        }  
    }  
    return 0;  
}
```

U501788 COUNT

n: 1 ~ n 中 0/1/2/.../9 每个数出现的次数

11: 1 2 3 4 5 6 7 8 9 10 11

0: 1
1: 4
2: 1
...
9: 1

cnt[0] ~ cnt[9]: 0 ~ 9 出现的次数

```
for (int i = 1; i <= n; i++) {  
    int t = i;  
    while (t != 0) {  
        cnt[t%10]++;  
        t/=10;  
    }  
}  
  
for (int i = 0; i <= 9; i++) {  
    cout << cnt[i] << endl;  
}
```

```
#include <iostream>  
  
using namespace std;  
  
int w[15];  
  
int main() {  
    int n; cin >> n;  
    for (int i = 1; i <= n; ++i) {  
        int t = i;  
        while (t) {  
            w[t%10]++;  
            t /= 10;  
        }  
    }  
  
    for (int i = 0; i <= 9; i++) {  
        cout << w[i] << endl;  
    }  
    return 0;  
}
```

U501790 缺失的数字

1, 2, 3, , 5, 6, , 8, 9, ..., n

用一个桶来记录一下

cnt[1], cnt[2], ..., cnt[n] 代表 1, 2, ..., n 出现的次数

最后, 在 1 ~ n 中, 谁出现的次数是 0, 说明谁没出现

```
#include <iostream>

using namespace std;

int w[100000];

int main() {
    int n; cin >> n;
    for (int i = 1; i <= n; i++) {
        int x; cin >> x; w[x]++;
    }

    for (int i = 1; i <= n; i++) {
        if (w[i] == 0) {
            cout << i << " ";
        }
    }
    return 0;
}
```

U498447 整理药名

```
#include <iostream>
#include <cstring>

using namespace std;

char s[105];

int main()
{
    int n;
    cin >> n;
    for (int i = 1; i <= n; i++) {
        cin >> (s+i);
        int len = strlen(s+i);
        if (s[i]>='a' && s[i]<='z') {
            s[i] = s[i]-'a'+'A';
        }

        for (int j = 2; j <= len; j++) {
```

```
        if (s[j]>='A' && s[j]<='Z') {
            s[j] = s[j] - 'A' + 'a';
        }
    }

    cout << (s+1) << endl;
}
return 0;
}
```

U498461 密码翻译

```
#include <iostream>
#include <cstring>

using namespace std;

char s[105];

int main()
{
    cin.getline(s+1, 105);
    int len = strlen(s+1);
    for (int i = 1; i <= len; i++) {
        if (s[i]>='A' && s[i]<='Z') {
            s[i] += 1;
            if (s[i] > 'Z') {
                s[i] -= 26;
            }
        }
        else if (s[i]>='a' && s[i]<='z') {
            s[i] += 1;
            if (s[i] > 'z') {
                s[i] -= 26;
            }
        }
    }
    cout << (s+1) << endl;
    return 0;
}
```

U498464 简单密码

```
#include <iostream>
#include <cstring>

using namespace std;
```

```
char s[205];

int main()
{
    cin.getline(s+1, 205);
    int len = strlen(s+1);
    for (int i = 1; i <= len; i++) {
        if (s[i]>='A' && s[i]<='Z') {
            s[i] -= 5;
            if (s[i] < 'A') {
                s[i] += 26;
            }
        }
    }
    cout << (s+1) << endl;
    return 0;
}
```

U498458 找第一个只出现一次的字符

```
#include <iostream>
#include <cstring>

using namespace std;

char s[100005];
int cnt[1000];

int main()
{
    cin >> (s+1);
    int n = strlen(s+1);
    for (int i = 1; i <= n; i++) {
        cnt[s[i]]++;
    }

    for (int i = 1; i <= n; i++) {
        if (cnt[s[i]] == 1) {
            cout << s[i];
            return 0;
        }
    }

    cout << "no";
    return 0;
}
```

U498466 加密的病历单

```
#include <iostream>
#include <cstring>
#include <algorithm>

using namespace std;

char s[55];

int main()
{
    cin >> (s+1);
    int n = strlen(s+1);
    reverse(s+1, s+n+1);

    for (int i = 1; i <= n; i++) {
        if (s[i]>='a' && s[i]<='z') {
            s[i] += 3;
            if (s[i] > 'z') {
                s[i] -= 26;
            }
            s[i] = s[i] - 'a' + 'A';
        }
        else {
            s[i] += 3;
            if (s[i] > 'Z') {
                s[i] -= 26;
            }
            s[i] = s[i] - 'A' + 'a';
        }
    }

    cout << (s+1) << endl;
    return 0;
}
```

U498469 判断字符串是否为回文

可以翻转一下字符串，然后跟原字符串比一下，看是否一模一样即可