

# 统计一直赢的场数

## 人员

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元骏泽、周沁言 到课

## 作业

<https://www.luogu.com.cn/contest/205810>

## 课堂表现

同学们上课做题态度非常积极认真，初锦阳、纪博涵、李瑞涵、吴言恩 4 位同学这节课做题表现非常好，提出表扬！

## 课堂内容

### U489741 完美偶数

利用 while 拆数, 根据循环次数来统计有多少位, 并判断过程中是否有某一位是奇数

```
#include <iostream>

using namespace std;

int main()
{
    int n;
    cin >> n;
    for (int i = 1; i <= n; i++) {
        int x;
        cin >> x;
        int x2 = x;
        int cnt = 0;
        bool flag = true;
        while (x != 0) {
            int t = x%10;
            if (t%2 == 1) {
                flag = false;
            }
            x /= 10;
            cnt++;
        }
        if (cnt%2 == 0 && flag == true) {
            cout << x2 << endl;
        }
    }
}
```

```
    return 0;
}
```

## U489742 摘苹果

1. 打擂台找到最小值 minn
2. 从  $a[1] \sim a[n]$  遍历每个数  
if ( $a[i] \neq \text{minn}$ ) {  
     $\text{sum} += a[i]$ ;  
     $\text{cnt} ++$ ;  
}
3. 最后平均值:  $1.0 * \text{sum} / \text{cnt}$

```
#include <iostream>
using namespace std;
int a[105];
int main() {
    int n;
    cin >> n;
    for (int i = 1; i <= n; i++) {
        cin >> a[i];
    }

    int minn = 10000000;
    for (int i = 1; i <= n; i++) {
        if (a[i] < minn) {
            minn = a[i];
        }
    }

    int sum = 0, cnt = 0;
    for (int i = 1; i <= n; ++i) {
        if (a[i] != minn) {
            sum += a[i];
            cnt++;
        }
    }

    printf("%.11f\n", 1.0 * sum / cnt);
    return 0;
}
```

## U489744 数组的改变

维护一个 最小值的位置p1 和 最大值的位置p2

把  $a[1]$  和  $a[p1]$  交换,  $a[n]$  和  $a[p2]$  交换即可

```
#include <bits/stdc++.h>

using namespace std;

int a[105];

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

    int maxx = 0, minn = 1000000;
    int p1, p2;

    for (int i = 1; i <= n; i++) {
        if (a[i] > maxx) {
            maxx = a[i];
            p1 = i;
        }
        if (a[i] < minn) {
            minn = a[i];
            p2 = i;
        }
    }

    int t = a[1];
    a[1] = a[p2];
    a[p2] = t;

    t = a[n];
    a[n] = a[p1];
    a[p1] = t;

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

## U489765 统计一直赢的场数

维护一个 cnt, 代表连续赢的场次

```
#include <bits/stdc++.h>

using namespace std;
```

```
int a[105];

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

    int cnt = 1;
    for (int i = 2; i <= n; i++) {
        if (a[i] == a[i-1]) {
            cnt++;
        } else {
            // a[i-1] -> cnt
            if (cnt > 1) {
                cout << a[i-1] << " " << cnt << endl;
            }
            cnt = 1;
        }
    }

    if (cnt > 1) {
        cout << a[n] << " " << cnt << endl;
    }
    return 0;
}
```

## P1614 爱与愁的心痛

考虑起点, 从 1 到  $n-m+1$  都可以当起点, 然后求往后连续  $m$  个数的和, 最后打擂台求最小值即可

```
int minn = 1000000;
for (int i = 1; i <= n-m+1; i++) {
    // a[i], a[i+1], a[i+2], ..., a[i+m-1]
    int sum = 0;
    for (int j = i; j <= i+m-1; j++) {
        sum += a[j];
    }
    if (sum < minn) {
        minn = sum;
    }
}
```

```
#include <bits/stdc++.h>
```

```
using namespace std;
```

```
const int maxn = 3000 + 5;
int a[maxn];

int main()
{
    int n, m; cin >> n >> m;
    for (int i = 1; i <= n; i++) cin >> a[i];

    int minn = 1000000;
    for (int i = 1; i <= n-m+1; i++) {
        int sum = 0;
        for (int j = i; j <= i+m-1; j++) {
            sum += a[j];
        }
        if (sum < minn) {
            minn = sum;
        }
    }
    cout << minn << endl;
    return 0;
}
```