综合混练

人员

杨咏丞、李雨谦、韩鸣蔚、陈欣妙、刘奕辰、董昱含、杨俊彦、龙沛轩、王陆文龙、李锦澍、周治润、潘俊伊、袁晨峻、徐思远、白芸珲 到课, 王博涵 线上

上周作业检查

https://www.luogu.com.cn/contest/234970

2025-0309六队上课(综合混练)

报名 编辑比赛

题目数 7 | 报名人数 24

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
#1	袁晨峻	700 (12.63h)	100 (9.68min)	100 (32.40min)	100 (1.00h)	100 (42.68min)	100 (1.24h)	100 (4.56h)	100 (4.41h)
#2	徐思远	700 (20.92h)	100 (17.12min)	100 (48.45min)	100 (1.16h)	100 (1.52h)	100 (1.88h)	100 (2.98h)	100 (12.29h)
#3	阮文璋	700 (7.70d)	100 (5.53h)	100 (5.95h)	100 (6.45h)	100 (6.82h)	100 (14.97h)	100 (1.63d)	100 (4.41d)
#4	杨俊彦	600 (8.18h)	100 (13.97min)	100 (43.15min)	100 (1.09h)	100 (1.55h)	100 (2.24h)	100 (2.35h)	
#5	李雨谦	600 (5.04d)	100 (16.42min)	100 (40.63min)	100 (1.12h)	100 (1.57h)	100 (2.44d)	100 (2.45d)	
#6	王承周	600 (5.83d)	100 (5.51h)	100 (5.83h)	100 (6.42h)	100 (6.69h)	100 (2.40d)	100 (2.41d)	
#7	董昱含	600 (7.72d)	100 (17.83min)	100 (52.15min)	100 (11.80h)	100 (1.63h)	100 (3.55d)	100 (3.57d)	
#8	李锦澍	600 (9.19d)	100 (19.07min)	100 (43.47min)	100 (1.07h)	100 (1.61h)	100 (4.53d)	100 (4.51d)	
#9	陈欣妙	600 (13.05d)	100 (18.92min)	100 (41.72min)	100 (1.09h)	100 (1.65h)	100 (6.48d)	100 (6.41d)	
#10	刘奕辰	600 (13.30d)	100 (19.65min)	100 (41.83min)	100 (1.03h)	100 (1.23h)	100 (6.60d)	100 (6.57d)	
#11	潘俊伊	594 (2.65d)	100 (8.83min)	100 (44.12min)	100 (1.15h)	100 (59.17min)	100 (1.74h)	94 (2.45d)	
#12	龙沛轩	590 (3.12d)	100 (17.83min)	100 (40.50min)	100 (1.07h)	100 (51.75min)	90 (1.49d)	100 (1.51d)	
#13	许睿谦	500 (2.57d)	100 (5.57h)	100 (6.01h)	100 (6.48h)	100 (6.83h)		100 (1.54d)	
#14	杨咏丞	500 (3.69d)	100 (32.68min)	100 (50.65min)	100 (1.45h)	100 (1.62h)	100 (3.50d)		
#15	褚锦轩	500 (5.59d)	100 (5.50h)	100 (5.97h)	100 (6.44h)	100 (6.79h)	100 (4.56d)		
#16	王陆文龙	500 (6.65d)	100 (18.70min)	100 (44.98min)	100 (1.12h)	100 (1.83h)	100 (6.48d)		
#17	周治润	420 (2.73d)	100 (15.23min)	100 (49.15min)	20 (1.35h)	100 (1.65h)	100 (2.56d)		
#18	韩鸣蔚	400 (3.79h)	100 (20.15min)	100 (42.57min)	100 (1.63h)	100 (1.11h)			
#19	SSJ司云心	400 (4.65h)	100 (13.45min)		100 (1.11h)	100 (1.64h)	100 (1.68h)		
#20	曹塬	400 (2.44d)	100 (23.57min)	100 (9.75h)	100 (11.48h)	100 (1.54d)			
#21	王毅博	400 (6.37d)	100 (5.53h)		100 (6.47h)	100 (6.84h)	100 (5.59d)		
#22	王博涵	200 (1.85h)	100 (23.72min)		100 (1.46h)				
#23	白芸珲	200 (6.48d)	100 (19.22min)	100 (6.47d)					

作业

https://www.luogu.com.cn/contest/236356 (课上讲了 A~D 题, 课后作业是 E 题)

课堂表现

今天课上同学们做题表现还行, 但是能看出同学们贪心的基础不是很好, 所以同学们要好好复习之前的内容。

课堂内容

U516882 string

```
#include <bits/stdc++.h>
using namespace std;
string s;
int main(){
    long long id=0;
    cin>>s;
    int len=s.size();
    int a[len];
    for(int i=0;i<len;i++){
        a[i]=s[i]-'A'+1;
    }
    for(int i=0;i<len;i++){
        id=id*26+a[i];
    }
    cout<<id;
    return 0;
}
```

P8672 [蓝桥杯 2018 国 C] 交换次数

```
#include <bits/stdc++.h>
using namespace std;

const int maxn = 1e5 + 5;
char s[maxn], p[maxn];

int calc(char a, char b, char c) {
    for (int i = 0; i < maxn; ++i) s[i] = p[i];

    int n = strlen(s+1);
    int cnt_a = 0, cnt_b = 0, cnt_c = 0;
    for (int i = 1; i <= n; i++) {
        if (s[i] == a) cnt_a++;
        else if (s[i] == b) cnt_b++;
        else cnt_c++;
    }

    int res = 0;
    int bb = 0, cc = 0;
    for (int i = 1; i <= cnt_a; i++) {
        if (s[i] != a) {
            res++;
            if (s[i] == b) bb++;
            else cc++;
        }
    }

    for (int i = cnt_a+1; i <= n; i++) {
```

```
            if (s[i] == a) {
                if (bb > 0) {
                    s[i] = b;
                    bb--;
                } else {
                    s[i] = c;
                }
            }
        }

        for (int i = cnt_a+1; i <= cnt_a+cnt_b; i++) {
            if (s[i] != b) res++;
        }

        return res;
    }

    int main() {
        cin >> (p+1);
        int res = calc('A','B','T');
        res = min(res, calc('A','T','B'));
        res = min(res, calc('T','A','B'));
        res = min(res, calc('T','B','A'));
        res = min(res, calc('B','A','T'));
        res = min(res, calc('B','T','A'));
        cout << res << endl;
        return 0;
    }
```

P1702 突击考试

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

using namespace std;

const int maxn = 100000 + 5;
int a[maxn], b[maxn], len[10];
int n;

int calc(int t) {
    int cnt = 0, maxx = 0;
    for (int i = 1; i <= n; i++) {
        if (a[i]==t || b[i]==t) cnt++;
        else cnt = 0;
        maxx = max(maxx, cnt);
    }
    return maxx;
}

int main()
{
```

```
    cin >> n;
    for (int i = 1; i <= n; i++) cin >> a[i] >> b[i];

    int maxx = 0;
    for (int i = 1; i <= 5; i++) len[i] = calc(i), maxx = max(maxx, len[i]);

    for (int i = 1; i <= 5; i++) {
        if (len[i] == maxx) {
            cout << maxx << " " << i << endl;
            break;
        }
    }
    return 0;
}
```

P1106 删数问题

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

using namespace std;

int main()
{
    string s; int k; cin >> s >> k;
    vector<char> vec;
    for (char i : s) {
        while (!vec.empty() && i<vec.back() && k) {
            vec.pop_back(); k--;
        }
        vec.push_back(i);
    }

    while (k) { vec.pop_back(); k--; }

    reverse(vec.begin(), vec.end());
    while (!vec.empty() && vec.back()=='0') vec.pop_back();
    reverse(vec.begin(), vec.end());

    for (char i : vec) cout << i;
    if (vec.empty()) cout << 0;
    return 0;
}
```

P1803 凌乱的yyy / 线段覆盖

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

using namespace std;
```

```cpp
const int maxn = 1e6 + 5;
struct node {
    int l, r;
} w[maxn];

bool cmp(node p, node q) {
    return p.r < q.r;
}

int main()
{
    int n; cin >> n;
    for (int i = 1; i <= n; ++i) cin >> w[i].l >> w[i].r;
    sort(w+1, w+n+1, cmp);

    int last = -1, res = 0;
    for (int i = 1; i <= n; ++i) {
        if (w[i].l >= last) {
            ++res;
            last = w[i].r;
        }
    }

    cout << res << endl;
    return 0;
}
```

U492913 区间分组

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

using namespace std;

struct node {
    int pos, val;
};
bool cmp(node p, node q) {
    if (p.pos != q.pos) return p.pos < q.pos;
    return p.val < q.val;
}

int main()
{
    vector<node> vec;
    int n; cin >> n;
    while (n -- ) {
        int l, r; cin >> l >> r;
        vec.push_back({l,1}), vec.push_back({r+1,-1});
    }
```

```
    sort(vec.begin(), vec.end(), cmp);

    int cnt = 0, maxx = 0;
    for (node it : vec) {
        cnt += it.val;
        maxx = max(maxx, cnt);
    }
    cout << maxx << endl;
    return 0;
}
```