综合混练

人员

白芸珲、褚锦轩、许睿谦、王毅博 到课, 王承周 线上

作业

https://www.luogu.com.cn/contest/232369 (课上讲了 A~D 题, 课后必做作业是 E 题, 选做作业是 F 题)

课堂表现

今天课上的几个题目, 大部分都是那种暴力很好写, 但是满分做法需要再思考一下的题目。

同学们整体做题表现一般, 课下要好好研究一下, 加强这种题目的练习。

课堂内容

U477563 差为200的对数

```cpp
#include <bits/stdc++.h>
using namespace std;
const int N=2e5+5;
long long tong[N];
long long n,m;
int main()
{
    long long  n;
    cin >>n;
    for (int i=1;i<=n;i++)
    {
        int a;
        cin >>a;
        tong[a%200]++;
    }
    long long sum=0;
    for (int i=0;i<=199;i++)
    {
        sum+=tong[i]*(tong[i]-1)/2;
    }
    cout <<sum;
    return 0;
}
```

U516883 change

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

using namespace std;

char s[500005];
int op[500005], x[500005];
char c[500005];

int main()
{
    int n; cin >> n;
    cin >> (s+1);
    int m; cin >> m;
    for (int i = 1; i <= m; i++) {
        cin >> op[i] >> x[i] >> c[i];
    }

    int id = 0;
    for (int i = m; i >= 1; i--) {
        if (op[i]==2 || op[i]==3) {
            id = i;
            break;
        }
    }

    for (int i = 1; i <= m; i++) {
        if (op[i] == 1) s[x[i]] = c[i];
        else {
            if (i == id) {
                if (op[i] == 2) {
                    for (int j = 1; j <= n; j++) {
                        s[j] = tolower(s[j]);
                    }
                } else {
                    for (int j = 1; j <= n; j++) {
                        s[j] = toupper(s[j]);
                    }
                }
            }
        }
    }
    cout << (s+1) << endl;
    return 0;
}
```

U510530 珍珠链

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

using namespace std;
```

```cpp
const int maxn = 450 + 5;
char s[maxn];

int main()
{
    cin >> (s+1);
    int n = strlen(s+1), res = 0;
    for (int i = 1; i <= n; ++i) {
        for (int j = i; j <= n; ++j) {
            int cnt1 = 0, cnt2 = 0;
            for (int k = i; k <= j; k++) {
                if (s[k] == 'G') cnt1++;
                else cnt2++;
            }
            if (cnt1 == cnt2) res = max(res, j-i+1);
        }
    }
    cout << res << endl;
    return 0;
}
```

U510529 珍珠链2

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

using namespace std;

const int maxn = 1e6 + 5;
char s[maxn];
int p[maxn];

int main()
{
    cin >> (s+1);
    int n = strlen(s+1), res = 0;
    for (int i = 1; i <= n; i++) {
        if (s[i] == 'G') p[i] = p[i-1] + 1;
        else p[i] = p[i-1] - 1;
    }

    map<int, int> mp;
    // mp 里存的信息: mp[a] = b
    // ->  前缀和为 a 的所有点中最靠左的那个点

    mp[0] = 0;
    for (int i = 1; i <= n; i++) {
        int x = p[i];
        if (mp.count(x)) {
            res = max(res, i-mp[x]);
        } else {
```

```cpp
            mp[x] = i;
        }
    }
    cout << res << endl;
    return 0;
}
```