

综合混练

人员

刘新睿、牛晓晨、刘锦轩、范家郡 到课

上周作业检查

上周作业链接: <https://vjudge.net/contest/714711>

Begin: 2025-05-05 08:30 CST

☆👥 2025-0505 五队上课 (综合混练)

End: 2025-11-29 16:30 CST

Elapsed: 4:23:55:32

Running

Remaining: 203:08:04:27

OverviewProblemStatusRank (4:23:55:23)DiscussSettingCloneUpdateDelete

Rank	Team	Score	Penalty	A 18 / 55	B 18 / 35	C 13 / 23	D 7 / 8	E 3 / 5
1	☆👤 zhn123bc (张皓宁)	5	5771	8:21:11 (-4)	8:10:35 (-1)	8:42:52	8:57:21	2:11:39:37 (-2)
2	☆👤 two_tiger (卢炫佑)	5	20658	8:08:00 (-3)	8:18:37 (-3)	4:12:04:46 (-1)	4:12:29:39	4:12:57:26
3	☆👤 suansuan (李响)	5	29902	4:02:31:43	4:02:34:53	4:05:54:02 (-2)	4:03:19:43	4:03:21:41
4	☆👤 ikunTLE (方冠霖)	4	568	0:48:41 (-1)	1:30:34	3:14:39	3:35:04	
5	☆👤 Hacker_Cracker sty0948 (隋...)	4	662	0:52:59 (-3)	1:29:36	4:10:05 (-1)	3:09:37	
6	☆👤 misaka16384 (黄诗琦)	4	11221	7:38:47 (-2)	8:48:41 (-3)	2:12:06:19 (-2)	4:12:07:52	
7	☆👤 niuxiaochen (牛晓晨)	4	13403	1:15:28 (-5)	1:37:12 (-2)	4:13:56:39	4:12:13:48	
8	☆👤 WangYanzhen (王彦臻)	3	1693	8:16:14 (-4)	8:12:43	9:24:17 (-3)		
9	☆👤 qp_an (赵广宇)	3	4786	8:16:47 (-6)	8:34:20	2:12:55:52		
10	☆👤 chx123bc (陈瀚霄)	3	6215	8:07:32 (-2)	8:29:50 (-1)	3:13:37:42 (-1)		
11	☆👤 lxr123bc (刘新睿)	3	6759	0:53:42	1:37:42 (-2)	4:13:27:58		
12	☆👤 fj123bc (范家郡)	3	6788	1:01:01 (-1)	1:58:17	4:13:49:09	(-1)	
13	☆👤 Hanhj (韩鸿钜)	3	7565	8:10:37	8:30:12	4:13:24:38		
14	☆👤 longlong_int (刘锦轩)	2	175	0:58:04	1:37:25 (-1)			
15	☆👤 ccx123bc (曹承贤)	2	987	7:47:10	8:20:04 (-1)			
16	☆👤 dana230513 (金一航)	2	1006	7:51:28 (-1)	8:35:17			
17	☆👤 fbl123bc (付丙霖)	2	1034	7:04:16 (-2)	8:30:33 (-3)			
18	☆👤 lzy1031 (李政毅)	2	1078	8:23:41 (-2)	8:54:41			
19	☆👤 lzy123bc (刘智予)	0	0	(-1)				

作业

<https://vjudge.net/contest/715752> (课上讲了 A ~ C 这些题, 课后作业是 D E F G 题)

课堂表现

同学们课上听讲都比较认真, 但是课上时间有限, 题目没有全做完, 课后同学们一定要花时间多做一做。

课堂内容

CF1900C Anji's Binary Tree

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

using namespace std;

const int maxn = 3e5 + 5;
char s[maxn];
int tr[maxn][2];

int dfs(int u) {
    if (tr[u][0]==0 && tr[u][1]==0) return 0;
    if (tr[u][0] == 0) return (s[u]!='R') + dfs(tr[u][1]);
    if (tr[u][1] == 0) return (s[u]!='L') + dfs(tr[u][0]);
    return min((s[u]!='R') + dfs(tr[u][1]), (s[u]!='L') + dfs(tr[u][0]));
}

void solve() {
    int n; cin >> n;

    cin >> (s+1);
    for (int i = 1; i <= n; ++i) cin >> tr[i][0] >> tr[i][1];

    // cout << "----- ";
    cout << dfs(1) << endl;
}

int main()
{
    int T; cin >> T;
    while (T -- ) solve();
    return 0;
}
```

CF448C Painting Fence

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

using namespace std;
```

```

const int maxn = 5000 + 5;
int w[maxn];

int dfs(int l, int r) { // 处理 [l,r] 最少需要几步
    if (l > r) return 0;

    int minn = 1e9+100;
    for (int i = l; i <= r; ++i) minn = min(minn, w[i]);
    for (int i = l; i <= r; ++i) w[i] -= minn;
    int pos = -1;
    for (int i = l; i <= r; ++i) {
        if (!w[i]) { pos = i; break; }
    }

    return min(minn+dfs(l,pos-1)+dfs(pos+1,r), r-l+1);
}

int main()
{
    int n; cin >> n;
    for (int i = 1; i <= n; ++i) cin >> w[i];
    cout << dfs(1, n) << endl;
    return 0;
}

```

B3637 最长上升子序列

```

#include <bits/stdc++.h>

using namespace std;

const int maxn = 1e6 + 5;

int main()
{
    int n; cin >> n;
    vector<int> vec;
    while (n -- ) {
        int x; cin >> x;
        if (vec.empty() || x>vec.back()) vec.push_back(x);
        else *lower_bound(vec.begin(), vec.end(),x) = x;
    }

    cout << vec.size() << endl;
    return 0;
}

```

CF1153D Serval and Rooted Tree

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

using namespace std;

const int maxn = 3e5 + 5;
vector<int> vec[maxn];
int w[maxn], f[maxn];
int n, sz = 0;

void dfs(int u, int mid) {
    if (vec[u].empty()) { f[u] = 1; return; }

    for (int i : vec[u]) dfs(i, mid);

    int res;
    if (w[u] == 1) {
        res = 1e9;
        for (int i : vec[u]) res = min(res, f[i]);
    } else {
        res = 0;
        for (int i : vec[u]) res += f[i];
    }
    f[u] = res;
}

bool check(int mid) {
    memset(f, 0, sizeof(f));
    dfs(1, mid);
    return f[1] <= sz-mid+1;
}

int main()
{
    cin >> n;
    for (int i = 1; i <= n; ++i) cin >> w[i];
    for (int i = 2; i <= n; ++i) {
        int x; cin >> x; vec[x].push_back(i);
    }
    for (int i = 1; i <= n; ++i) {
        if (vec[i].empty()) ++sz;
    }

    int l = 1, r = sz;
    while (l <= r) {
        int mid = (l + r) / 2;
        if (check(mid)) l = mid+1;
        else r = mid-1;
    }
    cout << r << endl;
    return 0;
}
```

CF1286A Garland

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

using namespace std;

const int maxn = 100 + 5;
int w[maxn];
int f[maxn][maxn][2];

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

    memset(f, 0x3f, sizeof(f));
    f[0][0][0] = f[0][0][1] = 0;
    for (int i = 1; i <= n; ++i) {
        for (int j = 0; j <= i; ++j) {
            if (w[i]==0 || w[i]%2 == 1) {
                if (j >= 1) f[i][j][1] = min(f[i-1][j-1][0]+1, f[i-1][j-1][1]);
            }
            if (w[i]==0 || w[i]%2 == 0) {
                f[i][j][0] = min(f[i-1][j][0], f[i-1][j][1]+1);
            }
        }
    }

    cout << min(f[n][(n+1)/2][0], f[n][(n+1)/2][1]) << endl;
    return 0;
}
```