

模拟题目 + deque

人员

方俊喆、刘祺、牛同泽、赵熙羽、齐振玮、夏志赫、武敬哲、辛帅辰、秦显森、徐浩然、谢亚锴、高健桓、强笑萌、董浩桢 到课， 牟茗 线上

作业检查

上周作业链接: <https://www.luogu.com.cn/contest/212801>

2024-1110周日10:30

报名

编辑比赛

题目数6

报名人数17

比赛说明

题目列表

排行榜

名次	参赛者	总分	A	B	C	D	E	F
#1	刘祺	600 (19.20h)	100 (1.67h)	100 (38.27min)	100 (1.17h)	100 (6.53h)	100 (2.02h)	100 (7.16h)
#2	牟茗	600 (6.68d)	100 (1.45h)	100 (26.72min)	100 (58.92min)	100 (1.16h)	100 (1.55h)	100 (6.45d)
#3	赵熙羽	600 (19.24d)	100 (6.36d)	100 (36.15min)	100 (1.13h)	100 (1.42h)	100 (6.35d)	100 (6.39d)
#4	夏硕承	530 (21.73d)	100 (5.41d)	100 (25.33min)	100 (2.07h)	100 (5.41d)	100 (5.40d)	30 (5.41d)
#5	高健桓	508 (17.18d)	28 (3.45d)	100 (37.60min)	100 (3.41d)	80 (3.40d)	100 (3.44d)	100 (3.45d)
#6	武敬哲	500 (18.55d)	100 (1.15h)	100 (41.80min)		100 (6.16d)	100 (6.15d)	100 (6.16d)
#7	柳力玮	490 (24.86d)	100 (5.97d)	100 (5.93d)	100 (5.95d)	100 (5.96d)		90 (6.46d)
#8	辛帅辰	400 (19.45d)	100 (6.47d)	100 (6.47d)	100 (1.08h)		100 (6.47d)	
#9	秦显森	350 (12.31d)		100 (50.78min)	100 (1.43h)	80 (5.27d)	70 (6.94d)	
#10	谢亚锴	345 (19.05d)	100 (6.40d)	100 (43.67min)	5 (1.67h)		100 (6.27d)	40 (6.29d)
#11	齐振玮	300 (3.49h)		100 (30.70min)	100 (1.48h)		100 (1.50h)	
#12	夏志赫	300 (12.88d)		100 (48.70min)		100 (6.50d)	100 (6.35d)	
#13	牛同泽	240 (6.99d)		100 (51.75min)	100 (1.61h)		40 (6.89d)	
#14	xuruiqian1220	200 (1.99h)		100 (25.73min)			100 (1.56h)	
#15	Blue_wonders	154 (11.87d)		54 (5.92d)	100 (5.96d)			
#16	方俊喆	100 (44.82min)		100 (44.82min)				
#17	徐浩然	100 (1.14h)		100 (1.14h)				

作业

<https://www.luogu.com.cn/contest/214205> (F 题可能难一些，不要求同学们一定要拿到满分，尽力做)

课堂表现

同学们课上听讲都很认真，今天的 C 题非常好，同学们课上没做出来的，课下一定要努力做一下 C 题。

课堂内容

U504489 求子序列

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

using namespace std;

const int maxn = 100000 + 5;
int w[maxn];

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

    int cnt = 1, flag = 0;
    if (w[2] > w[1]) flag = 1;
    else flag = -1;

    for (int i = 3; i <= n; ++i) {
        if (w[i] > w[i-1]) {
            if (flag == -1) {
                cnt++, flag = 1;
            }
        } else {
            if (flag == 1) {
                cnt++, flag = -1;
            }
        }
    }

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

U504492 排队

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

using namespace std;

const int maxn = 100000 + 5;
int w[maxn], a[maxn];
```

```

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

    for (int i = 1, j = n/2+1, k = n/2+2; i <= n; ++i) {
        if (i&1) a[j] = w[i], --j;
        else a[k] = w[i], ++k;
    }

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

```

U489777 数字

```

#include <bits/stdc++.h>
using namespace std;
int cnt[10];
int main() {
    long long n; cin >> n;
    for (long long i = n; ; i += n) {
        long long t = i;
        while (t != 0) {
            cnt[t%10]++;
            t /= 10;
        }

        bool flag = true;
        for (int j = 1; j <= 9; j++) {
            if (cnt[j] == 0) {
                flag = false;
                break;
            }
        }
        if (flag == true) {
            cout << i << endl;
            break;
        }
    }
    return 0;
}

```

P1739 表达式括号匹配

```

#include <bits/stdc++.h>

```

```
using namespace std;

const int maxn = 255 + 5;
char s[maxn];

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

    stack<char> stk;
    for (int i = 1; i <= n; ++i) {
        if (s[i] == '(') stk.push(s[i]);
        else if (s[i] == ')') {
            if (stk.empty()) { cout << "NO" << endl; return 0; }
            stk.pop();
        }
    }

    if (!stk.empty()) cout << "NO" << endl;
    else cout << "YES" << endl;
    return 0;
}
```

P1540 [NOIP2010 提高组] 机器翻译

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

using namespace std;

const int maxn = 1000 + 5;
bool st[maxn];

int main()
{
    queue<int> q;
    int m, n, res = 0; cin >> m >> n;
    while (n -- ) {
        int x; cin >> x;
        if (st[x]) continue;

        ++res;
        q.push(x); st[x] = true;
        if ((int)q.size() > m) {
            int t = q.front(); q.pop(); st[t] = false;
        }
    }

    cout << res << endl;
}
```

```
    return 0;
}
```

deque

```
头文件: #include <deque>
deque<int> dq;
后插: push_back
前插: push_front
后删: pop_back
前删: pop_front
clear, empty, size, reverse

遍历:
for (int i : dq) {
    cout << i << " ";
}
cout << endl;

for (int i = 0; i < (int)dq.size(); i++) {
    cout << dq[i] << " ";
}
cout << endl;
```

P2952 [USACO09OPEN] Cow Line S

```
#include <iostream>
#include <deque>

using namespace std;

int main()
{
    int n, id = 0; cin >> n;
    deque<int> dq;
    while (n -- ) {
        char op; cin >> op;
        if (op == 'A') {
            char c; cin >> c;
            if (c == 'L') {
                dq.push_front(++id);
            } else {
                dq.push_back(++id);
            }
        } else {
            char c; int k; cin >> c >> k;
            if (c == 'L') {
                for (int i = 0; i < k; ++i) dq.pop_front();
            }
        }
    }
}
```

```
        } else {  
            for (int i = 0; i < k; ++i) dq.pop_back();  
        }  
    }  
}  
  
for (int i : dq) cout << i << endl;  
cout << endl;  
return 0;  
}
```