删数问题

人员

武敬哲、程梓豪、隋钰涵、赵熙羽、陈兆晟、高健桓、谢亚锴、董浩桢、秦显森、牛同泽 到课, 夏硕承 线上

作业检查

上周作业链接: https://www.luogu.com.cn/contest/224470

名次	参赛者	总分	A	B	C	D	E
#1	隋钰涵	500 (6.86h)	100 (23.52min)	100 (24.22min)	100 (1.14h)	100 (2.44h)	100 (2.49h)
#2	赵熙羽	500 (13.83h)	100 (22.15min)	100 (30.55min)	100 (1.53h)	100 (1.97h)	100 (9.46h)
#3	董浩桢	500 (4.45d)	100 (20.65min)	100 (35.07min)	100 (1.49h)	100 (2.06h)	100 (4.27d)
#4	武敬哲	500 (6.73d)	100 (29.85min)	100 (40.57min)	100 (1.50h)	100 (2.21h)	100 (6.53d)
#5	程梓豪	500 (9.03d)	100 (1.99h)	100 (1.84h)	100 (1.51h)	100 (2.44d)	100 (6.38d)
#6	谢亚锴	500 (19.61d)	100 (2.19h)	100 (6.49d)	100 (2.18d)	100 (6.48d)	100 (2.26d)
#7	陈兆晟	400 (3.89h)	100 (15.63min)	100 (31.27min)	100 (1.26h)	100 (1.85h)	
#8	郭骐嘉	400 (4.18h)	100 (25.32min)	100 (38.10min)	100 (1.09h)	100 (2.03h)	
#9	杨谨硕	400 (5.44h)	100 (1.43h)	100 (26.22min)	100 (1.49h)		100 (2.07h)
#10	夏硕承	300 (2.60h)	100 (26.88min)	100 (36.25min)	100 (1.54h)		
#11	秦显森	219 (3.26h)	100 (24.60min)	100 (14.70min)	10 (37.32min)	9 (1.99h)	
#12	牛同泽	210 (2.65h)	100 (27.38min)	100 (33.37min)	10 (1.64h)		
#13	李青默	200 (1.77h)	100 (37.18min)	100 (1.15h)			
#14	夏志赫	200 (2.82h)		100 (33.32min)	100 (2.27h)		
#15	魏鹏超	200 (2.83d)		100 (1.36h)	100 (1.47d)		
#16	牟茗	200 (12.94d)	100	100			
#17	齐振玮	0 (0ms)					

作业

https://www.luogu.com.cn/contest/226342

课堂表现

今天通过 删数问题 这个题, 发现同学们前面的单调栈掌握的并不熟练, 同学们要好好复习一下之前的单调栈和单调队列的内容。

课堂内容

P1008 [NOIP1998 普及组] 三连击

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

using namespace std;

int main()
{
    for (int i = 100; i <= 333; i++) {
        int j = 2*i, k = 3*i;
        string t = to_string(i)+to_string(j)+to_string(k);
        sort(t.begin(), t.end());
        if (t == "123456789") {
            cout << i << " " << j << " " << k << endl;
        }
    }
    return 0;
}
```

P1618 三连击（升级版）

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

using namespace std;

int cnt[15];

int main()
{
  int x, y, z; cin >> x >> y >> z;
  if (x == 0) {
    cout << "No!!!" << endl;
    return 0;
  }

  int tot = 0;
  for (int j = 100; j <= 999; ++j) {
    if (j*y%x != 0) continue;
    if (j*z%x != 0) continue;

    int a = j, b = j*y/x, c = j*z/x;
    if (c > 999) continue;
    for (int i = 1; i <= 9; ++i) cnt[i] = 0;
    while (a) {
```

```cpp
      cnt[a%10]++, a /= 10;
    }
    while (b) {
      cnt[b%10]++, b /= 10;
    }
    while (c) {
      cnt[c%10]++, c /= 10;
    }
    bool flag = true;
    for (int i = 1; i <= 9; ++i) {
      if (cnt[i] != 1) flag = false;
    }
    if (flag) {
      cout << j << " " << j*y/x << " " << j*z/x << endl;
      ++tot;
    }
  }

  if (!tot) cout << "No!!!" << endl;
  return 0;
}
```

B3723 [语言月赛202303] Coin Selection G

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

using namespace std;

typedef long long LL;
const int maxn = 1000 + 5;
LL w[maxn];

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

  LL sum1 = 0, sum2 = 0;
  for (int i = 1; i <= n; ++i) {
    sort(w+1, w+n+1);
    if (i%2 == 1) {  // sum1
      if (sum1 < w[i]) sum1 += w[i], w[i] = 0;
      else {
        for (int j = n; ; --j) {
          if (w[j] <= sum1) {
            sum1 += w[j], w[j] = 0;
            break;
          }
        }
      }
    } else {  // sum2
```

```
        if (sum2 < w[i]) sum2 += w[i], w[i] = 0;
        else {
          for (int j = n; ; --j) {
            if (w[j] <= sum2) {
              sum2 += w[j], w[j] = 0;
                break;
            }
          }
        }
      }
    }
  }
  cout << sum1 << " " << sum2 << endl;
  return 0;
}
```

P1106 删数问题

```cpp
#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 ((int)vec.size()>1 && vec.back() == '0') vec.pop_back();
    reverse(vec.begin(), vec.end());

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