

前缀最小最大值

人员

初锦阳、李瑞涵、赵牧之、王馨琪、刘宸熙、苑钊、温郝冬、倪炜艺、柳力玮、田心一、姜皓轩、纪博涵、谢梓轩、李知朔 到课

上周作业检查

上周作业链接: <https://www.luogu.com.cn/contest/236358>

2025-0316周日15:30

报名

编辑比赛

题目数5 | 报名人数22

比赛说明 | 题目列表 | 排行榜

名次	参赛者	总分	A	B	C	D	E
#1	柳力玮	500 (3.82h)	100 (4.58min)	100 (37.03min)	100 (21.88min)	100 (58.82min)	100 (1.78h)
#2	赵牧之	500 (15.34h)	100 (34.12min)	100 (3.13h)	100 (1.04h)	100 (3.24h)	100 (7.36h)
#3	韩昱辰	400 (4.35d)	100 (35.95min)	100 (2.36h)	100 (51.15min)	100 (4.19d)	
#4	李知朔	400 (22.91d)	100 (5.72d)	100 (5.73d)	100 (5.73d)	100 (5.74d)	
#5	燕润石	340 (3.67h)	100 (33.02min)	100 (1.70h)	100 (37.98min)	40 (47.20min)	
#6	初锦阳	340 (6.07d)	100 (22.77min)	100 (1.75h)	100 (37.98min)	40 (5.95d)	
#7	田心一	328 (6.15d)	100 (27.75min)	48 (1.77h)	100 (44.70min)	80 (6.03d)	
#8	苑钊	320 (4.54h)	100 (27.98min)	100 (1.27h)	100 (48.80min)	20 (1.99h)	
#9	纪博涵	300 (2.68h)	100 (35.15min)	100 (1.25h)	100 (51.03min)		
#10	倪炜艺	300 (3.15h)	100 (35.52min)	100 (1.75h)	100 (48.17min)		
#11	温郝冬	300 (3.16h)	100 (37.28min)	100 (1.72h)	100 (49.45min)		
#12	王馨琪	300 (6.42h)	100 (26.07min)	100 (5.25h)	100 (44.47min)		
#13	姜皓轩	300 (8.32h)	100 (5.95min)	100 (4.05h)	100 (4.17h)		
#14	刘子轩	270 (4.23h)	100 (24.57min)	100 (47.73min)	30 (1.19h)	40 (1.84h)	
#15	李瑞涵	200 (1.11h)	100 (25.33min)		100 (41.17min)		
#16	刘宸熙	150 (17.16d)	100 (5.70d)		30 (5.74d)	20 (5.72d)	
#17	HFLY	100 (5.76d)	100 (5.76d)				

作业

<https://www.luogu.com.cn/contest/237833> (课上讲了 A ~ D 题, 课后作业是 E F 题, G 题选做)

课堂表现

今天课上的题目很多同学有许多细节问题处理不到位,尤其是 C 题, 课上没过 C 题的同学课下一定要自己好好研究研究。

课堂内容

P8577 [CoE R5] 暴龙的白菜

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

using namespace std;

typedef long long LL;
const int maxn = 1e6 + 5;
int p[maxn];

int get_sum(int l, int r) { return (l<=r ? p[r]-p[l-1] : 0); }

string w_string(int x) {
    string res;
    while (x) {
        res += char(x%10+'0'); x /= 10;
    }
    reverse(res.begin(), res.end());
    return res;
}

int main()
{
    int limit = 1e6 + 5;
    string s;
    for (int i = 1; ; ++i) {
        string t = w_string(i);
        for (int j = 1; j <= i; ++j) {
            s += t;
            if ((int)s.size() > limit) break;
        }
        if ((int)s.size() > limit) break;
    }

    int n = (int)s.size();
    s = " " + s;
    for (int i = 1; i <= n; ++i) p[i] = p[i-1] + (s[i]-'0');

    int T; cin >> T;
    while (T -- ) {
        int l, r; cin >> l >> r;
        cout << get_sum(l, r) << endl;
    }
}
```

```
    return 0;
}
```

P1318 积水面积

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

using namespace std;

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

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

    int res = 0;
    for (int i = 2; i <= n-1; ++i) {
        int lmaxx = 0, rmaxx = 0;
        for (int j = 1; j <= i-1; ++j) lmaxx = max(lmaxx, w[j]);
        for (int j = i+1; j <= n; ++j) rmaxx = max(rmaxx, w[j]);
        res += max(min(lmaxx, rmaxx) - w[i], 0);
    }
    cout << res << endl;
    return 0;
}
```

U545755 积水面积2

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

using namespace std;

typedef long long LL;
const int maxn = 1e6 + 5;
int w[maxn];
int p_maxx[maxn], s_maxx[maxn];

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

    for (int i = 1; i <= n; ++i) p_maxx[i] = max(p_maxx[i-1], w[i]);
    for (int i = n; i >= 1; --i) s_maxx[i] = max(s_maxx[i+1], w[i]);

    LL res = 0;
```

```
for (int i = 2; i <= n-1; ++i) {
    int lmaxx = p_maxx[i-1], rmaxx = s_maxx[i+1];
    res += max(min(lmaxx, rmaxx) - w[i], 0);
}
cout << res << endl;
return 0;
}
```

U545760 找两数之差的最小值

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

using namespace std;

const int maxn = 1e6 + 5;
int w[maxn], p_minn[maxn];

int main()
{
    int n; cin >> n;
    for (int i = 1; i <= n; ++i) cin >> w[i];
    p_minn[1] = w[1];
    for (int i = 2; i <= n; ++i) p_minn[i] = min(p_minn[i-1], w[i]);

    int res = -2e9-10;
    for (int i = 2; i <= n; ++i) res = max(res, w[i] - p_minn[i-1]);
    cout << res << endl;
    return 0;
}
```

P1115 最大子段和

i 作为右端

$1 \sim i \rightarrow p[i] - p[0]$
 $2 \sim i \rightarrow p[i] - p[1]$
 $3 \sim i \rightarrow p[i] - p[2]$
 \vdots
 $i \sim i \rightarrow p[i] - p[i-1]$

$\left. \begin{array}{l} p[0] \sim p[i] \\ \text{谁最小} \end{array} \right\}$

```

#include <bits/stdc++.h>

using namespace std;

const int maxn = 2e5 + 5;
int w[maxn], p[maxn];
int p_min[maxn];

int main()
{
    int n; cin >> n;
    int res = -1000;
    for (int i = 1; i <= n; ++i) {
        cin >> w[i], p[i] = p[i-1] + w[i];
        p_min[i] = min(p_min[i-1], p[i]);
        res = max(res, p[i] - p_min[i-1]);
    }
    cout << res << endl;
    return 0;
}

```