综合混练

人员

杨咏丞、李雨谦、韩鸣蔚、陈欣妙、刘奕辰、董昱含、杨俊彦、龙沛轩、李锦澍、周治润、潘俊伊、袁晨峻、徐思远、白芸珲、王博涵、曹塬 到课

上周作业检查

https://www.luogu.com.cn/contest/236356

2025-0316六队上课(综合混练)

报名 编辑比赛

题目数 5 | 报名人数 25

比赛说明 题目列表 排行榜

名次	参赛者	总分	A	B	C	D	E
#1	袁晨峻	500 (1.73d)	100 (31.70min)	100 (49.12min)	100 (54.42min)	100 (1.74h)	100 (1.56d)
#2	阮文璋	500 (1.88d)	100 (5.40h)	100 (6.02h)	100 (6.48h)	100 (12.73h)	100 (14.57h)
#3	龙沛轩	500 (3.72d)	100 (19.35min)	100 (1.07h)	100 (1.38h)	100 (1.90h)	100 (3.52d)
#4	李锦澍	500 (6.49d)	100 (31.37min)	100 (58.12min)	100 (1.11h)	100 (1.96h)	100 (6.30d)
#5	董昱含	500 (6.72d)	100 (32.93min)	100 (2.55h)	100 (1.44h)	100 (3.81h)	100 (6.37d)
#6	刘奕辰	500 (6.76d)	100 (6.65min)	100 (59.57min)	100 (1.11h)	100 (1.77h)	100 (6.59d)
#7	杨咏丞	500 (8.74d)	100 (30.43min)	100 (1.35d)	100 (1.35d)	100 (2.51d)	100 (3.51d)
#8	徐思远	410 (10.82h)	100 (23.23min)	100 (1.07h)	100 (25.95min)	10 (1.84h)	100 (7.09h)
#9	陈欣妙	400 (4.28h)	100 (28.87min)	100 (57.15min)	100 (1.12h)	100 (1.72h)	
#10	杨俊彦	400 (7.45h)	100 (30.68min)	100 (1.18h)	100 (1.53h)	100 (4.24h)	
#11	李雨谦	400 (2.67d)	100 (17.70min)	100 (1.14h)	100 (2.53d)	100 (1.95h)	
#12	曹堰	400 (3.66d)	100 (1.40d)	100 (9.56h)	100 (9.58h)	100 (1.46d)	
#13	王承周	400 (5.25d)	100 (5.30h)	100 (6.27h)	100 (6.49h)	100 (4.50d)	
#14	王博涵	400 (5.66d)	100 (30.15min)	100 (1.03h)	100 (1.33h)	100 (5.54d)	
#15	王陆文龙	360 (3.54h)	100 (12.98min)	100 (35.95min)	100 (59.17min)	60 (1.74h)	
#16	潘俊伊	320 (4.11h)	100 (30.23min)	100 (51.95min)	100 (1.07h)	20 (1.68h)	
#17	白芸珲	300 (2.12h)	100 (25.18min)	100 (55.87min)	100 (46.42min)		
#18	韩鸣蔚	300 (2.20h)	100 (22.72min)	100 (55.67min)	100 (53.43min)		
#19	周治润	300 (2.92h)	100 (24.92min)	100 (1.09h)	100 (1.41h)		
#20	王毅博	300 (17.85h)	100 (5.30h)	100 (6.09h)	100 (6.45h)		
#21	褚锦轩	300 (18.01h)	100 (5.43h)	100 (6.05h)	100 (6.53h)		
#22	许睿谦	300 (19.10h)	100 (5.78h)	100 (6.70h)	100 (6.62h)		
#23	SSJ司云心	300 (6.85d)		100 (5.84h)	100 (6.45h)		100 (6.34d)

作业

https://www.luogu.com.cn/contest/237831 (课上讲了 A~E 题, 课后作业是 F G H 题)

课堂表现

今天的 C 题, 许多同学都是做了很多次才过, 这个题有好几个容易错的地方, 同学们课下要再多复习一下。

课堂内容

P1318 积水面积

```cpp
#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

```cpp
#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

```
#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;
}
```

P5461 赦免战俘

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

using namespace std;

const int maxn = 1024 + 5;
int a[maxn][maxn];

void dfs(int x1, int y1, int x2, int y2, int n) {
    if (n == 0) { a[x1][y1] = 1; return; }

    int x_ = (x1+x2)/2, y_ = (y1+y2)/2;

    dfs(x1,y_+1,x_,y2,n-1);
    dfs(x_+1,y1,x2,y_,n-1);
    dfs(x_+1,y_+1,x2,y2,n-1);
}

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