

1. 题目

02692: 假币问题

brute force, <http://cs101.openjudge.cn/practice/02692>

思路:

代码:

```
n=int(input())
for i in range(n):
    coin=['A','B','C','D','E','F','G','H','I','J','K','L']
    hv=[]
    lt=[]
    for k in range(3):
        a=list(input().split())
        if a[2]=='even':
            for k in a[0]+a[1]:
                if k in coin:
                    coin.remove(k)
        elif a[2]=='down':
            hv.append(a[1])
            lt.append(a[0])
        else:
            hv.append(a[0])
            lt.append(a[1])
    for k in coin:
        fl=True
        for p in lt:
            if k not in p:
                fl=False
        if fl:
            print(k+' is the counterfeit coin and it is light.')
    fl=True
    for p in hv:
        if k not in p:
            fl=False
    if fl:
        print(k+' is the counterfeit coin and it is heavy.')
```

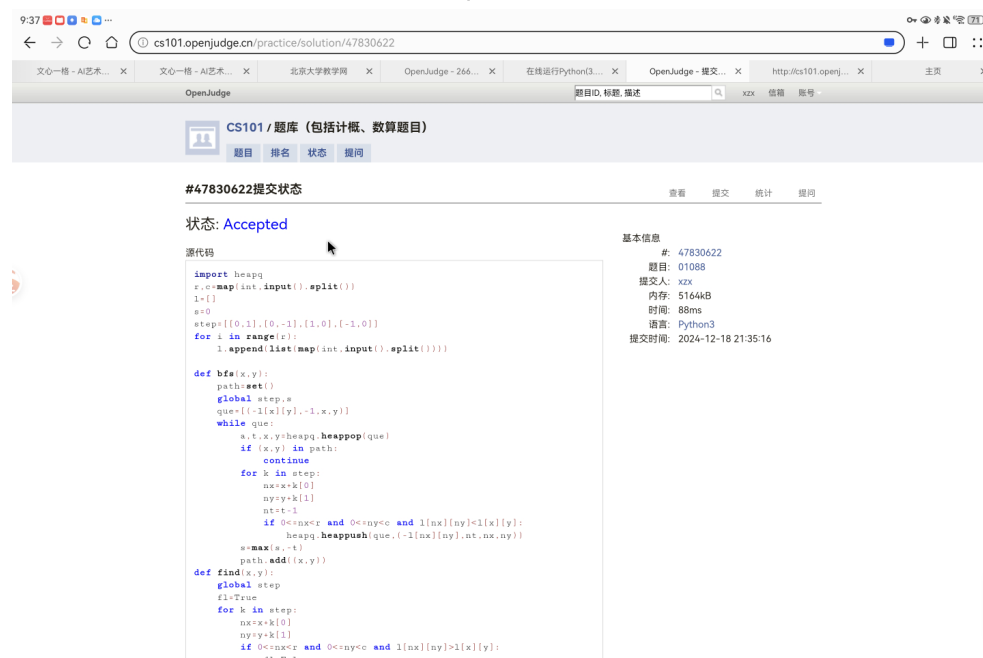
代码运行截图 （至少包含有"Accepted"）


```

        if 0<=nx<r and 0<=ny<c and l[nx][ny]<l[x][y]:
            heapq.heappush(que,(-l[nx][ny],nt,nx,ny))
        s=max(s,-t)
        path.add((x,y))
def find(x,y):
    global step
    fl=True
    for k in step:
        nx=x+k[0]
        ny=y+k[1]
        if 0<=nx<r and 0<=ny<c and l[nx][ny]>l[x][y]:
            fl=False
    return fl
for i in range(r):
    for j in range(c):
        if find(i,j):
            bfs(i,j)
print(s)

```

代码运行截图 == (至少包含有"Accepted") ==



25572: 螃蟹采蘑菇

bfs, dfs, <http://cs101.openjudge.cn/practice/25572/>

思路:

代码:

n=int(input())

l=[]

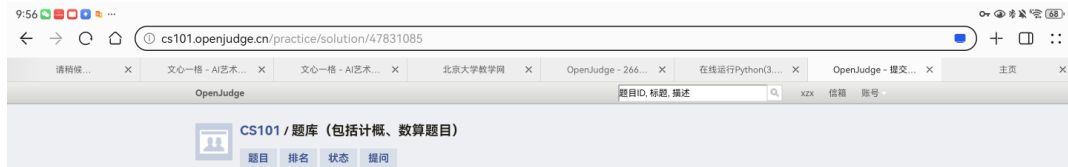
for i in range(n):

```

l.append(list(map(int,input().split()))))
step=[[0,1],[0,-1],[1,0],[-1,0]]
for i in range(n):
    for j in range(n):
        if l[i][j]==9:
            edx,edy=i,j
        if l[i][j]==5:
            stx,sty=i,j
            for k in step:
                if 0<=i+k[0]<n and 0<=j+k[1]<n and l[i+k[0]][j+k[1]]==5:
                    dx=k[0]
                    dy=k[1]
                    l[i+k[0]][j+k[1]]=0
fl=False
def dfs(x,y):
    global fl
    if x==edx and y==edy or x+dx==edx and y+dy==edy or fl:
        fl=True
    else:
        l[x][y]=-1
        for k in step:
            nx=x+k[0]
            ny=y+k[1]
            if 0<=nx<n and 0<=ny<n and 0<=nx+dx<n and 0<=ny+dy<n and
l[nx][ny]!=-1 and l[nx][ny]!=1 and l[nx+dx][ny+dy]!=1:
                dfs(nx,ny)
dfs(stx,sty)
if fl:
    print('yes')
else:
    print('no')

```

代码运行截图 （至少包含有"Accepted"）



27373: 最大整数

dp, <http://cs101.openjudge.cn/practice/27373/>

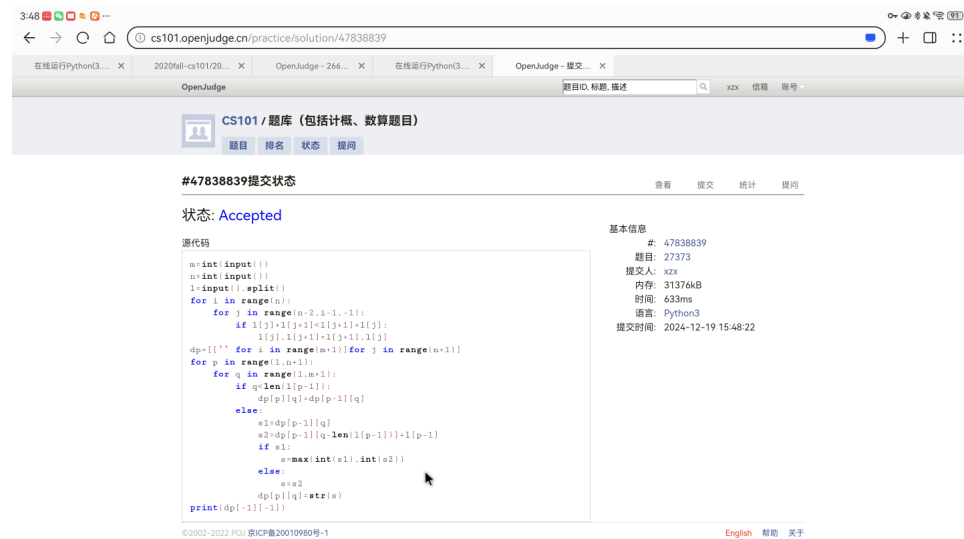
思路:

代码:

```
m=int(input())
n=int(input())
l=input().split()
for i in range(n):
    for j in range(n-2,i-1,-1):
        if l[j]+l[j+1]<l[j+1]+l[j]:
            l[j],l[j+1]=l[j+1],l[j]
dp=[[" for i in range(m+1)]for j in range(n+1)]
for p in range(1,n+1):
    for q in range(1,m+1):
        if q<len(l[p-1]):
            dp[p][q]=dp[p-1][q]
        else:
            s1=dp[p-1][q]
            s2=dp[p-1][q-len(l[p-1])]+l[p-1]
            if s1:
                s=max(int(s1),int(s2))
            else:
                s=s2
            dp[p][q]=str(s)
```

```
print(dp[-1][-1])
```

代码运行截图（至少包含有"Accepted"）



02811: 熄灯问题

brute force, <http://cs101.openjudge.cn/practice/02811>

思路:

代码:

```
import copy
```

```
nl=[]
```

```
for i in range(5):
```

```
    nl.append(list(map(int,input().split())))
```

```
nbut=[[0 for i in range(6)]for j in range(5)]
```

```
st=[[[],0]]
```

```
for i in range(1,6):
```

```
    nst=[]
```

```
    for j in range(len(st)):
```

```
        k=st[j][i]
```

```
        nst.append(k)
```

```
    st=st+nst
```

```
l=[]
```

```
def press(x,y):
```

```
    global l
```

```
    step=[[1,0],[-1,0],[0,1],[0,-1],[0,0]]
```

```
    for k in step:
```

```
        nx=x+k[0]
```

```
        ny=y+k[1]
```

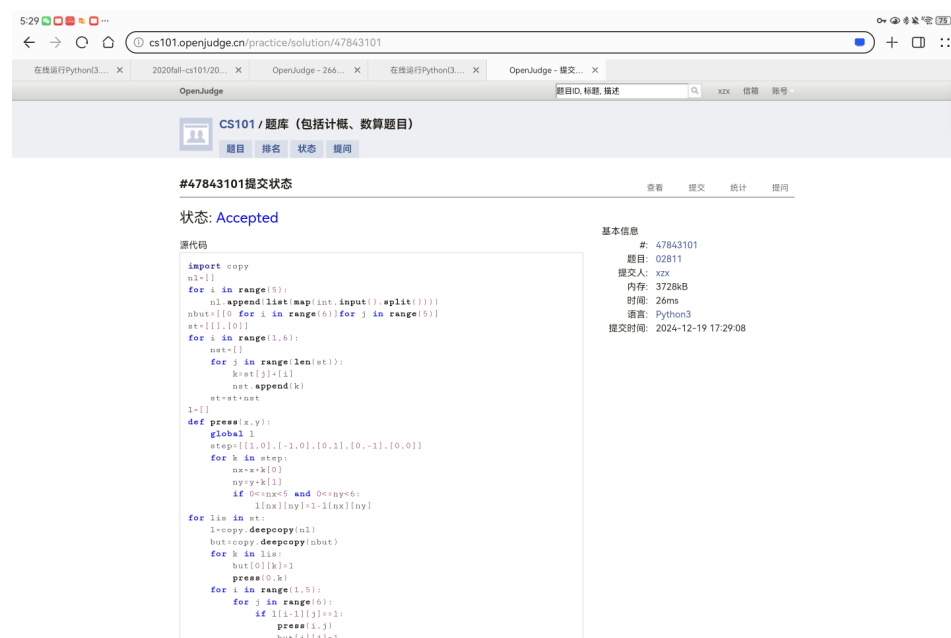
```
        if 0<=nx<5 and 0<=ny<6:
```

```

l[nx][ny]=1-l[nx][ny]
for lis in st:
    l=copy.deepcopy(nl)
    but=copy.deepcopy(nbut)
    for k in lis:
        but[0][k]=1
        press(0,k)
    for i in range(1,5):
        for j in range(6):
            if l[i-1][j]==1:
                press(i,j)
                but[i][j]=1
        if l[-1]==[0,0,0,0,0,0]:
            break
for i in range(5):
    s=""
    for k in but[i]:
        s+=str(k)+' '
    print(s[:-1])

```

代码运行截图 （至少包含有"Accepted"）



08210: 河中跳房子

binary search, greedy, <http://cs101.openjudge.cn/practice/08210/>

思路:

代码:

```

l,n,m=map(int,input().split())
rock=[0]

```

```

for i in range(n):
    rock.append(int(input()))
rock.append(l)
i=0
j=int(l/(n-m+1))+1
def cow(x):
    t=0
    ct=0
    for i in range(1,n+2):
        if rock[i]-rock[t]<x:
            ct+=1
        else:
            t=i
    if ct<=m:
        return True
    else:
        return False
while i<=j:
    p=(i+j)//2
    if cow(p):
        i=p+1
    else:
        j=p-1
print(j)

```

代码运行截图（至少包含有"Accepted"）



2. 学习总结和收获

本次作业难度一般，但在做题时还会有小错误导致 WA，所以这个周末再做点题，争取机考时尽量一遍过，加油!!

如果作业题目简单, 有否额外练习题目, 比如: OJ“计概 2024fall 每日选做”、CF、LeetCode、洛谷等网站题目。

日常跟进 OJ 每日选做