

第七周作业

AC=2

E07618: 病人排队

```
n=int(input())
hospital=[]
for _ in range(n):
    ID,num=tuple(input().split())
    age=int(num)
    hospital.append((ID,age))
old=[(ID,age) for (ID,age) in hospital if age>=60]
old.sort(key=lambda x: x[1],reverse=True)
others=[(ID,age) for (ID,age) in hospital if age<60]

final=old+others
for (ID,age) in final:
    print(ID)
```



题库 (包括计概、
数算题目)

07618: 病人排队

Accepted

3644kB

27ms

339 B

Python3 昨天

E23555: 节省存储的矩阵乘法

```
n,m1,m2=map(int,input().split())
A=[[0]*n for _ in range(n)]
B=[[0]*n for _ in range(n)]
for _ in range(m1):
    i1,j1,k1=tuple(map(int,input().split()))
    A[i1][j1] = k1
for _ in range(m2):
    i2,j2,k2=tuple(map(int,input().split()))
    B[i2][j2]=k2

C=[[0]*n for _ in range(n)]
for i in range(n):
    for j in range(n):
        C[i][j]=0
        for k in range(n):
            C[i][j]+=A[i][k]*B[k][j]

        if C[i][j]!=0:
            print(i,j,C[i][j])
```



题库 (包括计概、
数算题目)

23555: 节省存储的矩阵
乘法

Accepted

3800kB

34ms

462 B

Python3 昨天

18182:打怪兽

```
from collections import Counter
case=int(input())
for _ in range(case):
    attack = []
    n,m,b=map(int,input().split())
    for _ in range(n):
        t,x=tuple(map(int,input().split()))
        attack.append((t,x))
        attack.sort(key=lambda y: y[0])
    sum_x=0
    counts=Counter(t for (t,x) in attack)
    final=[]
    for t in counts:
        same = [(t, x) for t_value, x in attack if t_value == t]
        same.sort(key=lambda y: y[1])
        if counts[t]>m:
            for _ in range(counts[t]-m):
                same.remove(same[0])
            # attack=[items for items in attack if items[0]!=t]
        for t,x in same:
            sum_x+=x
            if sum_x>=b:
                print(t)
                break
    if sum_x<b:
        print("alive")
```



题库 (包括计概、
数算题目)

18182: 打怪兽

Accepted

3932kB

589ms

762 B

Python3 19小时前

M28780: 零钱兑换 3

```
import bisect

n,m=map(int,input().split())
value=list(map(int,input().split()))

dp=[float('inf')]*(m+1)
dp[0]=0
for i in range(1,m+1):
    a=bisect.bisect_right(value,i)
```

```

if a!=0:
    dp[i]=min(dp[i-value[k]] for k in range(a))+1

```

```

print(dp[m] if dp[m]!= float('inf') else -1)

```

比赛	题目	结果	内存	时间	代码长度	语言	提交时间
 题库 (包括计概、数算题目)	28780: 零钱兑换3	Accepted	8620kB	5071ms	284 B	Python3	3分钟前

T12757: 阿尔法星人翻译官

```

english=input()

```

```

english_to_num_map={ 'zero':0, 'one':1, 'two':2, 'three':3, 'four':4, 'five':5, 'six':6, 'seven':7,
                    'eight':8, 'nine':9, 'ten':10, 'eleven':11, 'twelve':12, 'thirteen':13,
                    'fourteen':14, 'fifteen':15, 'sixteen':16, 'seventeen':17, 'eighteen':18,
                    'nineteen':19, 'twenty':20, 'thirty':30, 'forty':40, 'fifty':50, 'sixty':60,
                    'seventy':70, 'eighty':80, 'ninety':90, 'hundred':100, 'thousand':1000,
                    'million':1000000}

```

```

def english_to_num(s):
    total = 0

    current=0
    words = s.split()
    for word in words:
        if word in english_to_num_map:
            value=english_to_num_map[word]
            if value==100:
                current*=value
            elif value>=1000:
                current*=value
                total+=current
                current=0
            else:
                current+=value
    total+=current
    return total

```

```

if "negative" in english:
    print("-"+str(english_to_num(english)))
else:
    print(english_to_num(english))

```

T16528: 充实的寒假生活

```
n=int(input())
activities=[]
for _ in range(n):
    start,end=map(int,input().split())
    activities.append((start,end))
activities.sort(key=lambda x:x[1])

ed=-1
num=0
for i in range(n):
    if ed<activities[i][0]:
        num+=1
        ed=activities[i][1]
print(num)
```

学习感悟:

在前面耗费了太多时间,最后一题明明比较简单(可以根据之前上课教过的贪心的区间问题套模板来做)但是没有时间做了。感觉这次整体还是比上次作业简单的,但是总是因为一些小小的错误没有 AC,比如第四道题一直是超时,因为没有想到可以将 `bisect` 二分查找用在 `dp` 上来降低时间复杂度。倒数第二题其实和之前有一次的作业:玛雅数字和阿拉伯数字的转换很像,所以做起来很得心应手,但是没有处理好 `value>=1000` 这种大倍率的情况所以 `WA`。发现自己很多时候会想的比较复杂,比如打怪兽的题,考场上想的太复杂了把自己搞乱了,导致各种循环的内外层结构也写得乱七八糟的。感觉还是需要多训练循环嵌套时的逻辑,牵一发而动全身.....