Assignment1

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一、 作业题目

1、 20742: 泰波拿契數(耗时: 50min)

http://cs101.openjudge.cn/practice/20742/

```
def tribonacci(n):
    if n == 0:
        return 0
    elif n == 1:
        return 1
    elif n == 2:
        return 1
    else:
        return tribonacci(n-1) + tribonacci(n-2) + tribonacci(n-3)
```



2、 58A Chat room (耗时: 1hour)

http://codeforces.com/problemset/problem/58/A

```
s = input()
word="hello"
count=0
for i in range(len(s)):
        if count >4:
                break
        if s[i] == word[count]:
                count+=1
output = (count>4)
if output:
        print('YES')
else:
        print('NO')
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      General
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                              Author
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       249037767
                                                 <u>58A</u> - 10
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                                                                                                 16 KB
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      → Source
     s = input()
word="hello"
count=0
for i in range(len(s)):
    if count >4 :
        break
    if s[i]=word[count]:
    count=1
    output = (count>4)
    if output:
        print('YES')
else:
        print('NO')
     Click to see test details
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```

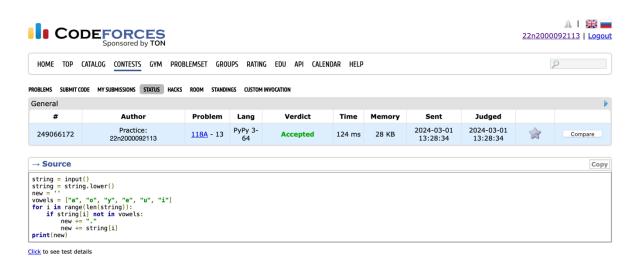
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Desktop version, switch to mobile version.
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3、 StringTask (耗时: 40min)

implementation/strings, 1000,

http://codeforces.com/problemset/problem/118/A

```
string = input()
string = string.lower()
new = ''
vowels = ["a", "o", "y", "e", "u", "i"]
for i in range(len(string)):
    if string[i] not in vowels:
        new += "."
        new += string[i]
print(new)
```



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4、 多项式时间复杂度(耗时: 1h20min)

http://cs101.openjudge.cn/practice/23563/

```
a = input()
a = a.split('+')
b = 0
for i in range(len(a)):
    a[i] = a[i].split('n^')
    if a[i][0]=='':
        if int(a[i][1]) > b:
            b = int(a[i][1])
else:
        if int(a[i][0]) != 0 and int(a[i][1]) > b:
            b = int(a[i][1])
```



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二、 学习总结与收获:

由于先前的计算概论课基础不太好,所以重新拾起写代码这个过程中进度万分缓慢,先是重新把教材里的基础知识过了一遍,然后把之前课上自己写过的题目大致浏览了一下,才找回一点点写代码的语法和知识点。在做题的过程中,很多时候发现解题思路很关键,找不到对的解题思路,代码就会稍显冗长。并且我也在做题过程中发现了许多自己可能会导致 runtime error 的写法,比如说有时候可能直接找到目标字符即可,并不需要把整个循环都走一遍;有时候可能会习惯以前的解法,没有去尝试新方式,例如chatroom 那道题,我一开始可能会考虑通过遍历顺序检查是否符合"hello",但是后来发现这样会很麻烦,随后才想到可以靠递归来可以解决。虽然相较于班上普遍同学来说我的耗时会偏长,但是总的来说还是收获很大的。