In [6]:
```
### char sum

def charsum(s):
    sum=0
    for i in s:
        sum=sum+(ord(i)-96)
    return sum

charsum('abab')
```

Out[6]: 6

In [26]:
```
s="abc"
#s.islower()
s.isupper()

#s.lower()
#s.upper()
s.split()
#list(s)

```

Out[26]: ['abc']

Problem:Duration

- input: strat time,end time(hh mm)

```
hh-{00,01,02,03...23}
mm-{00,01,.........59}
hh mm-{00 00,23 59}
```

- Output:time difference in hh mm

In [21]:
```
# Calculate the time difference as total number  minutes
#convert the total minutes in to HH MM

s ="2 42 8 23"
def minutediff(s):
    s=s.split()
    sh=int(s[0])
    sm=int(s[1])
    eh=int(s[2])
    em=int(s[3])
    startminutes=(sh * 60) + sm
    endminutes=(eh * 60) + em
    return endminutes - startminutes
def outputtime(minutes):
    #converts minutes to hh mm
    hh=minutes // 60
    mm=minutes % 60
    print(hh,mm)
    return
minutes=minutediff(s)
outputtime(minutes)
```

```
5 41
```

In [1]:
```
# Print characters count and digits count in  a string
def countofdigits(s):
    charcount=0
    digitcount=0
    for i in s:
        if((i>='a'and i<='z')or (i>='A'and i<='Z')):
            charcount=charcount+1
        elif(i>='0' and i<='9'):

            digitcount=digitcount+1
    print(charcount)
    print(digitcount)

s=input()
countofdigits(s)
```

```
Sir#12
3
2
```

In [2]:
```
# Print characters count and digits count in  a string
def countofdigits(s):
    charcount=0
    digitcount=0
    for i in range(0,len(s)):
        if((s[i]>='a'and s[i]<='z')or (s[i]>='A'and s[i]<='Z')):
            charcount=charcount+1
        elif(s[i]>='0' and s[i]<='9'):

            digitcount=digitcount+1
    print(charcount)
    print(digitcount)

s=input()
countofdigits(s)
```

```
aswe%123
4
3
```

In [4]:
```
# Print characters count and digits count in  a string
def countofdigits(s):
    charcount=0
    digitcount=0
    for i in range(0,len(s)):
        if((ord(s[i])>=97 and ord(s[i])<=122)or (ord(s[i])>=65 and ord(s[i])
            charcount=charcount+1
        elif(ord(s[i])>=48 and ord(s[i])<=57):

            digitcount=digitcount+1
    print(charcount)
    print(digitcount)

s=input()
countofdigits(s)
```

```
qwer$1234
4
4
```

In [5]:
```
# Print characters count and digits count in  a string
def countofdigits(s):
    charcount=0
    digitcount=0
    for i in range(0,len(s)):
        if(s[i].islower() or s[i].isupper()):
            charcount=charcount+1
        elif(ord(s[i])>=48 and ord(s[i])<=57):

            digitcount=digitcount+1
    print(charcount)
    print(digitcount)

s=input()
countofdigits(s)
```

```
qweer#1234
5
4
```

In [1]:
```
##Function to print perfect of a given test cases
def perfect(n):
    sum=0
    for i in range(1,n):
        if(n%i==0):
            sum=sum+i
    if(n==sum):
        return "YES"
    else:
        return "NO"

test=int(input())
for i in range(test):
    n=int(input())
    print(perfect(n))
```

```
2
6
YES
28
YES
```

In [2]:

```
##Function to print highest reminder

def divisibility(n):
    r=0
    for i in range(1,n):
        rem=n%i      #5%1=0,  5%2=1,5%3=2,5%4=1
        if rem>r:    #i>0   2>1   1!>2
            r=rem    #r=1   r=2
            j=i      #j=2   j=3
    return j
n1=int(input())
for i in range(n1):
    n2=int(input())
    print(divisibility(n2))
```

```
2
5
3
4
3
```

In [10]:

```
## Prime numbers

def primenumbers(n):
    count=0
    for i in range(1,n+1):
        if(n%i==0):
            count=count+1

    if(count==2):
        print("prime")
    else:
        print("not")

primenumbers(5)
```

```
prime
```

In [34]:
```
def primenumbers(n):
    for i in range(1,n):
        count=0
        for j in range(1,i+1):

            if(i%j==0):

                count=count+1

        if(count==2):

            print(i,end=" ")


primenumbers(7)
```

```
2 3 5
```

In [35]:
```
##prime no another way
def primerange(n1):

    for k in range(2,n1):
        n=k
        c=0
        for i in range(1,n+1):
            if(n%i==0):
                c=c+1
        if(c==2):
            print(k,end=" ")
primerange(7)
```

```
2 3 5
```

In [ ]:
```
##prime factorial(exam)
def primerange(n1):
    c=0
    for i in range(1,n+1):
        if(n%i==0):
            c=c+1

    if(c==2):
        fc=fc+1

primerange(7)
```