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2.Find the elements which is closest to its mean

```
lst = [10,20,30,20,20]
avg=sum(lst)/len(lst)
for i in lst:
    if i==avg:
        print(i)
```

3.FIND THE AVERAGE SPEED OF THE VEHICLE

```
dist = []
timet=[]
n = 5
for i in range(0, n):
    ele = int(input())
    dist.append(ele)

print(dist)
for i in range(0,n):
    ete=int(input())
    timet.append(ete)
print(timet)
d=sum(dist)
t=sum(timet)
speed=d/t
print(speed)
```

4.FIND NUMBER OF PEOPLE IN THE BUS GIVEN THE NUMBER OF PEOPLE BOARDING AND ALIGHTING

```
people = []
n = int(input("Enter number of stations: "))
print("number of people boarding at each station:")
for i in range(0, n):
    ele = int(input())
    people.append(ele)
print("number of people boarding at each station",people)
alighting = []
print("number of people alighting at each station")
for i in range(0, n):
    el = int(input())
    alighting.append(el)
print("number of people alightingat each station",alighting)

"""people=[10,20,30,40,50]
alighting=[5,6,7,8,10]"""
```

```
total=[]
for i in range(0,n):
        diff=people[i]-alighting[i]
        total.append(diff)
        print("people on bus at each station",diff)
print(total)
sum1=sum(total)
print("total number of people in the bus:",sum1)
```

5.FIND THE MISSING ELEMENT GIVEN AN ORIGINAL AND UPDATED STRING

```
mylist1=[1,2,3,4,5]
outlist=[3,4,5,1]
l = [x for x in mylist1 if x not in outlist]
print("Number of items missing: " , len(l))
for x in mylist1:
    if x in l:
        print(x , " is missing")
```

6.DIFFRENCE BETWEEN 2 LOWEST NUMBERS IN THE LIST

```
mylist=[1,2,5,4,7,6,8]
mylist.sort()
print(mylist)
diff=mylist[1]-mylist[0]
print(diff)
```

7.PRINT ALL THE ELEMENTS LESS THAN THE AVERAGE IN THE LIST

```
lst = [10,20,30,20,20,30,15]
avg=sum(lst)/len(lst)
men1=[]
print("average",avg)
for i in lst:
        if i<avg:
                print(i)
                men1.append(i)
print("number of elements less than mean",len(men1))
```

1.PROGRAM TO FIND THE ODD ONE OUT

```
mylist=[20,30,20,20,20]
from collections import Counter
counter = Counter(mylist)
print(min(counter, key=counter.get))
```

1.CORRECT THE MALFORMED STRING

```
time="5:70:65"
t1=time.split(":")
```

```
t2=[]
for i in t1:
    t2.append(int(i))
t1.clear()
if(t2[1]>60):
    if(t2[0]==12):
        t2[0]=1
    else:
        t2[0]=t2[0]+1
    t2[1]=t2[1]-60
if(t2[2]>60):
    t2[1]=t2[1]+1
    t2[2]=t2[2]-60
for i in t2:
    t1.append(str(i))
    t1.append(":")
t1.pop(-1)
for i in t1:
    print(i,end="")
```

2.CORRECT THE MALFORMED DATE STRING

```
date="45/8/2018"
d1=date.split("/")
month={1:31,2:28,3:31,4:30,5:31,6:30,7:31,8:31,9:30,10:31,11:30,12:31}
d2=[]
for i in d1:
    d2.append(int(i))
d1.clear()
if(d2[1]<=12):
    days=month.get(d2[1])
else:
    days=month.get(d2[1]-12)
if(d2[1]>12):
    d2[1]=d2[1]-12
    d2[2]=d2[2]+1
if(d2[0]>days):
    d2[0]=d2[0]-days
    d2[1]=d2[1]+1
for i in d2:
    d1.append(str(i))
    d1.append("/")
d1.pop(-1)
for i in d1:
    print(i,end="")
```

3.CONVERT IP ADDRESS TO INTEGER AND VICE VERSA

```
import ipaddress
```

```
print(ipaddress.ip_address(3221225000))
print(ipaddress.ip_address(123))
print(ipaddress.ip_address(42540766400282592856903984001653826561))
import ipaddress


addr1 = ipaddress.ip_address('191.255.254.40')
addr2 = ipaddress.ip_address('0.0.0.123')
print(int(addr1))
print(int(addr2))


addr3 = ipaddress.ip_address('2001:db7:dc75:365:220a:7c84:d796:6401')
print(int(addr3))
```

4.ISOGRAM OR NOT

```
def isog(word):
    word1=word.lower()
    mylist=[]

    for i in word1:
        if i.isalpha():
            if i in mylist:
                return False
            mylist.append(i)
    return True
print(isog("maharaja"))
print(isog("lery"))
```

5.MEXICAN WAVE

```
s='earth'
new=[]
for i, val in enumerate(s[:]):
    up=s[i].upper()
    c=s[:i] + up + s[i+1:]
    new.append(c)
print(new)
```

6.given a number find the largest number by deleting single digit (order of digits will remain same)

```
def maxnumber(n, k):
    for i in range(0, k):

        ans = 0
        i = 1

        while n // i > 0:

            temp = (n//(i * 10))*i + (n % i)
            i *= 10



            if temp > ans:
                ans = temp
        n = ans

    return ans;


n = 6358
k = 1
print(maxnumber(n, k))
```

7.GIVEN A NUMBER FIND THE LARGEST BY SHUFFLING THE DIGITS

```
def maximum1(inu):


    count = [0 for x in range(10)]


    string = str(num)


    for i in range(len(string)):
        count[int(string[i])] = count[int(string[i])] +  1


    res = 0
    mult = 1



    for i in range(10):
        while count[i] > 0:
            res = res + ( i * mult )
            count[i] = count[i] - 1
            mult = mult* 10
    return res


num = 23456345
print maximum1(num)
```

8.COMPUTE THE WORD FREQUENCY

```
def wordcount(str):
    counts = dict()
    words = str.split()

    for word in words:
        if word in counts:
            counts[word] += 1
        else:
            counts[word] = 1

    return counts

print( wordcount('i love my country and love my city.'))
```

9.RGB TO HEX AND VICE VERSA

```
def rgbtohex(rgb):
    return '%02x%02x%02x' % rgb
print(rgbtohex((255, 255, 195)))
def hextorgb(value):
    value = value.lstrip('#')
    lv = len(value)
    return tuple(int(value[i:i+lv//3], 16) for i in range(0, lv, lv//3))
print(hextorgb("FF65BA"))
```

10.Generate accumulated string

```
n = int(input("Enter number of rows: "))

a = 97

for i in range(1,n+1):
    for j in range(1, i+1):
        print("%c" %(a), end="")
    a +=1
    print()
```