==========

1. Find Mth maximum number and Nth minimum in a list

```
m=3
n=2
l=[2,7,3,5,6,9,1]
l.sort()
print(l)
print("max",l[-m])
print("min",l[n-1])
```

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2. Sum of 1!+2!+.....N!

```
n=5
def fact(n):
    f=1
    for i in range(1,n+1):
        f*=i
    return f

s=0
for i in range(1,n+1):
    s+=fact(i)
print("sum of factorials is ",s)
```

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3. Add two binary strings

```
a="1000"
b="0100"

a=int(a,2)
b=int(b,2)
print(a,b)
c=a+b
print("sum of binary nums is ",bin(c))
```

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4. Print a right triangle for a given n.

E.g. n=3

```
  1
 21
321
```

```
n=5
for i in range(1,n+1):
    for j in range(i,0,-1):
        print(j,end=" ")
    print("")
```

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5. LSD & MSD of a given number

```
n="12345"
print("LSD ",n[0])
print("MSD ",n[len(n)-1])
```

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6. Add two matrices

```
a=[[1,2],[3,4]]
b=[[4,3],[2,1]]
c=[[0,0],[0,0]]
r1=len(a)
c1=len(a[0])
r2=len(b)
c2=len(b[0])

if r1==r2 and c1==c2:
    for i in range(r1):
        for j in range(c1):
            c[i][j]=a[i][j]+b[i][j]
else:
    print("addition not possible ")

for r in c:
    print(r)
```

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7. Sum of digits of a number

```
n=12345
s=0
while n>0:
   s+=n%10
   n=n//10
print("sum of digits ",s)
```

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8. Sum of squares of all odd numbers in a list

```
l=[1,2,3,4,5,6,7,8,9,10]
esq,osq=0,0
for i in l:
   if i%2==0:
      esq+=(i**2)
   else:
      osq+=(i**2)
print("odd square sum ",osq)
print("even square sun ",esq)
```

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9. Arrange letters of a word alphabetically and then reverse it.

```
s="mosque"
sl=sorted(s)
print(sl)
res="".join(sl[::-1])
print(res)
```

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