```
#string to list input conversion
x=[]
x[:]=input()
print(x)
```

```
     anjali
     ['a', 'n', 'j', 'a', 'l', 'i']
```

```
y=[]
y[:]=input().split()
print(y)
```

```
     anjali rathod
     ['anjali', 'rathod']
```

```
x=[1,2,3]
y=[4,5,6]
x.extend(y)
print(x)
```

```
     [1, 2, 3, 4, 5, 6]
```

```
a=[1,2,3]
a.insert(0,'anjali')
print(a)
```

```
     ['anjali', 1, 2, 3]
```

```
a=[1,1,1,1,2,3,3,2,2]
a.count(1)
```

```
     4
```

```
a=[1,1,1,2,2,2,3,3,3,3]
key=1
a.count(key)
```

```
     3
```

```
a.remove(1)
#removes only 1 element
```

```
a
```

```
     [1, 1, 2, 2, 2, 3, 3, 3, 3]
```

```
a.pop(1)
#removes only 1 element
```

```
1
```

```
a
```

```
[1, 2, 2, 2, 3, 3, 3, 3]
```

```
a.pop()
#removes the last element
```

```
3
```

```
a
```

```
[1, 2, 2, 2, 3, 3, 3]
```

```
a=[1,4,3,2]
a.sort()
print(a)
#sorts the list
```

```
[1, 2, 3, 4]
```

```
a.reverse()
#reverses the list
```

```
a
```

```
[4, 3, 2, 1]
```

```
b=[1,4,2,3]
a=b.copy()
a.sort()
```

```
b
```

```
[1, 4, 2, 3]
```

```
hex(id(a))
```

```
'0x7fad824f73c0'
```

```
hex(id(b))
```

```
'0x7fad824f2730'
```

```
a
```

```
[1, 2, 3, 4]
```

```
#checking if shallow copy works in 2D list conclusion is shallow copy doesnt work for 2D list
# we use deep copy for 2D list and above
a=[
   [1,2,3],
   [4,5,6]
]
```

```
from copy import deepcopy
b=deepcopy(a)
```

```
b[0][0]="anjali"
```

```
b
```

```
[['anjali', 2, 3], [4, 5, 6]]
```

```
a=["a","e","i","o","u"]
x=input()
v=0
c=0
for i in x:
  if i in a:
    v=v+1
  else:
   c=c+1
print("c",c)
print("v",v)
'''check this program'''
```

```
anjali
c 3
v 3
'check this program'
```

```
#list comprehension
a=[ x for x in range(0,10) if x%2==0 ]
```

```
a
```

```
[0, 2, 4, 6, 8]
```

```
a=[ chr(i) for i in range(ord('a'),ord('z'))]
```

```
a
```

```
['a',
 'b',
 'c',
 'd',
 'e',
 'f',
 'g',
 'h',
 'i',
 'j',
 'k',
 'l',
 'm',
 'n',
 'o',
 'p',
 'q',
 'r',
 's',
 't',
 'u',
 'v',
 'w',
 'x',
 'y']
```

```
#TUPLES
a=(1,1.2,"an1")
```

```
a
```

```
(1, 1.2, 'an1')
```

```
a=(50,)
```

```
a
```

```
(50,)
```

```
type(a)
```

tuple

```
a=(1,2,3,4)
x=6
x not in a
```

True

```
a=("anjali",)*10
```

```
a
```

```
('anjali',
 'anjali',
 'anjali',
 'anjali',
 'anjali',
 'anjali',
 'anjali',
 'anjali',
 'anjali',
 'anjali')
```

```
for i in a:
  print(i)
```

```
anjali
anjali
anjali
anjali
anjali
anjali
anjali
anjali
anjali
anjali
```

```
a=[1,2]
x=tuple(a)
```

```
x
```

(1, 2)

```
z=list(x)
```

```
z
```

```
[1, 2]
```

```
a=(1,2,3,4,5,6)
```

```
a[::-1]
```

```
(6, 5, 4, 3, 2, 1)
```

```
a[-1]
```

```
6
```

```
len(a)
```

```
6
```

```
max(a)
```

```
6
```

```
min(a)
```

```
1
```

```
a.count(1)
```

```
1
```

```
#generate list with only consonants using list comprehension
vowels=("a","e","i","o","u")
a=[chr(i) for i in range(ord("a"),ord("z")+1) if chr(i) not in vowels]
print(a)
```

```
['b', 'c', 'd', 'f', 'g', 'h', 'j', 'k', 'l', 'm', 'n', 'p', 'q', 'r', 's', 't', 'v', 'w
```

```
a=str(input())
sum=0
for i in a:
  sum+=ord(i)
  print('number=',ord(i))
print('sum=',sum)
```

```
anjali
number= 97
number= 110
number= 106
number= 97
number= 108
number= 105
sum= 623
```

```
ord('a')
```

```
97
```