1] concatination (only str and list we can merge,indexting and slicing are not happens)

```
a='hello'
b='good evening'
c= input('enter your name')
print(a+' '+b+' '+c)
```

```
enter your namesandy
hello good evening sandy
```

indexting :- (fetch element at a time)(in python indexting start from 0)

```
a='asia sports'   #indexting is str
print(a[3])
```

```
a
```

```
x=[22,32,44,34,344,54,55]    #indexting is list
print(x[3])
```

```
34
```

slicing :- fetch multipal elements at a time

```
a="africa"
a[0:2]
```

```
'af'
```

bulit in functions with respect to list

```
#1]append (to add one eliment at a time )
l1=['ai',"data",'ml','tablue']
l1.append("py")
print(l1)
```

```
['ai', 'data', 'ml', 'tablue', 'py']
```

```
#2]insert(to add one eliment at desire position)
x=['riya','priya','piyush']
x.insert(2,"rishi")
print(x)
```

```
['riya', 'priya', 'rishi', 'piyush']
```

```
#3]remove(it will remove one eliment which you know)
l1=['ai',"data",'ml','tablue']
l1.remove("data")
print(l1)
```

```
['ai', 'ml', 'tablue']
```

```
#4]pop(it will remove value with help of indexting number)
l1=['ai',"data",'ml','tablue']
l1.pop(3)
```

```
'tablue'
```

```
#5]extend(it will add multiple element at a time)
l1=['ai',"data",'ml','tablue']
l1.extend(['R1','science'])
print(l1)
```

```
['ai', 'data', 'ml', 'tablue', 'R1', 'science']
```

```
#6]sum(to add or sum all the number in a list)
x=[22,32,44,34,344,54,55]
sum(x)
```

```
585
```

```
#7]max(to fetch maximum number of the list)
x=[22,32,44,34,344,54,55]
max(x)
```

```
344
```

```
#8]min(to fetch minimun number of the list)
x=[22,32,44,34,344,54,55]
min(x)
```

```
22
```

```
#9]len(it show the total number of the list)
x=[22,32,44,34,344,54,55]
len(x)
```

```
7
```

```
#10]count(it will show the number of accurance means how many times that number used in list)
x=[22,32,44,34,344,54,55]
x.count(22)
```

```
1
```

```
#11]sort(it will arrange the number in assending order)
x=[22,32,44,34,344,54,55]
x.sort()
print(x)
```

```
[22, 32, 34, 44, 54, 55, 344]
```

```
#11]sort(it will arrange the number in assending order),also do dsending order
x=[22,32,44,34,344,54,55]
```

```
x.sort(reverse=true)
```

- DATA STRUCTURES:- data structure used for data storing 1]DICTONARY({})-(OBJECTIVLY USED IN KEY-VALUE PAIR ,append not working in dictonary it is only for list,indexting and slicing is not posible in dictonary)

2]TUPLE(())-(indexting and slicing is posible ,modification is not posible,used only for crusial data storing) 3]SET

```
#dictonary:- {key:"value"}
data={'name':'rishi','occupation':'CA','salary':20000,'city':'surat'}
print(data)
type(data)
```

```
{'name': 'rishi', 'occupation': 'CA', 'salary': 20000, 'city': 'surat'}
dict
```

```
#to add value in dictonary
data={'name':'rishi','occupation':'CA','salary':20000,'city':'surat'}
data['experiance']="5"
print(data)
```

```
{'name': 'rishi', 'occupation': 'CA', 'salary': 20000, 'city': 'surat', 'experiance': '5'}
```

```
#to fetch value from diactonary
data={'name':'rishi','occupation':'CA','salary':20000,'city':'surat'}
data["salary"]
```

```
20000
```

```
#to replacing the value from dactonary
data={'name':'rishi','occupation':'CA','salary':20000,'city':'surat'}
data['occupation']="engginer"
print(data)
```

```
{'name': 'rishi', 'occupation': 'engginer', 'salary': 20000, 'city': 'surat'}
```

```
#to delete the value from dictonary
data={'name':'rishi','occupation':'CA','salary':20000,'city':'surat'}
del data['city']
print(data)
```

```
{'name': 'rishi', 'occupation': 'CA', 'salary': 20000}
```

```
#tuple
l1=(22,'ai',44,"data",'ml','tablue')
print(l1)
type(l1)
```

```
(22, 'ai', 44, 'data', 'ml', 'tablue')
tuple
```

NESTED LIST:- list with in list

```
l1=['ai',"data",'ml','tablue',[22,223,32,]]
l1[3]
l1[4][2]
```

```
32
```

```
l1=['ai',"data",'ml','tablue',[22,223,32]]
a=l1[1:3]
b=l1[4][0:2]
print(a+b)
```

```
['data', 'ml', 22, 223]
```