list

In [ ]:

```
#list is a data type that is mutable
#list item are ordered,changeble and allow duplicates
```

creation of list

In [27]:

```
#creating list using square brackets[]
#list contain elements that seperated by comma ,
```

In [79]:

```
city=["satara","karad","islampur","pune"]
```

In [80]:

```
city
```

Out[80]:

```
['satara', 'karad', 'islampur', 'pune']
```

In [81]:

```
#using list function()
list1=list(["Karuna Pol",123])
list1
```

Out[81]:

```
['Karuna Pol', 123]
```

In [82]:

```
list2=list("karuna")
list2
```

Out[82]:

```
['k', 'a', 'r', 'u', 'n', 'a']
```

slicing of list

In [83]:

```
#start list
city[0]
```

Out[83]:

```
'satara'
```

In [84]:

```
#end list
city[3]
```

Out[84]:

```
'pune'
```

In [85]:

```
#giving range from start to rest of all values
city[1:]
```

Out[85]:

```
['karad', 'islampur', 'pune']
```

In [86]:

```
#giving range from end to get begining values
city[:3]
```

Out[86]:

```
['satara', 'karad', 'islampur']
```

In [87]:

```
#to get all values
city[:]
```

Out[87]:

```
['satara', 'karad', 'islampur', 'pune']
```

In [88]:

```
#to get in between values
city[1:3]
```

Out[88]:

```
['karad', 'islampur']
```

change vaulues in list

In [89]:

```
city
```

Out[89]:

```
['satara', 'karad', 'islampur', 'pune']
```

In [90]:

```
city[3]="mumbai"
city
```

Out[90]:

```
['satara', 'karad', 'islampur', 'mumbai']
```

delete

In [91]:

```
#delete any value in list using del keyword
del city[1]
city
```

Out[91]:

```
['satara', 'islampur', 'mumbai']
```

In [77]:

```
#cannot delete entire list using delkeyword
del city
city
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call
last)
/var/folders/v8/088c1jn178q1q1c1_1b7jg000000gn/T/ipykernel_738/2110157
092.py in <module>
      1 #cannot delete entire list using delkeyword
      2 del city
----> 3 city

NameError: name 'city' is not defined
```

Methods

1.append

In [92]:

```
#1.append
#adds an element at the end of the list
city.append("pune")
city
```

Out[92]:

```
['satara', 'islampur', 'mumbai', 'pune']
```

2.count

In [93]:

```
#2.count
#return the number of elements with specified vales
city
x=city.count("satara")
x
```

Out[93]:

```
1
```

3.extend

In [94]:

```
#3.extend
#adds the element of list ,to the end of the current list
city1=["satara","islampur","karad"]
name=["karuna","chetan","vijay"]
city1.extend(name)
city1
```

Out[94]:

```
['satara', 'islampur', 'karad', 'karuna', 'chetan', 'vijay']
```

4.insert

In [96]:

```
#4.insert
#adds the element at the specified position
city.insert(1,"karuna")
city
```

Out[96]:

```
['satara', 'karuna', 'islampur', 'mumbai', 'pune']
```

In [98]:

```
city.insert(-3,"chetan")
city
```

Out[98]:

```
['satara', 'karuna', 'chetan', 'chetan', 'islampur', 'mumbai', 'pune']
```

5.remove

In [99]:

```
#5. remove
#remove the item with the specified value
city.remove("chetan")
city
```

Out[99]:

```
['satara', 'karuna', 'chetan', 'islampur', 'mumbai', 'pune']
```

6.pop

In [100]:

```
#6.pop
#removes the element at the specified (index) position
city.pop(4)
city
```

Out[100]:

```
['satara', 'karuna', 'chetan', 'islampur', 'pune']
```

In [101]:

```
#if index is not given
city.pop()
city
```

Out[101]:

```
['satara', 'karuna', 'chetan', 'islampur']
```

7.clear

In [103]:

```
#7.clear
#removes all the element of list
#it is equal to del[:]
list2
```

Out[103]:

```
['k', 'a', 'r', 'u', 'n', 'a']
```

In [104]:

```
list2.clear()
list2
```

Out[104]:

```
[]
```

8.index

In [105]:

```
#8.index
#returns the index of the given element
city
```

Out[105]:

```
['satara', 'karuna', 'chetan', 'islampur']
```

In [107]:

```
city.index('karuna')
```

Out[107]:

```
1
```

In [110]:

```
#searching item from given index
list3=[10,20,3,45,33,10,15,20,10,15,20]
list3.index(20,8)
```

Out[110]:

```
10
```

In [114]:

```
#giving negative index= searching from -ve index and return +ve index
list3.index(20,-6)
```

Out[114]:

```
7
```

In [115]:

```
#giving the index range from start to end
#i.e. list.index(item,start_index,end_index)
list3.index(10,1,6)
```

Out[115]:

```
5
```

In [116]:

```
#giving -ve index from start to end return +ve index
list3.index(10,-4,-1)
```

Out[116]:

```
8
```

9.sort

In [118]:

```
#9.sort
#used to sort the element in ascending or descending order
list1=[20,43,77,35,57,21,12,79,24,36]
list1
```

Out[118]:

```
[20, 43, 77, 35, 57, 21, 12, 79, 24, 36]
```

In [119]:

```
#ascending order
list1.sort()
list1
```

Out[119]:

```
[12, 20, 21, 24, 35, 36, 43, 57, 77, 79]
```

In [120]:

```
#descending order
list1.sort(reverse=True)
list1
```

Out[120]:

```
[79, 77, 57, 43, 36, 35, 24, 21, 20, 12]
```

10.reverse

In [121]:

```
#10.reverse
#used to reverse the values of the list
list1=[40,24,22,"karuna",59,29]
list1.reverse()
list1
```

Out[121]:

```
[29, 59, 'karuna', 22, 24, 40]
```

11.copy

In [122]:

```
#11.copy
#used to make copy of list
list2=list1.copy()
list2
```

Out[122]:

```
[29, 59, 'karuna', 22, 24, 40]
```

Function on list

1.len

In [123]:

```
#len
#returns lenght of list
len(list1)
```

Out[123]:

```
6
```

2.max

In [125]:

```
#max
#returns the greatest value from list
list1=[28,25,739,922,83,83]
max(list1)
```

Out[125]:

```
922
```

3.min

In [126]:

```
#min
#returns the smallest value from the list
min(list1)
```

Out[126]:

```
25
```

4.sum

In [127]:

```
#sum
#returns the total of item in list
sum(list1)
```

Out[127]:

```
1880
```

In [ ]:

```

```