In [1]:
```
#Create an empty list
```

In [2]:
```
market=[]
print(type(market))
```

```
<class 'list'>
```

In [3]:
```
# Using list constructor
mylist=list()
type(mylist)
```

Out[3]:
```
list
```

In [4]:
```
#list of numbers
list_nos=[12,-90,0,123.78,-56]
list_nos
```

Out[4]:
```
[12, -90, 0, 123.78, -56]
```

In [5]:
```
snacks=["Sandwitch","pizza","kurkure","biscuits","burger"]
len(snacks)
```

Out[5]:
```
5
```

In [8]:
```
# List can contain dif data type items
mylist=[45,True,"IT-1","k",-89.78]
print(mylist)
```

```
[45, True, 'IT-1', 'k', -89.78]
```

In [10]:
```
mylist[1],mylist[-1]
```

Out[10]:
```
(True, -89.78)
```

In [11]:
```
#Display all the items one by one using loop
for item in mylist:
    print(item)
```

```
45
True
IT-1
k
-89.78
```

In [12]:
```
#Display all the items from index 1 to 3
mylist[1:4]
```

Out[12]:
```
[True, 'IT-1', 'k']
```

In [13]:
```
fruits=["coconut","mango","apple","guava","cherry"]
fruits
```

Out[13]:
```
['coconut', 'mango', 'apple', 'guava', 'cherry']
```

In [15]:
```
#add grapes in the list of fruits
fruits.append('grapes')
fruits
```

Out[15]:
```
['coconut', 'mango', 'apple', 'guava', 'cherry', 'grapes', 'grapes']
```

In [16]:
```
#add banana in 3rd posiion: insert(pos,item)
fruits.insert(3,"banana")
fruits
```

Out[16]:
```
['coconut', 'mango', 'apple', 'banana', 'guava', 'cherry', 'grapes', 'grapes']
```

In [17]:
```
fruits.count('grapes')
```

Out[17]:
```
2
```

In [19]:
```
fruits.remove('grapes')
fruits
```

Out[19]:
```
['coconut', 'mango', 'apple', 'banana', 'guava', 'cherry']
```

In [20]:
```
fruits.pop()
fruits
```

Out[20]:
```
['coconut', 'mango', 'apple', 'banana', 'guava']
```

In [21]:
```
dir(list)
```

Out[21]:
```
['__add__',
 '__class__',
 '__class_getitem__',
 '__contains__',
 '__delattr__',
 '__delitem__',
 '__dir__',
 '__doc__',
 '__eq__',
 '__format__',
 '__ge__',
 '__getattribute__',
 '__getitem__',
 '__gt__',
 '__hash__',
 '__iadd__',
 '__imul__',
 '__init__',
 '__init_subclass__',
 '__iter__',
 '__le__',
 '__len__',
 '__lt__',
 '__mul__',
 '__ne__',
 '__new__',
 '__reduce__',
 '__reduce_ex__',
 '__repr__',
 '__reversed__',
 '__rmul__',
 '__setattr__',
 '__setitem__',
 '__sizeof__',
 '__str__',
 '__subclasshook__',
 'append',
 'clear',
 'copy',
 'count',
 'extend',
 'index',
 'insert',
 'pop',
 'remove',
 'reverse',
 'sort']
```

In [22]:
```
list_nos
```

Out[22]:
```
[12, -90, 0, 123.78, -56]
```

In [24]:
```
#sort the list
list_nos.sort()
list_nos
```

Out[24]:
```
[-90, -56, 0, 12, 123.78]
```

In [25]:
```
fruits.sort()
fruits
```

Out[25]:
```
['apple', 'banana', 'coconut', 'guava', 'mango']
```

In [28]:
```
#copy a list to another list
fal=[]
fal=fruits.copy()
fal
```

Out[28]:
```
['apple', 'banana', 'coconut', 'guava', 'mango']
```

In [29]:
```
mylist
```

Out[29]:
```
[45, True, 'IT-1', 'k', -89.78]
```

In [30]:
```
#add one more list of items to the existing mylist
mylist.extend([8,78,False,"Kiit"])
mylist
```

Out[30]:
```
[45, True, 'IT-1', 'k', -89.78, 8, 78, False, 'Kiit']
```

In [31]:
```
mylist.reverse()
mylist
```

Out[31]:
```
['Kiit', False, 78, 8, -89.78, 'k', 'IT-1', True, 45]
```

In [33]:
```
# create a list of 5 nos and display square of each item in another list
nos=[1,2,3,4,5]

nos*2
```

Out[33]:
```
[1, 2, 3, 4, 5, 1, 2, 3, 4, 5]
```

In [44]:
```
result=[]
for x in nos:
    result.append(x**2)
result
```

Out[44]:
```
[1, 4, 9, 16, 25]
```

In [47]:
```
# display the cube of 1st 6 natural nos using list comprehension
cube=[]
[cube.append(x**3) for x in range(1,6)]
cube
```

Out[47]:
```
[1, 8, 27, 64, 125]
```

In [45]:
```
#list comprehension
[i**2 for i in range(6)]
```

Out[45]:
```
[0, 1, 4, 9, 16, 25]
```

In [39]:
```
# display 1st 8 natural nos using loop
for item in range(8):
    print(item,end=" ")
```

```
0 1 2 3 4 5 6 7
```

In [41]:
```
for item in range(1,9):
    print(item,end=" ")
```

```
1 2 3 4 5 6 7 8
```

In [ ]:
```
#range(start-index,end-index,stepsize)
```

In [43]:
```
#print all even nos upto 10
for i in range(0,11,2):
    print(i,end=" ")
```

```
0 2 4 6 8 10
```

In [48]:
```
mylist
```

Out[48]:
```
['Kiit', False, 78, 8, -89.78, 'k', 'IT-1', True, 45]
```

In [ ]:
```
if 'k'in mylist:
    print("Present")
else:
    print("Absent")
if 'CS-1' not in mylist:
    print("No")
else:
    print("Yes")
```

In [49]:
```
#merging of 2 lists
l1=[45,8,90,-90]
l2=[34,5,-6]
l1+l2
```

Out[49]:
```
[45, 8, 90, -90, 34, 5, -6]
```

In [53]:
```
l1.extend(l2)
len(l1)
```

Out[53]:
```
16
```

In [56]:
```
#using while loop dispaly 1st 6 natural nos and find sum
i=1
sum=0
while i<=6:
    print(i,end=" ")
    sum=sum+i
    i=i+1
sum
```

```
1 2 3 4 5 6
21
```

Out[56]:

In [ ]:
```

```