

In [2]:

```
li=["apple","banana","orange","graphs","milk"]  
li
```

Out[2]:

```
['apple', 'banana', 'orange', 'graphs', 'milk']
```

In [2]:

```
li=sort()  
li
```

```
-----  
NameError                                Traceback (most recent call last)  
<ipython-input-2-8038adf712a2> in <module>  
----> 1 li=sort()  
      2 li
```

NameError: name 'sort' is not defined

In [5]:

```
print(type(li))
```

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

In []:

In [8]:

```
print(len(li))
```

```
5
```

In [10]:

```
accessing first element in a list  
print(li[-1])
```

```
File "<ipython-input-10-27df1267a08f>", line 1  
    accessing first element in a list  
      ^  
SyntaxError: invalid syntax
```

In [11]:

```
print(li[-1])
```

```
milk
```

In [13]:

```
li[0]="pinaple"
```

In [15]:

```
li.insert(4,"kasi")  
li
```

Out[15]:

```
['pinaple', 'kasi', 'bananna', 'orange', 'kasi', 'graphs', 'milk']
```

In [17]:

```
li=("kasi","123","true")  
li
```

Out[17]:

```
('kasi', '123', 'true')
```

In [19]:

```
li[2:5]
```

Out[19]:

```
('true',)
```

In [21]:

```
li
```

Out[21]:

```
('kasi', '123', 'true')
```

In [23]:

```
li.remove("milk")  
li
```

```
-----  
AttributeError                                Traceback (most recent call last)  
<ipython-input-23-61a63e0449ae> in <module>  
----> 1 li.remove("milk")  
      2 li
```

AttributeError: 'tuple' object has no attribute 'remove'

In [4]:

```
li1=["kasi","arya","arya"]  
li+li1
```

NameError Traceback (most recent call last)

```
<ipython-input-4-43b0aa9d9b66> in <module>  
      1 li1=["kasi","arya","arya"]  
----> 2 li+li1
```

NameError: name 'li' is not defined

In [5]:

```
li=["apple","bananna","orange","graphs","milk"]  
li
```

Out[5]:

```
['apple', 'bananna', 'orange', 'graphs', 'milk']
```

In [6]:

```
li1=["kasi","arya","arya"]  
li+li1
```

Out[6]:

```
['apple', 'bananna', 'orange', 'graphs', 'milk', 'kasi', 'arya', 'arya']
```

In [9]:

```
li1
```

Out[9]:

```
[]
```

In [11]:

```
li1.clear()  
print (li1)
```

```
[]
```

In [12]:

```
li=["apple","bananna","orange","graphs","milk"]  
li
```

Out[12]:

```
['apple', 'bananna', 'orange', 'graphs', 'milk']
```

In [15]:

```
li.remove("apple")  
li
```

Out[15]:

```
['banana', 'orange', 'graphs']
```

tuple

()

In [19]:

```
t1=(10,20,30)  
print(type(t1))
```

```
<class 'tuple'>
```

In [20]:

```
t2=(10)  
print(type(t2))  
t3=(20)  
print(type(t1))
```

```
<class 'int'>  
<class 'tuple'>
```

In [21]:

```
to create empty dictionary:  
    dictionary_names{}  
to create dictionaries values:  
    dictionaries_name={key:value,key:value2...}
```

```
File "<ipython-input-21-1edd70698fb8>", line 1  
    to create empty dictionary:  
      ^
```

SyntaxError: invalid syntax

In [22]:

```
d1={'a':10,'b':34,'c':45}  
print(d1)  
print(type(d1))
```

```
{'a': 10, 'b': 34, 'c': 45}  
<class 'dict'>
```

In [24]:

```
d2={'a':100,'name':"kasi",'branch':'mba','b':98}
print(d2)
```

```
{'a': 100, 'name': 'kasi', 'branch': 'mba', 'b': 98}
```

In [26]:

```
assessing te dictionaries values using the key names
print(d2['name'])
print(d2['b'])
print(d2['a'])
```

```
kasi
98
100
```

In [28]:

```
print(d2)
d2['branch']='mca'
print(d2)
```

```
{'a': 100, 'name': 'kasi', 'branch': 'mba', 'b': 98}
{'a': 100, 'name': 'kasi', 'branch': 'mca', 'b': 98}
```

In [29]:

```
print(dir(dict))
```

```
['__class__', '__contains__', '__delattr__', '__delitem__', '__dir__', '__doc__', '__eq__', '__format__', '__ge__', '__getattribute__', '__getitem__', '__gt__', '__hash__', '__init__', '__init_subclass__', '__iter__', '__le__', '__len__', '__lt__', '__ne__', '__new__', '__reduce__', '__reduce_ex__', '__repr__', '__reversed__', '__setattr__', '__setitem__', '__sizeof__', '__str__', '__subclasshook__', 'clear', 'copy', 'fromkeys', 'get', 'items', 'keys', 'pop', 'popitem', 'setdefault', 'update', 'values']
```

In [33]:

```
print(d2)
print(d2.keys ())
```

```
{'a': 100, 'name': 'kasi', 'branch': 'mca', 'b': 98}
dict_keys(['a', 'name', 'branch', 'b'])
```

In [34]:

```
print(d2)
print(d2.values())
```

```
{'a': 100, 'name': 'kasi', 'branch': 'mca', 'b': 98}
dict_values([100, 'kasi', 'mca', 98])
```

In [36]:

```
print(d2)
print(d2.pops())
```

```
{'a': 100, 'name': 'kasi', 'branch': 'mca', 'b': 98}
```

```
-----
AttributeError                                Traceback (most recent call last)
<ipython-input-36-d76ffb264dac> in <module>
      1 print(d2)
----> 2 print(d2.pops())
```

AttributeError: 'dict' object has no attribute 'pops'

In [37]:

```
print(d2)
print(d2.items())
```

```
{'a': 100, 'name': 'kasi', 'branch': 'mca', 'b': 98}
dict_items([('a', 100), ('name', 'kasi'), ('branch', 'mca'), ('b', 98)])
```

In []:

In []:

In []:

In []:

In []: