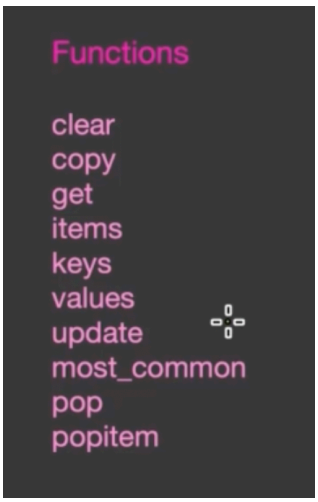
# DataStructures : Counter

- It is present inside a package called collections
- It'll take sequence as input and **count number of times** each element is occurring
- It'll also **count duplicate** , it'll give output as **dictionary**
- Methods present inside counter modules are




- Lets see this with examples

```
>>>
>>> L = [ 'Mark','Jonny','David','Mark','Jonny','Mark','James','Mathew' ]
>>>
>>> from collections import Counter
>>>
>>> c = Counter(L)
>>> c
Counter({'Mark': 3, 'Jonny': 2, 'David': 1, 'James': 1, 'Mathew': 1})
>>>
>>> c['Mark']
3
>>> c.get('Mark')
3
>>> c.keys()
dict_keys(['Mark', 'Jonny', 'David', 'James', 'Mathew'])
>>> c.values()
dict_values([3, 2, 1, 1, 1])
>>>
>>> c.update({'Ajay':4})
>>> c
Counter({'Ajay': 4, 'Mark': 3, 'Jonny': 2, 'David': 1, 'James': 1, 'Mathew': 1})
>>> c.elements()
<itertools.chain object at 0x7ff11e5ee190>
```

```
>>> for i in c.elements():
        print(i)


Mark
Mark
Mark
Jonny
Jonny
David
James
Mathew
Ajay
Ajay
Ajay
Ajay
>>> c.pop('Ajay')
4
>>> c
Counter({'Mark': 3, 'Jonny': 2, 'David': 1, 'James': 1, 'Mathew': 1})
>>> c.most_common(1)
[('Mark', 3)]
>>> c.most_common(2)
[('Mark', 3), ('Jonny', 2)]
>>> c.update({'Ajay':4})
>>> c.most_common(2)
[('Ajay', 4), ('Mark', 3)]
>>>
```