Python LIST Functions

- 1. append()
  2. copy()
  3. clear()
  4. count()
  5. extend()
  6. index()
  7. insert()
  8. remove()
  9. pop()
  10. reverse()
  11. sort()

append ()

- adds a single element to the end of the list

In [3]:
```
env = ['dev', 'qa']
env.append('prod')
print (env)
```

```
['dev', 'qa', 'prod']
```

copy ()

- creates a sperate duplicate of your list.
- if you change one, the other won't be affected.

In [4]:
```
env = ['dev', 'qa']
new_env = env.copy()
print (new_env)
```

```
['dev', 'qa']
```

In [5]:
```
print (env)
```

```
['dev', 'qa']
```

clear ()

- empty the list
- removes all elements/items from the list, making it empty

In [6]:
```
new_env
```

Out[6]: ['dev', 'qa']

In [8]:
```
new_env.clear()
print(new_env)
```

```
[]
```

count()

- it counts how many times an items/elements appears
- it returns the number of occureances of a specific element in the list

In [11]:
```
env = ['dev', 'qa', 'satge' 'prod', 'dev']
env.count('dev')
```

Out[11]: 2

In [15]:
```
env.count('prod')
```

Out[15]: 0

In [14]:
```
env.count('qa')
```

Out[14]: 1

In [17]:
```
env.count('satge')
```

Out[17]: 0

remove()

- deletes the first occurance element/item from the list (not by position)

In [18]:
```
l = [1,2,3,4,5,6,7,8,9]
print(l)
```

```
[1, 2, 3, 4, 5, 6, 7, 8, 9]
```

In [19]:
```
l.remove(2)
print(l)
```

```
[1, 3, 4, 5, 6, 7, 8, 9]
```

In [20]:
```
l = ['jan','feb','mar']
print(l)
```

```
['jan', 'feb', 'mar']
```

In [21]:
```
l.remove('mar')
print(l)
```

```
['jan', 'feb']
```

insert()

- add an item/element at a specific position/index
- insert an element at the index you choose (doesn't replace; it shifts element to the right)

In [22]:
```
l = ['jan','mar']
print(l)
```

```
['jan', 'mar']
```

In [23]:
```
l.insert(1,'feb')
print(l)
```

```
['jan', 'feb', 'mar']
```

pop()

- remove an item/element by index
- if you don't specify an index, it removes the last index/element

In [24]:
```
l = [1,2,3,4,5]
print(l)
```

```
[1, 2, 3, 4, 5]
```

In [25]:
```
l.pop()
```

Out[25]: 5

In [26]:
```
print(l)
```

```
[1, 2, 3, 4]
```

In [27]:
```
l.pop(1)
```

Out[27]: 2

In [28]:
```
print(l)
```

```
[1, 3, 4]
```

remove() vs pop()

- remove() - removes value from list by mentioned element
- pop() - removes vale from list by index

In [29]:
```
l = [1,2,3,4,5,6]
l.pop(2)
```

Out[29]: 3

In [30]:
```
print(l)
```

```
[1, 2, 4, 5, 6]
```

In [31]:
```
l.remove(2)
print(l)
```

```
[1, 4, 5, 6]
```

sort()

- arrange list element in order
- sorts the list in ascending (default) or descending order (reverse=True)
- user need to pass similar type of data types to sort the function

In [32]:
```
l = [1,100,50,10]
print(l)
```

```
[1, 100, 50, 10]
```

In [34]:
```
l.sort()
print(l)
```

```
[1, 10, 50, 100]
```

In [35]:
```
l.sort(reverse=True)
print(l)
```

```
[100, 50, 10, 1]
```

reverse()

- reverse the list

In [54]:
```
list1 = ['one','two','three','four','five','six','seven']
print(list1)
```

```
['one', 'two', 'three', 'four', 'five', 'six', 'seven']
```

In [55]:
```
list1.reverse()
print(list1)
```

```
['seven', 'six', 'five', 'four', 'three', 'two', 'one']
```

In [59]:
```
list1
```

Out[59]:
```
['one', 'two', 'three', 'four', 'five', 'six', 'seven']
```

In [60]:
```
list1 = list1[::-1]
print(list1)
```

```
['seven', 'six', 'five', 'four', 'three', 'two', 'one']
```

extend()

- Merge one list into another list
- adds all elements from another list to the end of the current list

In [37]:
```
l1 = [1,2,3]
l2 = [4,5,6]
l1.extend(l2)
print(l1)
```

```
[1, 2, 3, 4, 5, 6]
```

index()

- find the position of an element
- returns the index(position) of the first occurance of a value in the list

In [38]:
```
l = [10,20,30,40,50]
print(l)
```

```
[10, 20, 30, 40, 50]
```

In [44]:
```
l[2]
print(l)
```

```
[10, 20, 30, 40, 50]
```

In [45]:
```
l.index(40)
```

Out[45]: 3

In [46]:
```
l.index(30)
```

Out[46]: 2

Join Lists

In [47]:
```
list1 = ['one','two','three']
list2 = ['four','five','six']
list3 = list1+list2
print(list3)
```

```
['one', 'two', 'three', 'four', 'five', 'six']
```

List Membership

In [49]:
```
list3
```

Out[49]: ['one', 'two', 'three', 'four', 'five', 'six']

In [50]:
```
'two' in list3
```

Out[50]: True

In [51]:
```
'seven' in list3
```

Out[51]: False

In [52]:
```
if 'two' in list3:
    print('two is present in the list')
else:
    print('two is not presnt in the list')
```

```
two is present in the list
```

In [53]:
```
if 'ten' in list3:
    print('ten is available in the list')
else:
    print('ten is not available in the list')
```

```
ten is not available in the list
```

loop through a list

In [61]:
```
l = [1,2,3,4,5,6,7,8,9]
l
```

Out[61]:
```
[1, 2, 3, 4, 5, 6, 7, 8, 9]
```

In [62]:
```
for i in l:
    print(i)
```

```
1
2
3
4
5
6
7
8
9
```

In [ ]:
```
for i in enumerate l
```