In [329…
```
name = "   I am a hard working guy   "
name
```

Out[329…
```
'   I am a hard working guy   '
```

In [331…
```
name.lstrip() # remove left spaces
```

Out[331…
```
'I am a hard working guy   '
```

In [333…
```
name.rstrip() # remove right spaces
```

Out[333…
```
'   I am a hard working guy'
```

In [334…
```
name.strip() # remove left and right spaces
```

Out[334…
```
'I am a hard working guy'
```

## Using Escape Character ('\')

In [338…
```
mystr = 'Practising different programming languages like \"Pytho\" etc;'
mystr
```

Out[338…
```
'Practising different programming languages like "Pytho" etc;'
```

In [339…
```
# using double quotes
mystr = "Practising different programming languages like \"Pytho\" etc;"
mystr
```

Out[339…
```
'Practising different programming languages like "Pytho" etc;'
```

## List

In [341…
```
myList = [] # empty list
myList
```

Out[341…
```
[]
```

In [342…
```
print(type(myList))
```

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

In [343…
```
myList2 = [30,60, 90] # list of integers
myList2
```

Out[343…
```
[30, 60, 90]
```

In [344…
```
myListFloat = [3.14, 2.22, 3.55] # list with floats
myListFloat
```

Out[344…
```
[3.14, 2.22, 3.55]
```

In [345…
```
myListString =['vinay', 'Vedasree', 'Meenusree', 'Harika'] # list of string
myListString
```

Out[345…
```
['vinay', 'Vedasree', 'Meenusree', 'Harika']
```

In [346…
```
nestedList = ['values', [], [30,60, 90],[3.14, 2.22, 3.55]] # Nested List or Nested list with different data types
nestedList
```

Out[346…
```
['values', [], [30, 60, 90], [3.14, 2.22, 3.55]]
```

In [347…
```
len(nestedList) # gets the numbers of list items (nested will be consider as single item only)
```

Out[347…
```
4
```

In [348…
```
# Forward index (left to right)
# Backward index (right to left)
```

In [356…
```
nestedList[2] # gets the second index list item
```

Out[356…
```
[30, 60, 90]
```

In [360…
```
nestedList[-3] # gets the backward index list item
```

Out[360…
```
[]
```

## List Sclicing

In [364…
```
listofFruits = ['mango', 'banana', 'apple', 'gova', 'avacado','pinaple', 'mosambee', 'watermilon']
listofFruits
```

Out[364…
```
['mango',
 'banana',
 'apple',
 'gova',
 'avacado',
 'pinaple',
 'mosambee',
 'watermilon']
```

In [365…
```
listofFruits[0:3] # gets the list of items from 0 to 2 (index forward formula works as (n-1))
```

Out[365…
```
['mango', 'banana', 'apple']
```

In [366…
```
listofFruits[2:5] # gets the list of items from 2 to 4
```

Out[366…
```
['apple', 'gova', 'avacado']
```

In [370…
```
listofFruits[:3] # gets first three items
```

Out[370…
```
['mango', 'banana', 'apple']
```

In [371…
```
listofFruits[-3:] # gets last three items
```

Out[371…
```
['pinaple', 'mosambee', 'watermilon']
```

In [372…
```
listofFruits[-2] # gets the last second item from the list
```

Out[372…
```
'mosambee'
```

In [373…
```
listofFruits[:] # returns whole list
```

Out[373…
```
['mango',
 'banana',
 'apple',
 'gova',
 'avacado',
 'pinaple',
 'mosambee',
 'watermilon']
```

In [374…
```
listofFruits[:10] # before 10th index items from the list
```

Out[374…
```
['mango',
 'banana',
 'apple',
 'gova',
 'avacado',
 'pinaple',
 'mosambee',
 'watermilon']
```

In [375…
```
listofFruits[1:] # after first index items from the list
```

Out[375…
```
['banana', 'apple', 'gova', 'avacado', 'pinaple', 'mosambee', 'watermilon']
```

## Add remove items from the list

In [383…
```
listofFruits
```

Out[383…
```
['mango',
 'banana',
 'apple',
 'gova',
 'avacado',
 'pinaple',
 'mosambee',
 'watermilon']
```

In [384…
```
listofFruits.append('dragon fruit') #Adding a new fruit into the list item
```

In [385…
```
listofFruits
```

Out[385…
```
['mango',
 'banana',
 'apple',
 'gova',
 'avacado',
 'pinaple',
 'mosambee',
 'watermilon',
 'dragon fruit']
```

In [389…
```
listofFruits.insert(3,'grapes') #Adding a new fruit item at index 3
listofFruits
```

Out[389…
```
['mango',
 'banana',
 'apple',
 'grapes',
 'gova',
 'avacado',
 'pinaple',
 'mosambee',
 'watermilon',
 'dragon fruit']
```

In [390…
```
listofFruits.pop() # removes the last element from the list
listofFruits
```

Out[390…
```
['mango',
 'banana',
 'apple',
 'grapes',
 'gova',
 'avacado',
 'pinaple',
 'mosambee',
 'watermilon']
```

In [391…
```
listofFruits.pop(3) # removes the item from the thrid index
listofFruits
```

Out[391…
```
['mango',
 'banana',
 'apple',
 'gova',
 'avacado',
 'pinaple',
 'mosambee',
 'watermilon']
```

In [392…
```
listofFruits[1] = 'dragon' # change the element of the list
```

In [393…
```
listofFruits
```

Out[393…
```
['mango',
 'dragon',
 'apple',
 'gova',
 'avacado',
 'pinaple',
 'mosambee',
 'watermilon']
```

In [394…
```
listofFruits.remove('pinaple')
listofFruits
```

Out[394…
```
['mango', 'dragon', 'apple', 'gova', 'avacado', 'mosambee', 'watermilon']
```

In [395…
```
listofFruits.clear()
listofFruits
```

Out[395…
```
[]
```

In [403…
```
del listofFruits
```

In [404…
```
listofFruits
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[404], line 1
----> 1 listofFruits

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

## Copy List

In [ ]:
```
mylist =['one', 'two', 'three', 'four', 'five', 'six', 'seven', 'eight', 'nine', 'ten']
mylist
```

In [407…
```
mylist1 = mylist # creating a new list
```

In [409…
```
mylist1
```

Out[409…
```
['one', 'two', 'three', 1, 'five', 'six', 'seven', 'eight', 'nine', 'ten']
```

In [411…
```
id(mylist), id(mylist1)
```

Out[411…
```
(1856438528768, 1856438528768)
```

In [412…
```
mylist2 = mylist1.copy() # copies the data to the new list
mylist2
```

Out[412…
```
['one', 'two', 'three', 1, 'five', 'six', 'seven', 'eight', 'nine', 'ten']
```

In [415…
```
id(mylist1), id(mylist2) # the address will be different as when copy the a seperate mempry will be allocated
```

Out[415…
```
(1856438528768, 1856475028736)
```

In [416…
```
# overwrite data at the 3rd position of the list
mylist[3] = 1
mylist
```

Out[416…
```
['one', 'two', 'three', 1, 'five', 'six', 'seven', 'eight', 'nine', 'ten']
```

## Join List

In [418…
```
list1 = ['one', 'two', 'three', 'four']
list2 = ['five', 'six', 'seven']
list3 = list1 + list2 # concatenate two list into new list
list1.extend(list2) # merges two list into a single list
```

In [422…
```
print(list3)
```

```
print(list1)
```

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

## List Membership

In [433…
```
list1
```

Out[433…
```
['one', 'two', 'three', 'four', 'five', 'six', 'seven']
```

In [435…
```
'one' in list1 # checks and displays 'True' is exists
```

Out[435…
```
True
```

In [437…
```
list2
```

Out[437…
```
['five', 'six', 'seven']
```

In [443…
```
'one' in list2 # checks and displays 'False' if not exists
```

Out[443…
```
False
```

In [448…
```
if ('two' in list1):
    print('found in the list1')
else:
    print('Not found in the list1')
```

```
found in the list1
```

In [454…
```
if ('two' in list2):
    print('found in the list1')
else:
    print('Not found in the list1')
```

```
Not found in the list1
```

## Reverse and sort list

In [473…
```
list1
```

Out[473…
```
['seven', 'six', 'five', 'four', 'three', 'two', 'one']
```

In [498…
```
list1.reverse() # Reverse the list
```

In [500…
```
list1
```

Out[500…
```
['seven', 'six', 'five', 'four', 'three', 'two', 'one']
```

In [502…
```
list1 = list1[::-1] # Reverse the lsit
list1
```

Out[502…
```
['one', 'two', 'three', 'four', 'five', 'six', 'seven']
```

In [504…
```
mylist2 = [4, 3, 7, 5, 9, 0]
mylist2
```

Out[504…
```
[4, 3, 7, 5, 9, 0]
```

In [510…
```
mylist2.sort() # sort list to ascending order
```

In [508…
```
mylist2
```

Out[508…
```
[0, 3, 4, 5, 7, 9]
```

In [512…
```
mylist2.sort(reverse=True) # sort decending order of the list
```

In [516…
```
mylist2
```

Out[516…
```
[9, 7, 5, 4, 3, 0]
```

## Loop through the list elements

In [519…
```
for i in list1:
    print(i)
```

```
one
two
three
four
five
six
seven
```

In [527…
```
for i in enumerate(list1):
    print(i)
```

```
(0, 'one')
(1, 'two')
(2, 'three')
(3, 'four')
(4, 'five')
(5, 'six')
(6, 'seven')
```

In [532…
```
list10 =['one', 'two', 'three', 'four', 'five', 'one', 'two']
list10
```

Out[532…
```
['one', 'two', 'three', 'four', 'five', 'one', 'two']
```

In [537…
```
list10.count('one')
```

Out[537…
```
2
```

In [547…
```
L1 =[0,1,2,3,4,5]
L1
```

Out[547…
```
[0, 1, 2, 3, 4, 5]
```

In [553…
```
all(L1) # Will Return false as one value is false (Value 0)
```

Out[553…
```
False
```

In [555…
```
any(L1) # Will Return True as we have items in the list with True value
```

Out[555…
```
True
```

In [ ]:
```
L2 =
```

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]: