list

December 27, 2021

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```
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```

[3]:
```
list_names = ['diana' ,'caro', 'mercy', 'wangui' ,'salome','wahu', 'grace' ]
print(list_names)
list_numbers = [23, 30, 32, 45, 60, 39, 20, 34, 60, 80, 100, 160]
print(list_numbers[6])
```

```
['diana', 'caro', 'mercy', 'wangui', 'salome', 'wahu', 'grace']
20
```

[38]:
```
# indexing actual names
print(list_names[5])
print(int(list_numbers[6]))

#indexinng  letter within the name which is not applicable with the numbers
print(list_names[5][2])
```

```
#negative index
print(list_names[-3])
```

```
wahu
20
h
salome
```

[39]:
```
# list within a list

names_numbers = [['diana' ,'caro', 'mercy', 'wangui' ,'salome','wahu', 'grace'
 ↪],[23, 30, 32, 45, 60, 39, 20, 34, 60, 80, 100, 160] ]
print(names_numbers)
print('')
print(names_numbers[0])   #printing the first list within a list
print('')
print(names_numbers[0][4])     #printing the item in the 4th index of the first
 ↪list
print('')
print(names_numbers[0][4][3])   #printing alphabet in the third porsition 4th
 ↪index first list
```

```
[['diana', 'caro', 'mercy', 'wangui', 'salome', 'wahu', 'grace'], [23, 30, 32,
45, 60, 39, 20, 34, 60, 80, 100, 160]]

['diana', 'caro', 'mercy', 'wangui', 'salome', 'wahu', 'grace']

salome

o
```

[29]:
```
# list sliicing
list_names = ['diana' ,'caro', 'mercy', 'wangui' ,'salome','wahu', 'grace' ]
print(list_names[2:])
print(list_names[::-1])  #reversing a sring using neegative indices
list_numbers = [23, 30, 32, 45, 60, 39, 20, 34, 60, 80, 100, 160]
print(list_numbers[3:7])
```

```
['mercy', 'wangui', 'salome', 'wahu', 'grace']
['grace', 'wahu', 'salome', 'wangui', 'mercy', 'caro', 'diana']
[45, 60, 39, 20]
```

[33]:
```
# len function in a list
print(len(list_names))
print(len(list_numbers))
```

```
7
12
```

[35]:
```
# changing values using index
list_names[4] = 'james'
print(list_names)
```

```
['diana', 'caro', 'mercy', 'wangui', 'james', 'wahu', 'grace']
```

[46]:
```
# list concatenation
list_names1 = ['jay','jose','dus','pato']
concat = list_names + list_names1
print(concat)

print('')
# list replication
rep = list_names1 * 4
print(rep)
```

```
['diana', 'caro', 'mercy', 'wangui', 'salome', 'wahu', 'grace', 'jay', 'jose',
'dus', 'pato']

['jay', 'jose', 'dus', 'pato', 'jay', 'jose', 'dus', 'pato', 'jay', 'jose',
'dus', 'pato', 'jay', 'jose', 'dus', 'pato']
```

[50]:
```
# del function

del(list_names[4])
print(list_names)
```

```
['diana', 'caro', 'mercy', 'wangui', 'grace']
```

[55]:
```
# in and not in using a list

mercy = 'mercy' in list_names
james = 'james' not in list_names
print(mercy)
print(james)
```

```
True
True
```

[56]:
```
# using for loop

for values in list_names:
    print(values)
```

```
diana
caro
mercy
wangui
grace
```

[58]:
```
# appending -- this works together with the for loop to work with different␣
 ↪items in different lists
names = []
for values in list_names:
    names.append(values)
print(names)
```

```
['diana', 'caro', 'mercy', 'wangui', 'grace']
```

[60]:
```
# list enumaration  / printing index and their values in a list
for index, values in enumerate(list_names):
    print(index, values)
```

```
0 diana
1 caro
2 mercy
3 wangui
4 grace
```

[50]:
```
#multiple asynment using indices
#nb you only assyn to the available index
list_names[3], list_names[4] = 'salome', 'wahu'
print(list_names)
```

```
['wangui', 'wahu', 'salome', 'salome', 'wahu', 'lucy', 'lucy', 'joy', 'grace',
'diana']
```

[5]:
```
#index function
index = list_names.index('salome')
print(f'the index of salome is: {index}')
```

```
the index of salome is: 4
```

[9]:
```
#insert function
list_names.insert(7 , 'joy')
print(list_names)
```

```
['diana', 'caro', 'mercy', 'wangui', 'salome', 'wahu', 'grace', 'joy']
```

[43]:
```
# sort/reverse
list_names.sort()
list_desc = list_names
list_desc.sort(reverse = True)
print(list_names)
print(list_desc)

#sorted
print(sorted(list_names))
```

```
['wangui', 'wahu', 'salome', 'mercy', 'lucy', 'lucy', 'joy', 'grace', 'diana',
```

```
'caro']
['wangui', 'wahu', 'salome', 'mercy', 'lucy', 'lucy', 'joy', 'grace', 'diana',
'caro']
['caro', 'diana', 'grace', 'joy', 'lucy', 'lucy', 'mercy', 'salome', 'wahu',
'wangui']
```

[41]:
```
# extend
list_names.extend(['lucy'])
print(list_names)
```

```
['wangui', 'wahu', 'salome', 'mercy', 'lucy', 'joy', 'grace', 'diana', 'caro',
'lucy']
```

[44]:
```
#pop
list_names.pop()
print(list_names)
```

```
['wangui', 'wahu', 'salome', 'mercy', 'lucy', 'lucy', 'joy', 'grace', 'diana']
```

[45]:
```
#insert
list_names.insert(3, 'ruth')
print(list_names)
```

```
['wangui', 'wahu', 'salome', 'ruth', 'mercy', 'lucy', 'lucy', 'joy', 'grace',
'diana']
```

[49]:
```
#using range with a list
print(list(range(0,10,2)))
```

```
[0, 2, 4, 6, 8]
```

[ ]:
```

```