# List Functions

# Access Item in list

- thislist = ["apple", "banana", "cherry"]
  print(thislist[1])

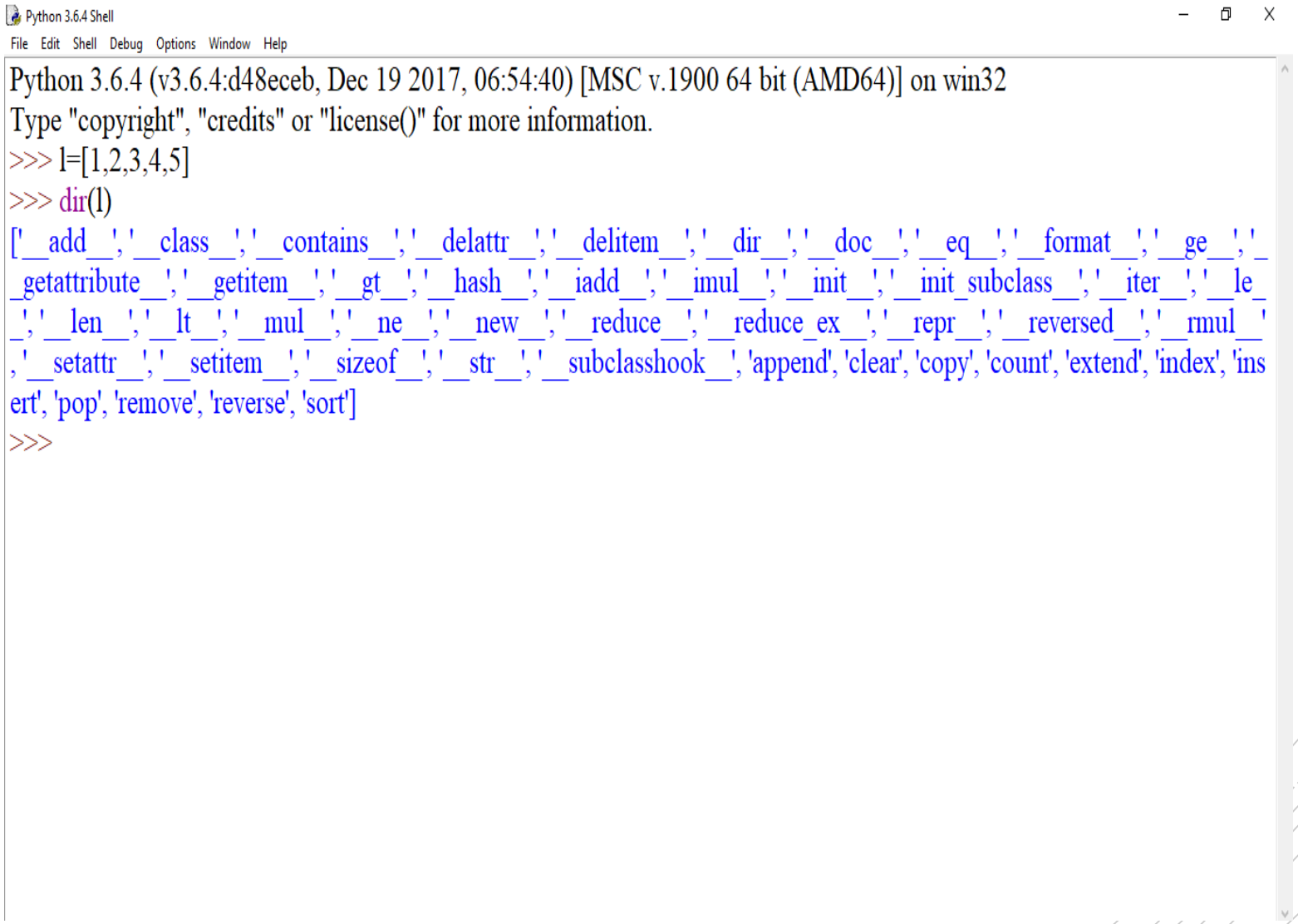
# Changing the elements

```
thislist = ["apple", "banana", "cherry"]
thislist[1] = "blackcurrant"
print(thislist)
```

# Lenght

```
thislist = ["apple", "banana", "cherry"]
print(len(thislist))
```

# Dir(list)


Python 3.6.4 Shell
File Edit Shell Debug Options Window Help
Python 3.6.4 (v3.6.4:d48eceb, Dec 19 2017, 06:54:40) [MSC v.1900 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> l=[1,2,3,4,5]
>>> dir(l)
['__add__','__class__','__contains__','__delattr__','__delitem__','__dir__','__doc__','__eq__','__format__','__ge__','__getattribute__','__getitem__','__gt__','__hash__','__iadd__','__imul__','__init__','__init_subclass__','__iter__','__le__','__len__','__lt__','__mul__','__ne__','__new__','__reduce__','__reduce_ex__','__repr__','__reversed__','__rmul__','__setattr__','__setitem__','__sizeof__','__str__','__subclasshook__', 'append', 'clear', 'copy', 'count', 'extend', 'index', 'insert', 'pop', 'remove', 'reverse', 'sort']
>>>

'append', 'clear', 'copy', 'count', 'extend', 'index', 'insert', 'pop', 'remove', 'reverse', 'sort'

- Append → which is used to add the list else which is used to merge the list in another list
- Clear → Clear the list
- Copy →It gives the copy of the list
- Count → Element count in list
- Extend → which is used to add the elements in List
- Index → --- it will used to find the word available in the list. in index it provide the first occurance
- Pop → Remove the last element and display the removed element
- Insert → which is used to insert the element
- Remove → remove particular element
- Reverse→ revers the given element in list
- Sort →Sort the list

# Append Example

```
list=['a','b','c']
```

**Append Example 1:**

```
list.append(['d','e','f'])
print(list)
```

*Output:*

```
['a', 'b', 'c', ['d', 'e', 'f']]
```

**Append Example 2:**

```
list.append(['Python','Programming'])
print(list)
```

*Output:*

```
['a', 'b', 'c', 'd', 'e', 'f', ['d', 'e', 'f'], ['Python', 'Programming']]
```

# Nested List

```
>>> L1 = [ 1, [73,89,42,32], 62, [24,32], 99 ]
>>> L1[1] = [73,89,42,32]
>>> L1[1][1] = 89
>>> print(L1)
[1, [73, 89, 42, 32], 62, [24, 32], 99]
>>> print(L1[1])
[73, 89, 42, 32]
>>> print(L1[0])
1
>>> print(L1[0])
1
>>> L1[0]=45
>>> print(L1)
[45, [73, 89, 42, 32], 62, [24, 32], 99]
>>> L1[1][0]=34
>>> print(L1)
[45, [34, 89, 42, 32], 62, [24, 32], 99]
>>>
```

# Clear Example

```
>>> l.clear()
>>> l
[]
>>> # Two ways possible
>>> del l[:]
>>> l
[]
>>>
```

# Copy Example new=old

**Method 1: (Shallow Copy)**

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

New= List

Print(New)

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

**Method 2: (Deep Copy)**

```
X=list.copy()

Print(X)

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

# Count list.count(element)

```
>>> x=["hai","hello","Python"]
>>> x.count("h")
0
>>> x.count("hai")
1
>>> list=[1,2,3,4,5]
>>> list.count(1)
1
>>> list.count(2)
1
>>>
```

# Extend Example

```
list=['a','b','c']
```

**Extend Example 1:**

```
list.extend(['d','e','f'])
print(list)
```

*Output:*

```
['a', 'b', 'c', 'd', 'e', 'f']
```

**Extend Example 2:**

```
list.extend(['Python','Programming'])

print(list)
```

*Output:*

```
['a', 'b', 'c', 'd', 'e', 'f', 'Python', 'Programming']
```

# Insert() list.insert(Index, value)

- list.insert(0,“Tech Wyvern")  #0---> This is the Index
  print(list)
  *Output:*
  [‘Tech Wyvern', 'a', 'b', 'c', 'd', 'e', 'f', ['d', 'e', 'f'], 'Python', 'Programming']]

# List Index

List=[‘Tech Wyvern', 'a', 'b', 'c', 'd', 'e', 'f', ['d', 'e', 'f'], 'Python', 'Programming']]

**Example 1:**

list.index("a")

*output:*

1

**Example 2:**

list.index("d")

# In list d occur 2 times but it will provide the first occurrence

*output:*

4

# Remove()

List=[‘Tech Wyvern', 'a', 'b', 'c', 'd', 'e', 'f', ['d', 'e', 'f'], 'Python', 'Programming']]

list.remove("d")

print( list)

*Output:*

[‘Tech Wyvern', 'a', 'b', 'c', 'e', 'f', ['d', 'e', 'f'], 'Python', 'Programming']

# Reverse()

```
>>> x=["hai","hello","Python"]
>>> x.reverse()
>>> print(x)
['Python', 'hello', 'hai']
>>>
```

# Sort()

```
>>> x=[2,3,41,2,3,4,1,2]

>>> x.sort()

>>> x

[1, 2, 2, 2, 3, 3, 4, 41]
```

# Pop()

List=[‘Tech Wyvern', 'a', 'b', 'c', 'd', 'e', 'f', ['d', 'e', 'f'], 'Python', 'Programming']]

list.pop()

*Output:*

'Programming'