

```
In [2]: import numpy as np
a=np.array([10,20,30,40,50,60])
print(a,type(a),id(a))

[10 20 30 40 50 60] <class 'numpy.ndarray'> 2103489267248

In [3]: #copy() function
b=a.copy()
print(b,type(b),id(b))

[10 20 30 40 50 60] <class 'numpy.ndarray'> 2103466700400

In [7]: a=np.append(a,80)
b=np.append(b,100)
print(a)
print(b)

[10 20 30 40 50 60 80]
[ 10 20 30 40 50 60 100]

In [8]: print(a,type(a))

[10 20 30 40 50 60 80] <class 'numpy.ndarray'>

In [10]: a=np.array([10 20 30 40 50 60])
print(a)

File "C:\Users\asus\AppData\Local\Temp\ipykernel_23260\1744897004.py", line 1
a=np.array([10 20 30 40 50 60])
              ^
SyntaxError: invalid syntax

In [11]: b=a.view()

In [13]: print(b,type(b),id(b))

[10 20 30 40 50 60 80] <class 'numpy.ndarray'> 2103489466608

In [14]: c=np.view(a)      #module 'numpy' has no attribute 'view'

-----
AttributeError                                Traceback (most recent call last)
~\AppData\Local\Temp\ipykernel_23260\1831227509.py in <module>
----> 1 c=np.view(a)

C:\ProgramData\Anaconda3\lib\site-packages\numpy\__init__.py in __getattr__(attr)
    311         return Tester
    312
--> 313         raise AttributeError("module {!r} has no attribute "
    314                               "{!r}".format(__name__, attr))
    315
AttributeError: module 'numpy' has no attribute 'view'

In [1]: #Appending the elements in the ndarray object using append() function
import numpy as np
a=np.array([10,20,30,40,50])
print(a,type(a))

[10 20 30 40 50] <class 'numpy.ndarray'>

In [4]: np.append(a,100) # appending 1 element to view. Always Append() adds value to the end of the array.

Out[4]: array([ 10,  20,  30,  40,  50, 100])

In [5]: np.append(a,100,60) # trying to append 2 values at a time for view.

Out[5]: array([ 10,  20,  30,  40,  50, 100])

In [6]: a=np.append(a,100,60)

In [7]: a # append will take only 1 element at a time

Out[7]: array([ 10,  20,  30,  40,  50, 100])

In [8]: # appending multiple elements at a time we need to enter it using List
a=np.append(a,[75,82,60])

In [11]: print(a,type(a)) # append values are assigned to the existing 1D array

[ 10  20  30  40  50 100  75  82  60] <class 'numpy.ndarray'>

In [21]: # Insert() Function
a=np.array([10,20,30,40,50,60])
print(a,type(a),id(a))

[10 20 30 40 50 60] <class 'numpy.ndarray'> 1989481027888

In [24]: np.insert(a,3,52) #inserting value 52 in ndarray object "a" at 3rd position using insert()

Out[24]: array([10, 20, 30, 52, 40, 50, 60])

In [25]: print(a)

[10 20 30 40 50 60]

In [26]: a= np.insert(a,3,52) #inserting value 28 in ndarray object "a" at 2nd position using insert()
print(a,type(a))

[10 20 30 52 40 50 60] <class 'numpy.ndarray'>

In [27]: #Replace the values of ndarray
a[2]=25
print(a,type(a))

[10 20 25 52 40 50 60] <class 'numpy.ndarray'>

In [28]: a[0:2]=[111,121] #replace series of values

In [29]: a

Out[29]: array([111, 121,  25,  52,  40,  50,  60])

In [30]: np.delete(a,[1,2])

Out[30]: array([111,  52,  40,  50,  60])

In [31]: a

Out[31]: array([111, 121,  25,  52,  40,  50,  60])

In [33]: a=np.delete(a,[2,4])
print(a)

[111 121  52  50  60]

In [34]: a= np.array([111, 121,  25,  52,  40,  50,  60])
a

Out[34]: array([111, 121,  25,  52,  40,  50,  60])

In [35]: np.delete(a,[1:3]) # we can directly use slicing here to delete the elements

File "C:\Users\asus\AppData\Local\Temp\ipykernel_24280\2122425300.py", line 1
np.delete(a,[1:3])
              ^
SyntaxError: invalid syntax

In [37]: a=np.delete(a,[0,-1,-3]) # 3 selected elements deleted using indexing strategy with delete()
a

Out[37]: array([121,  25,  52,  50])

In [45]: a=np.array([10,50,23,52,85,96,75,86,96])
a

Out[45]: array([10, 50, 23, 52, 85, 96, 75, 86, 96])

In [48]: a.shape=(3,3)
a

Out[48]: array([[10, 50, 23],
               [52, 85, 96],
               [75, 86, 96]])

In [50]: np.delete(a,2,axis=0) #3rd column from the array is deleted

Out[50]: array([[10, 50, 23],
               [52, 85, 96]])

In [51]: a

Out[51]: array([[10, 50, 23],
               [52, 85, 96],
               [75, 86, 96]])

In [57]: np.delete(a,1,axis=1) # 2nd row is deleted(count starts from 0)

Out[57]: array([[10, 23],
               [52, 96],
               [75, 96]])

In [60]: a=np.array([10,50,23,52,85,96,75,86,96])
a.shape=(3,3)
print(a,type(a))

[[10 50 23]
 [52 85 96]
 [75 86 96]] <class 'numpy.ndarray'>

In [62]: np.insert(a,1,[26,85,96],axis=0)

Out[62]: array([[10, 50, 23],
               [26, 85, 96],
               [52, 85, 96],
               [75, 86, 96]])

In [63]: a

Out[63]: array([[10, 50, 23],
               [52, 85, 96],
               [75, 86, 96]])

In [64]: np.insert(a,0,[45,75,65],axis=1)

Out[64]: array([[45, 10, 50, 23],
               [75, 52, 85, 96],
               [65, 75, 86, 96]])

In [66]: a=np.delete(a,1,axis=1) # processed thrice so ended up getting single column

In [67]: a

Out[67]: array([[10],
               [52],
               [75]])

In [72]: np.insert(a,1,[85,65,96],axis=1) # processed twice

Out[72]: array([[10, 85],
               [52, 65],
               [75, 96]])

In [71]: np.delete(a,[0,2],axis=0)

Out[71]: array([[52]])
```