Numpy Joining Array

In [20]:
```
import numpy as np

my_array1 = np.array([10,20,30,40])
my_array2 = np.array([50,60,70,80])

new_array = np.concatenate((my_array1, my_array2))
print(new_array)
```

```
[10 20 30 40 50 60 70 80]
```

In [4]:
```
my_array1 = np.array([[10,20,30,40],[50,60,70,80]])
my_array2 = np.array([[50,60,70,80],[7,80,90,15]])

new_array  = np.concatenate((my_array1,my_array2),axis =1)
print(new_array)
```

```
[[10 20 30 40 50 60 70 80]
 [50 60 70 80  7 80 90 15]]
```

1. Stack Function

In [5]:
```
import numpy as np

my_array1 = np.array([10,20,30,40])
my_array2 = np.array([50,60,70,80])


new_array = np.stack((my_array1,my_array2),axis=1)
print(new_array)
```

```
[[10 50]
 [20 60]
 [30 70]
 [40 80]]
```

In [11]:
```
my_array1 = np.array([[10,20,30,40],[50,60,70,80]])
my_array2 = np.array([[50,60,70,80],[7,80,90,15]])

new_array = np.stack((my_array1,my_array2),axis=1)
print(new_array)
```

```
[[[10 20 30 40]
  [50 60 70 80]]

 [[50 60 70 80]
  [ 7 80 90 15]]]
```

In [8]:
```
import numpy as np

my_array1 = np.array([10,20,30,40])
my_array2 = np.array([50,60,70,80])


new_array = np.hstack((my_array1,my_array2))
print(new_array)
```

```
[10 20 30 40 50 60 70 80]
```

In [18]:
```
my_array1 = np.array([[10,20,30,40],[15,45,8,81]])
my_array2 = np.array([[50,60,70,80],[7,80,90,15]])

new_array = np.vstack((my_array1,my_array2))
print(new_array)
```

```
[[10 20 30 40]
 [15 45  8 81]
 [50 60 70 80]
 [ 7 80 90 15]]
```

In [17]:
```
my_array1 = np.array([[10,20,30,40],[50,60,70,80]])
my_array2 = np.array([[50,60,70,80],[7,80,90,15]])

new_array = np.hstack((my_array1,my_array2))
print(new_array)
```

```
[[10 20 30 40 50 60 70 80]
 [50 60 70 80  7 80 90 15]]
```

In [19]:
```
import numpy as np

my_array1 = np.array([10,20,30,40])
my_array2 = np.array([50,60,70,80])


new_array = np.dstack((my_array1,my_array2))
print(new_array)
```

```
[[[10 50]
  [20 60]
  [30 70]
  [40 80]]]
```

Spliting Array

In [27]:
```
import numpy as np

my_array1 = np.array([10,20,30,40,50,60,70,80,90,110,120,130])

new_array = np.array_split(my_array1, 7)
print(new_array)
```

```
[array([10, 20]), array([30, 40]), array([50, 60]), array([70, 80]), array([
90, 110]), array([120]), array([130])]
```

In [29]:
```
import numpy as np

my_array1 = np.array([10,20,30,40,50,60,70,80,90,110,120,130])

new_array = np.array_split(my_array1, 4)
print(new_array[0])
print(new_array[1])
print(new_array[2])
print(new_array[3])
```

```
[10 20 30]
[40 50 60]
[70 80 90]
[110 120 130]
```

In [33]:
```
my_array1 = np.array([[10,20],[30,40],[50,60],[70,80],[90,100],[110,120]])

new_array = np.array_split(my_array1,3)
print(new_array[0])
print(new_array[1])
print(new_array[2])
```

```
[[10 20]
 [30 40]]
[[50 60]
 [70 80]]
[[ 90 100]
 [110 120]]
```

In [36]:
```
my_array1 = np.array([[10,20],[30,40],[50,60],[70,80],[90,100],[110,120]])

new_array = np.array_split(my_array1,3,axis=1)
print(new_array[0])
print(new_array[1])
print(new_array[2])
```

```
[[ 10]
 [ 30]
 [ 50]
 [ 70]
 [ 90]
 [110]]
[[ 20]
 [ 40]
 [ 60]
 [ 80]
 [100]
 [120]]
[]
```

In [43]:
```
my_array1 = np.array([[10,20,2],[30,40,3],[50,60,4],[70,80,7],[90,100,9],[110,
120,4]])

new_array = np.hsplit(my_array1,3)
print(new_array[0])
print(new_array[1])
print(new_array[2])
```

```
[[ 10]
 [ 30]
 [ 50]
 [ 70]
 [ 90]
 [110]]
[[ 20]
 [ 40]
 [ 60]
 [ 80]
 [100]
 [120]]
[[2]
 [3]
 [4]
 [7]
 [9]
 [4]]
```

In [ ]: