- Pracitcing Numpy Here

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In [1]:
```
import numpy as np
```

- Creating An Array

In [5]:
```
# 1 - D Array
games = np.array(["COD Warzone", "Valorant", "Battlefield", "ModernWarfare"])
games
```

Out[5]:
```
array(['COD Warzone', 'Valorant', 'Battlefield', 'ModernWarfare'],
      dtype='<U13')
```

In [7]:
```
# Practicing IndeXing on Array
games[1]
```

Out[7]:
```
'Valorant'
```

In [8]:
```
games[0:]
```

Out[8]:
```
array(['COD Warzone', 'Valorant', 'Battlefield', 'ModernWarfare'],
      dtype='<U13')
```

In [9]:
```
games[2:5]
```

Out[9]:
```
array(['Battlefield', 'ModernWarfare'], dtype='<U13')
```

In [ ]:
```
# - Different functions of Array
```

In [10]:
```
np.ones(10)
```

Out[10]:
```
array([1., 1., 1., 1., 1., 1., 1., 1., 1., 1.])
```

In [14]:
```
np.zeros(10)
```

Out[14]:
```
array([0., 0., 0., 0., 0., 0., 0., 0., 0., 0.])
```

In [21]:
```
np.empty(3)
```

Out[21]:
```
array([2.05833592e-312, 2.14321575e-312, 5.68175493e-322])
```

In [28]:
```
np.arange(10,20)
```

Out[28]:
```
array([10, 11, 12, 13, 14, 15, 16, 17, 18, 19])
```

In [29]:
```
np.arange(10, 100, 10)
```

Out[29]:
```
array([10, 20, 30, 40, 50, 60, 70, 80, 90])
```

In [32]:
```
np.linspace(0,100,5)
```

Out[32]:
```
array([  0.,  25.,  50.,  75., 100.])
```

In [35]:
```
a = np.array([10, 20, 30, 40, 50])
b = np.array([60, 70, 80, 90, 100])
np.concatenate((a,b))
```

Out[35]:
```
array([ 10,  20,  30,  40,  50,  60,  70,  80,  90, 100])
```

In [72]:
```
# - 2D Array
c = np.array([[0, 1, 2, 3],
                          [4, 5, 6, 7],
                         [0, 1, 2, 3],
                          [4, 5, 6, 7]])
c
```

Out[72]:
```
array([[0, 1, 2, 3],
       [4, 5, 6, 7],
       [0, 1, 2, 3],
       [4, 5, 6, 7]])
```

In [73]:
```
c.ndim
```

Out[73]:
```
2
```

In [57]:
```
c.size
```

Out[57]:
```
24
```

In [58]:
```
c.shape
```

Out[58]:
```
(3, 2, 4)
```

In [65]:
```
re = c.reshape(12, 2)
re
```

Out[65]:
```
array([[0, 1],
       [2, 3],
       [4, 5],
       [6, 7],
       [0, 1],
       [2, 3],
       [4, 5],
       [6, 7],
       [0, 1],
       [2, 3],
       [4, 5],
       [6, 7]])
```

In [74]:
```
# - Creating 3D Array
lst = np.array([[[0, 1, 2, 3],
                          [4, 5, 6, 7]],
                         [[0, 1, 2, 3],
                          [4, 5, 6, 7]],
                         [[0 ,1 ,2, 3],
                          [4, 5, 6, 7]]])
lst
```

Out[74]:
```
array([[[0, 1, 2, 3],
        [4, 5, 6, 7]],

       [[0, 1, 2, 3],
        [4, 5, 6, 7]],

       [[0, 1, 2, 3],
        [4, 5, 6, 7]]])
```

In [76]:
```
lst.ndim
```

Out[76]:
```
3
```