Converts the array into 1D

- ravel - shallow copy
- flatten - deep copy

- np.append(old array,new array,axis=dimension-1)

In [1]:

```
#Import package
import numpy as np
```

In [2]:

```
arr = np.arange(1,21).reshape(5,4)
```

In [5]:

```
arr1=np.ravel(arr)
```

In [4]:

```
arr.ndim
```

Out[4]:

```
2
```

In [6]:

```
arr1
```

Out[6]:

```
array([ 1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16, 17,
       18, 19, 20])
```

In [7]:

```
arr1.ndim
```

Out[7]:

```
1
```

In [8]:

```
arr2 = arr.flatten()
```

In [9]:

```
arr2
```

Out[9]:

```
array([ 1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12, 13, 14, 15, 16, 17,
       18, 19, 20])
```

In [10]:

```
arr2.ndim
```

Out[10]:

```
1
```

In [24]:

```
arr = np.arange(1,101,2).reshape(5,5,2)
arr
```

Out[24]:

```
array([[[ 1,  3],
        [ 5,  7],
        [ 9, 11],
        [13, 15],
        [17, 19]],

       [[21, 23],
        [25, 27],
        [29, 31],
        [33, 35],
        [37, 39]],

       [[41, 43],
        [45, 47],
        [49, 51],
        [53, 55],
        [57, 59]],

       [[61, 63],
        [65, 67],
        [69, 71],
        [73, 75],
        [77, 79]],

       [[81, 83],
        [85, 87],
        [89, 91],
        [93, 95],
        [97, 99]]])
```

In [25]:

```
arr.shape
```

Out[25]:

```
(5, 5, 2)
```

In [29]:

```
1 temp_arr=np.arange(20,30).reshape(5,1,2)
```

In [30]:

```
1 upd_arr=np.append(arr,temp_arr,axis=2)
```

```
---------------------------------------------------------------------------
-
ValueError                                Traceback (most recent call las
t)
Input In [30], in <cell line: 1>()
----> 1 upd_arr=np.append(arr,temp_arr,axis=2)

File <__array_function__ internals>:5, in append(*args, **kwargs)

File ~\anaconda3\lib\site-packages\numpy\lib\function_base.py:4817, in app
end(arr, values, axis)
   4815     values = ravel(values)
   4816     axis = arr.ndim-1
-> 4817 return concatenate((arr, values), axis=axis)

File <__array_function__ internals>:5, in concatenate(*args, **kwargs)

ValueError: all the input array dimensions for the concatenation axis must
match exactly, but along dimension 1, the array at index 0 has size 5 and
the array at index 1 has size 1
```

In [ ]:

```
1
```

In [ ]:

```
1
```

In [ ]:

```
1
```