

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

```
In [2]: a1=[4,1,3,5]
array1=np.array(a1)
print(array1)
print(type(array1))

[4 1 3 5]
<class 'numpy.ndarray'>
```

```
In [3]: print(array1.shape)

(4,)
```

```
In [4]: print(array1[2])
print(array1[0])

3
4
```

```
In [5]: print(array1.reshape(1,4))
print(array1.reshape(4,1))

[[4 1 3 5]]
[[4]
 [1]
 [3]
 [5]]
```

```
In [6]: array2=array1.reshape(1,4)
array4=array1.reshape(4,1)
print(array2.shape)
print(array3.shape)

(1, 4)
```

```
-----
NameError                                Traceback (most recent call last)
~\AppData\Local\Temp\ipykernel_10536\1581529163.py in <module>
      2 array4=array1.reshape(4,1)
      3 print(array2.shape)
----> 4 print(array3.shape)

NameError: name 'array3' is not defined
```

```
In [7]: array2=array1.reshape(1,4)
array3=array1.reshape(4,1)
print(array2.shape)
print(array3.shape)

(1, 4)
(4, 1)
```

```
In [8]: a2=[3,2,1]
a3=[6,5,4]
a4=[9,8,7]
array4=np.array([a2,a3,a4])
print(type(array4))
print(array4)
print(array4.shape)
```

```
<class 'numpy.ndarray'>
[[3 2 1]
 [6 5 4]
 [9 8 7]]
(3, 3)
```

```
In [9]: print(array4.reshape(1,9))
        print(array4.reshape(9,1))
```

```
[[3 2 1 6 5 4 9 8 7]]
[[3]
 [2]
 [1]
 [6]
 [5]
 [4]
 [9]
 [8]
 [7]]
```

```
In [10]: print(array4)
```

```
[[3 2 1]
 [6 5 4]
 [9 8 7]]
```

```
In [11]: a5=[1,2,3,4,5]
        a6=[7,8,9,0,1]
        a7=[1,3,4,5,6]
        a8=[7,7,2,3,4]
        array5=np.array([a5,a6,a7,a8])
        print(array5)
```

```
[[1 2 3 4 5]
 [7 8 9 0 1]
 [1 3 4 5 6]
 [7 7 2 3 4]]
```

```
In [12]: print(array5[:,:])
```

```
[[1 2 3 4 5]
 [7 8 9 0 1]
 [1 3 4 5 6]
 [7 7 2 3 4]]
```

```
In [18]: print(array5[2:,1:3])
```

```
[[3 4]
 [7 2]]
```

```
In [19]: print(array5[2:,1:3])
```

```
[[3 4]
 [7 2]]
```

```
In [23]: print(array5[2:,1:3])
```

```
[[3 4]
 [7 2]]
```

```
In [26]: print(array5[2:,1:3])
```

```
[[3 4]
 [7 2]]
```

```
In [25]: print(array5[2:,1:3])
```

```
[[3 4]
 [7 2]]
```

```
In [27]: print(array5[1:,1:])
```

```
[[8 9 0 1]
 [3 4 5 6]
 [7 2 3 4]]
```

```
In [31]: print(array5[1:3,:2])
```

```
[[7 8]
 [1 3]]
```

```
In [ ]:
```