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

In [17]:
```
l1=[4,1,3,5]
ar1=np.array(l1)
print(ar1)
print(type(ar1))
```

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

In [18]:
```
print(ar1.shape)
```

```
(4,)
```

In [32]:
```
print(ar1[2])
print(ar1[0])
```

```
3
4
```

In [21]:
```
print(ar1.reshape(1,4))
print(ar1.reshape(4,1))
```

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

In [23]:
```
ar2=ar1.reshape(1,4)
ar3=ar1.reshape(4,1)
print(ar2.shape)
print(ar3.shape)
```

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

In [26]:
```
l2=[3,2,1]
l3=[6,5,4]
l4=[9,8,7]
ar4=np.array([l2,l3,l4])
print(type(ar4))
print(ar4)
print(ar4.shape)
```

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

In [28]:
```
print(ar4.reshape(1,9))
print(ar4.reshape(9,1))
```

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

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

In [33]:
```
print(ar4)
```

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

In [38]:
```
l5=[1,2,3,4,5]
l6=[7,8,9,0,1]
l7=[1,3,4,5,6]
l8=[7,7,2,3,4]
ar5=np.array([l5,l6,l7,l8])
print(ar5)
```

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

In [39]:
```
print(ar5[:,:])
```

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

In [41]:
```
print(ar5[2:,1:3])
```

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

In [42]:
```
print(ar5[1:,1:])
```

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

In [43]:
```
print(ar5[1:3,:2])
```

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

In [ ]:

In [ ]: