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

INDEXING ,ARRAY FORMATION AFTER IMPORTING ARRAYS

```
In [ ]:  A=[1,2,3,4,5]
         ar1=np.array(A)
         print(ar1)
         print(type(ar1))
         print(ar1[3])
         print(ar1.shape)
```

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

CONVERTING MULTIPLE LIST INTO AN ARRAY

```
In [ ]:  a=[1,2,3,4,5]
         b=[7,8,9,0,1]
         c=[1,3,4,5,6]
         d=[7,7,2,3,4]
         arr2=np.array([a,b,c,d])
         print(arr2)
         print(arr2.shape)
```

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

RESHAPING AN ARRAY

```
In [ ]:  arr2.reshape(1,20)
         print(arr2.shape)
         print(arr2)
```

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

ARRAY SLICING

```
In [ ]:  arr2[:,:]# diplay the exact array
```

```
Out[ ]:  array([[1, 2, 3, 4, 5],
                [7, 8, 9, 0, 1],
                [1, 3, 4, 5, 6],
                [7, 7, 2, 3, 4]])
```

```
In [ ]:  print("REPRESENTING  ROW")
         arr2[1:,:]
```

```
REPRESENTING  ROW
Out[ ]:  array([[7, 8, 9, 0, 1],
                [1, 3, 4, 5, 6],
                [7, 7, 2, 3, 4]])
```

```
In [ ]:  print("REPRESENTING COLUMN")
         arr2[:,:2]
```

```
REPRESENTING COLUMN
Out[ ]:  array([[1, 2],
                [7, 8],
                [1, 3],
                [7, 7]])
```

```
In [ ]:  arr2[2:,1:3]
```

```
Out[ ]:  array([[3, 4],
                [7, 2]])
```

```
In [ ]:  arr2[1:,1:]
```

```
Out[ ]:  array([[8, 9, 0, 1],
                [3, 4, 5, 6],
                [7, 2, 3, 4]])
```

```
In [ ]:  arr2[1:3,:2]
```

```
Out[ ]:  array([[7, 8],
                [1, 3]])
```