```
import numpy as np
arr=np.array([1,2,3,4,5])
print(arr)
```

```
[1 2 3 4 5]
```

To create an nd array,we can pass a list,tuple or array

```
import numpy as np
#arr=np.array([1,2,3,4]) #passing the list
arr=np.array((1,2,3,4)) #passing the tuple
print(arr)
print(type(arr))
```

```
[1 2 3 4]
<class 'numpy.ndarray'>
```

use a tuple to create a Numpy array:

```
import numpy as np
arr=np.array((1,2,3,4,5))
print(arr)
```

```
[1 2 3 4 5]
```

```
#create a 0-D array with value 42
import numpy as np
arr=np.array(42)  #0-D array
print(arr)
print(type(arr))
```

```
42
<class 'numpy.ndarray'>
```

```
#create a 2-D array containing the value 1,2,3,4,5:
import numpy as np
arr=np.array([1,2,3,4,5])
print(arr)
```

```
[1 2 3 4 5]
```

```
#create a 2-D array containing two array with the values1,2,3,4,5,6
import numpy as np
arr=np.array([[1,2,3],[4,5,6]])
print(arr)
print(type(arr))
```

```
[[1 2 3]
 [4 5 6]]
<class 'numpy.ndarray'>
```

```
import numpy as np
arr=np.array([[[1,2,3],[4,5,6]],[[7,8,9],[10,11,12]]])
print(arr)
print(type(arr))
```

```
[[[ 1  2  3]
  [ 4  5  6]]

 [[ 7  8  9]
  [10 11 12]]]
<class 'numpy.ndarray'>
```

```
import numpy as np
arr=np.array([[[1,2,3],[4,5,6]],[[1,2,3],[4,5,6]]])
print(arr)
```

```
[[[1 2 3]
  [4 5 6]]

 [[1 2 3]
  [4 5 6]]]
```

Numpy Array provides the ndim attribute thet return an integer that tells how many dimension the array have

```
import numpy as np
a=np.array(42)
b=np.array([1,2,3,4,5])
c=np.array([[1,2,3],[4,5,6]])
d=np.array([[[1,2,3],[4,5,6]],[[1,2,3],[4,5,6]]])
print("dimension of a is",a.ndim)
print("dimension of b is",b.ndim)
print("dimension of c is",c.ndim)
print("dimension of d is",d.ndim)
```

```
dimension of a is 0
dimension of b is 1
dimension of c is 2
dimension of d is 3
```

```
import numpy as np
arr=np.array([1,2,3,4])
print(arr)
print(arr[0])
```

```
[1 2 3 4]
1
```

```
import numpy as np
arr=np.array([1,2,3,4])
print(arr)
print(arr[2]+arr[3])
```

```
[1 2 3 4]
7
```

```
import numpy as np
arr=np.array([1,2,3,4])
print(arr[2]*arr[3])
```

```
12
```

```
#access the 2nd element on 1nd dim:
import numpy as np
arr=np.array([[1,2,3,4,5],[6,7,8,9,10]])
print(arr[1,-4])
```

```
7
```

```
import numpy as np
arr=np.array([[1,2,3,4,5],[6,7,8,9,10]])
print('5th element of 2 dim:',arr[1,4])
```

```
5th element of 2 dim: 10
```

Access 3-D array

```
import numpy as np
arr=np.array([[[1,2,3],[4,5,6]],[[7,8,9],[10,11,12]]])
#print(arr)
#print(arr[0,1,2])
#print(arr[1,1,1])
print(arr[1,0,2])
```

```
9
```

```
import numpy as np
arr=np.array([[1,2,3,4,5],[6,7,8,9,10]])
print(arr[-2,-1])
```

```
5
```

```
import numpy as np
arr=np.array([1,2,3,4,5,6,7])
print(arr[1:4])
```

```
[2 3 4]
```

```
import numpy as array
arr=np.array([1,2,3,4,5,6,7])
print(arr[1:4:2])
```

```
[2 4]
```

```
import numpy as np
arr=np.array([1,2,3,4,5,6,7])
print(arr[:4])
```

```
[1 2 3 4]
```