

```
In [1]: import numpy as np  
arr=np.array([0,1,2])
```

```
In [2]: arr.dtype
```

```
Out[2]: dtype('int32')
```

```
In [8]: print(arr)
```

```
[0. 0. 0. 0. 0.]
```

```
In [13]:
```

```
In [20]: arr=np.zeros(5, dtype= 'float')  
print(arr)
```

```
[0. 0. 0. 0. 0.]
```

```
In [16]: arr=np.arange(0,3,2)  
print(arr)
```

```
[0 2]
```

```
In [21]: arr=np.array([[0,1],[2,3]], dtype='float')  
print(arr)
```

```
[[0. 1.]  
 [2. 3.]]
```

```
In [23]: a=np.arange(0,4)  
print(a)  
b=a.reshape(2,2)  
print(b)
```

```
[0 1 2 3]  
[[0 1]  
 [2 3]]
```

```
In [25]: arr=np.arange(0,4).reshape(2,2)  
print(arr)
```

```
[[0 1]  
 [2 3]]
```

```
In [26]: print("array shape is ",np.shape(arr))
```

```
array shape is (2, 2)
```

```
In [27]: type(np.shape(arr))
```

```
Out[27]: tuple
```

```
In [28]: print(np.shape(arr)[0])
```

2

```
In [29]: row,col =np.shape(arr)
print(row)
```

2

```
In [30]: arr=np.average([0,1,2])
print(np.average(arr))
```

1.0

```
In [31]: arr1=np.array([1,2,3])
arr2=np.array([9,8,7])
sum_arr = np.add(arr1,arr2)
print(sum_arr)
type(sum_arr)
```

[10 10 10]

Out[31]: numpy.ndarray

```
In [32]: arr=np.array([1,5,7])
sum_all=np.sum(arr)
print(sum_all)
```

13

```
In [33]: num=int(input("Enter a number"))
print("square root is:",np.sqrt(num))
```

Enter a number8
square root is: 2.8284271247461903

```
In [34]: type(np.sqrt(8))
```

Out[34]: numpy.float64

```
In [ ]:
```