

```
In [4]: np.ones((5,5))
```

```
Out[4]: array([[1., 1., 1., 1., 1.],
               [1., 1., 1., 1., 1.],
               [1., 1., 1., 1., 1.],
               [1., 1., 1., 1., 1.],
               [1., 1., 1., 1., 1.]])
```

```
In [94]: print("hey there i am vasim")
```

```
hey there i am vasim
```

```
In [95]: import numpy as np
         np.zeros((3,3))
```

```
Out[95]: array([[0., 0., 0.],
                [0., 0., 0.],
                [0., 0., 0.]])
```

```
In [3]: import numpy as np
        list=[5,1,2,5,2,5,5]
        arr=np.array(list)
        arr
```

```
Out[3]: array([5, 1, 2, 5, 2, 5, 5])
```

In [96]:

```
np.random.randint(1,100,(3,3))
```

```
Out[96]: array([[32, 24, 33],  
               [63, 11, 16],  
               [69, 40, 38]])
```

In [97]:

```
np.random.seed(44)  
np.random.randint(1,100,(3,3))
```

```
Out[97]: array([[21, 36, 46],  
               [60,  4, 97],  
               [85,  4, 24]])
```

In [99]:

```
np.random.seed(15)  
arr=np.random.randint(1,200,10)  
arr
```

```
Out[99]: array([141, 134, 120, 129, 157, 156,  86, 119, 176,  18])
```

```
In [8]: import numpy as np
np.random.seed(15)
arr=np.random.randint(1,200,10)
arr

arr.max()
arr.min()
arr.sum()
arr.mean()

arr.argmax()
arr.argmin()
arr.reshape(5,2)
```

```
Out[8]: array([[141, 134],
               [120, 129],
               [157, 156],
               [ 86, 119],
               [176, 18]])
```

```
In [12]: mat= np.arange(0,100).reshape(10,10)
mat
```

```
Out[12]: array([[ 0,  1,  2,  3,  4,  5,  6,  7,  8,  9],
                [10, 11, 12, 13, 14, 15, 16, 17, 18, 19],
                [20, 21, 22, 23, 24, 25, 26, 27, 28, 29],
                [30, 31, 32, 33, 34, 35, 36, 37, 38, 39],
                [40, 41, 42, 43, 44, 45, 46, 47, 48, 49],
                [50, 51, 52, 53, 54, 55, 56, 57, 58, 59],
                [60, 61, 62, 63, 64, 65, 66, 67, 68, 69],
                [70, 71, 72, 73, 74, 75, 76, 77, 78, 79],
                [80, 81, 82, 83, 84, 85, 86, 87, 88, 89],
                [90, 91, 92, 93, 94, 95, 96, 97, 98, 99]])
```

In [15]: `mat[2,3]`

Out[15]: 23

In [19]: `mat[:,0]`

Out[19]: `array([ 0, 10, 20, 30, 40, 50, 60, 70, 80, 90])`

In [24]: `mat[0,:]`

Out[24]: `array([0, 1, 2, 3, 4, 5])`

In [22]: `mat[0:3,0:3]`

Out[22]: `array([[ 0, 1, 2],  
 [10, 11, 12],  
 [20, 21, 22]])`

In [ ]: