

In [29]:

```
import numpy as np
a = np.zeros([3,3],dtype=int)
print(a)
```

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

In [30]:

```
import numpy as np
a = np.ones([3,3],dtype=int)
print(a)
```

```
[[1 1 1]
 [1 1 1]
 [1 1 1]]
```

In [31]:

```
a=np.array(['1,2,3,4,5,6,7'])
print(a)
for row in a:
    for val in row:
        print(val,end=' ')
    print()
```

```
['1,2,3,4,5,6,7']
1 , 2 , 3 , 4 , 5 , 6 , 7
```

In [32]:

```
arr=np.array([])
n=int(input("Enter the size : "))
for i in range(n):
    v=input("Enter value : ")
    arr=np.append(arr,v)
print(arr)
```

```
Enter the size : 3
Enter value : 1
Enter value : 2
Enter value : 3
['1' '2' '3']
```

In [33]:

```
import numpy as np
a=[0, 1, 6, 1, 4, 1, 2, 2, 7]
print("Original array:")
print(a)
print("Number of occurrences of each value : ")
print(np.bincount(a))
```

```
Original array:
[0, 1, 6, 1, 4, 1, 2, 2, 7]
Number of occurrences of each value :
[1 3 2 0 1 0 1 1]
```

In [34]:

```
import collections
x = np.array([1,2,3,4,5,1,2,4,4,4,4,1,9,9,9,9,1])
print("Original array:")
counter = collections.Counter(x)
print(counter)
```

```
Original array:
Counter({4: 6, 9: 5, 1: 4, 2: 2, 3: 1, 5: 1})
```

In [35]:

```
import collections
x = np.array([1,2,3,4,5,1,2,4,4,4,4,1,9,9,9,9,1])
print("Origin arr")
print(x)
a=np.count_nonzero(x == 4)
print("the count of given num is : " ,a)
```

```
Origin arr
[1 2 3 4 5 1 2 4 4 4 4 1 9 9 9 9 1]
the count of given num is : 6
```

In [36]:

```
import collections
x = np.array([1,2,3,4,5,1,2,4,4,4,4,1,9,9,9,9,1])
print("Origin arr")
print(x)
a=np.count_nonzero(x < 4)
print("the count of less than 4 is :",a)
```

```
Origin arr
[1 2 3 4 5 1 2 4 4 4 4 1 9 9 9 9 1]
the count of less than 4 is : 7
```

In [37]:

```
arra=np.array([3,7,1,6,8])
print("Given array:")
print(arra)
print(8 in arra)
```

```
Given array:
[3 7 1 6 8]
True
```

In [38]:

```
a=np.array([1,2,3,4,5,6,7])
np.max(a)
```

```
Out[38]:
7
```

In [39]:

```
np.min(a)
```

```
Out[39]:
1
```

In []: