

In [30]:

```
import numpy as np
```

In [31]:

```
a=np.zeros(9,dtype=int).reshape(3,3)
a
```

Out[31]:

```
array([[0, 0, 0],
       [0, 0, 0],
       [0, 0, 0]])
```

In [32]:

```
b=np.ones(9,dtype=int)
b
```

Out[32]:

```
array([1, 1, 1, 1, 1, 1, 1, 1, 1])
```

In [33]:

```
c=np.arange(10)
for i in c:
    print(i)
```

```
0
1
2
3
4
5
6
7
8
9
```

In [38]:

```
s=int(input("enter size"))
a=np.zeros(s,dtype=int)
for i in range(s):
    d=int(input("enter element"))
    a[i]=d
a
```

```
enter size2
enter element1
enter element2
```

Out[38]:

```
array([1, 2])
```

In [39]:

```
a=np.array([2,3,5,7,2,4,3,4,5,2,3,4,5,8,9])
b=dict()
for i in a:
    b[i]=b[i]+1 if i in b else 1
for i in b:
    print(i,":",b[i])
```

```
2 : 3
3 : 3
5 : 3
7 : 1
4 : 3
8 : 1
9 : 1
```

In [40]:

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

Original array:

Counter({1: 4, 2: 2, 3: 1, 4: 1, 5: 1, 9: 1})

In [41]:

```
a=np.array([2,3,5,7,2,4,3,4,5,2,3,4,5,8,9])
np.count_nonzero(a == 3)
```

Out[41]:

3

In [42]:

```
a=np.array([2,3,5,7,2,4,3,4,5,2,3,4,5,8,9])
b=0
for i in a:
    if i<4:
        b+=1
b
```

Out[42]:

6

In [43]:

```
a=np.array([2,3,5,7,2,4,3,4,5,2,3,4,5,8,9])
print(a.min())
print(a.max())
```

2

9

In [44]:

```
x = np.array([1,2,3,4,5,1,2,1,9,1])
2 in x
```

Out[44]:

True