

In [1]:

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

[0 0 0]

In [16]:

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

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

In [20]:

```
a=np.ones((2,3),dtype=int)
print(a)
```

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

In [4]:

```
x = np.array([1,2,3,4,5,1,2,1,9,1])
for i in x:
    print(i,end=" ")
```

1 2 3 4 5 1 2 1 9 1

In [5]:

```
s=int(input("Enter size: "))
a=np.zeros(s,dtype=int)
for i in range(s):
    a[i]=int(input("Enter value: "))
print(a)
```

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

In [6]:

```
x = np.array([1,2,3,4,5,1,2,1,9,1])
dict1={}
for i in x:
    dict1[i]=0
for i in x:
    if i in dict1:
        dict1[i]+=1
    else:
        dict1[i]=1
for i,j in dict1.items():
    print("{} : {}".format(i,j))
```

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

In [7]:

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

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

In [8]:

```
print(np.count_nonzero(x == 1))
```

4

In [9]:

```
n=int(input())  
print(np.count_nonzero(x==n))
```

1
4

In [21]:

```
print(np.count_nonzero(x<4))
```

7

In [12]:

```
a=np.array([1,2,6,9,10,17,30,28,35])  
print(1 in a)  
print(2 in a)  
print(3 in a)  
print(5 in a)
```

True
True
False
False

In [15]:

```
a=np.array([234,3456,7854,121,543,7898,4353,2114,4236,1162,1323,4651])  
max1=np.max(a)  
min1=np.min(a)  
print(max1)  
print(min1)
```

7898
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In []: