In [1]:

```
import numpy as np
```

In [17]:

```
import pandas as pd
```

In [19]:

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

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

In [20]:

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

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

In [24]:

```
c=np.array([1,2,3,4])
print(c)
for i in c:
    print(i)
```

```
[1 2 3 4]
1
2
3
4
```

In [25]:

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

Out[25]:

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

In [28]:

```
d=[]
n=int(input("enter range"))
for i in range(0,n):
    l=int(input("enter values"))
    d.append(l)
print(d)
```

```
enter range3
enter values1
enter values2
enter values3
[1, 2, 3]
```

In [29]:

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

In [30]:

```
import collections
```

In [31]:

```
print("original array:")
print(x)
counter=collections.Counter(x)
print(counter)
```

```
original array:
[1 2 3 4 5 6 7 1 4 3]
Counter({1: 2, 3: 2, 4: 2, 2: 1, 5: 1, 6: 1, 7: 1})
```

In [32]:

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

Out[32]:

```
2
```

In [33]:

```
np.count_nonzero(x==4)
```

Out[33]:

```
2
```

In [34]:

```
np.count_nonzero(x==7)
```

Out[34]:

```
1
```

In [35]:

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

Out[35]:

```
5
```

In [38]:

```
max(x)
```

Out[38]:

```
7
```

In [39]:

```
min(x)
```

Out[39]:

```
1
```

In [40]:

```
3 in x
```

Out[40]:

```
True
```

In [41]:

```
10 in x
```

Out[41]:

```
False
```

In [ ]:

```

```