

In [1]:

```
import numpy as np
import pandas as pd
```

In [5]:

```
a=np.zeros((2,4),dtype=int)
print(a)
```

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

In [8]:

```
a=np.ones((4,4),dtype=float)
print(a)
```

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

In [34]:

```
a=np.array([[10,20,30,40],[50,60,70,80]])
print(a)
```

```
[[10 20 30 40]
 [50 60 70 80]]
```

In [35]:

```
for i in a:
    for j in i:
        print(j)
```

```
10
20
30
40
50
60
70
80
```

In [36]:

```
for i in np.nditer(a):
    print(i)
```

```
10
20
30
40
50
60
70
80
```

In [33]:

```
a=int(input("Enter the size:"))
x=np.empty((0))
for i in range(0,a):
    x=np.append(a,i)
print(x)
```

Enter the size:10

[10 9]

In [46]:

```
a=np.array([1,2,3,4,5,1,13])
print(np.bincount(a))
```

[0 2 1 1 1 1 0 0 0 0 0 0 0 1]

In [53]:

```
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 [54]:

```
y=int(input("Enter number:"))
print(np.count_nonzero(x == y))
```

Enter number:1

4

In [55]:

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

7

In [56]:

```
print(np.count_nonzero(x == 9))
```

1

In [64]:

```
a=np.array([10,20,30,23,34,1,7,38])
print(np.max(a))
print(np.min(a))
```

38

1

In [67]:

```
arr=[]  
a =int(input("Size of array:"))  
for i in range(a):  
    arr.append(int(input("Element:")))  
arr= np.array(arr)  
print(arr)
```

Size of array:3

Element:1

Element:2

Element:3

[1 2 3]

In [79]:

```
a=int(input("Size of array:"))  
ar= np.empty(a)  
for i in range(a):  
    x=int(input("Element:"))  
    ar[i]=x  
print(ar)  
print(np.floor(ar))
```

Size of array:3

Element:1

Element:2

Element:3

[1. 2. 3.]

[1. 2. 3.]