In [5]:
```
import numpy as np
arr=np.array([1,2,3,4,5,6])
print("\nOriginal array: ",arr)
x=np.where(arr==4)
print("Indexes where the value is 4:",x)
```

```
Original array:  [1 2 3 4 5 6]
Indexes where the value is 4: (array([3]),)
```

In [6]:
```
arr=np.array([1,2,3,4,5,6,7,8])
x=np.where(arr%2==0)
print("\noriginal array: ",arr)
print("\nIndexes where the values are even:",x)
```

```
original array:  [1 2 3 4 5 6 7 8]

Indexes where the values are even: (array([1, 3, 5, 7]),)
```

In [7]:
```
x=np.searchsorted(arr,3,side='left')
print("\n Indexes where the value 3 should be inserted, starting from the ri
```

```
 Indexes where the value 3 should be inserted, starting from the right:  2
```

In [8]:
```
arr=np.array([3,2,0,1])
print("\nOriginal array: ",arr)
print("\nSorted array",np.sort(arr))
arr=np.array([[3,2,4],[5,0,1]])
print("\nOriginal array: ",arr)
print("Sorted array: ",np.sort(arr))
```

```
Original array:  [3 2 0 1]

Sorted array [0 1 2 3]

Original array:  [[3 2 4]
 [5 0 1]]
Sorted array:  [[2 3 4]
 [0 1 5]]
```

In [10]:
```
arr=np.array([41,42,43,44])
x=[True,False,True,False]
newarr=arr[x]
print("\n Original array: ",arr)
print("\n Filter index :",x)
print("\nFiter array: ",newarr)
```

```
 Original array:  [41 42 43 44]

 Filter index : [True, False, True, False]

Fiter array:  [41 43]
```

In [12]:
```
arr=np.array([41,42,43,44])
filter_arr=arr>42
newarr=arr[filter_arr]
print("\noriginal array: ",arr)
```

```
print("\n Filter array:Condition->42:",filter_arr)
print("\n New array: ",newarr)
```

```
original array:  [41 42 43 44]

 Filter array:Condition->42: [False False  True  True]

 New array:  [43 44]
```

In [ ]: