In [1]:
```
# VIVEK-CHAUHAN-ADVANCED-DATA-ANALYTICS-NUMPY
```

In [7]:
```
import numpy as np
import pandas as pd
```

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

```
[1 2 3 4 5]
```

In [10]:
```
print(type(a))
```

```
<class 'numpy.ndarray'>
```

In [18]:
```
print(a[2])
```

```
3
```

In [20]:
```
print(a[0] + a[1])
```

```
3
```

In [24]:
```
print(a[0:2])
```

```
[1 2]
```

In [28]:
```
print(a[0:])
```

```
[1 2 3 4 5]
```

In [30]:
```
print(a[:3])
```

```
[1 2 3]
```

In [32]:
```
print(a[-3:-1])
```

```
[3 4]
```

In [34]:
```
print(a[1:5:2])
```

```
[2 4]
```

In [9]:
```
b = np.array(["vivek","data-analytics"])
print(b)
```

```
['vivek' 'data-analytics']
```

In [15]:
```
print(type(b))
```

```
<class 'numpy.ndarray'>
```

In [21]:
```
print(b.dtype)
```

```
<U14
```

In [27]:
```
c = np.array([1,2,3,4,5], dtype='S') #it's a update in data type declaration.
print(c)
```

```
[b'1' b'2' b'3' b'4' b'5']
```

In [9]:
```
d = np.array([1.1,20.22,30.55])
print(d)
e = d.astype("i") #it will convert in interger value and remove the decimal values.
print(e)
```

```
[ 1.1  20.22 30.55]
[ 1 20 30]
```

In [35]:
```
a1 = np.array([1,2,3])
a2 = np.array([4,5,6])

a3 = np.concatenate((a1,a2))
print(a3)
```

```
[1 2 3 4 5 6]
```

In [39]:
```
searching = np.array([1,2,3,4,5,4,4,4,4])
print(searching)

s = np.where(searching == 4 )
print(s)  # it will return where our element 4 is present at the index.
```

```
[1 2 3 4 5 4 4 4 4]
(array([3, 5, 6, 7, 8], dtype=int64),)
```

In [45]:
```
sorted = np.array([1,2,3,4,5])
print(sorted)

searchsorted = np.searchsorted(sorted,3)
print(searchsorted) # it will return the index of your particular element.
```

```
[1 2 3 4 5]
2
```

In [58]:
```
sortedarray = np.array([1,2,3,4,5])
print(sorted)

searchsortedright = np.searchsorted(sortedarray,5,side = "right") #it will search t
print(searchsortedright) # it will return the index of your particular element.
```

```
[1 2 3 4 5]
5
```

In [62]:
```
unsortarray = np.array([5,4,3,2,1])
print(unsortarray)

print(np.sort(unsortarray)) # it will return the copy of the array the original arr
```

```
[5 4 3 2 1]
[1 2 3 4 5]
```

In [ ]:
```

```