In [1]:
```
import numpy as np
```

1.Create an array with zeros and ones and print the output

In [2]:
```
a=np.zeros(3)
print(a)
a=np.ones(4)
print(a)
```

```
[0. 0. 0.]
[1. 1. 1. 1.]
```

2.Create an array and print the output

In [4]:
```
a=np.array([10,20,30])
print(a)
```

```
[10 20 30]
```

3.Create an array whose initial content is random and print the output

In [11]:
```
b=np.array([2,4,6,8,10])
print(np.empty(4))
```

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

4.Create an array with the range of values with even intervals

In [13]:
```
c=np.arange(2,10,2)
print(c)
```

```
[2 4 6 8]
```

5.Create an array with values that are spaced linearly in a specified interval

In [14]:
```
c=np.linspace(1,10,num=5)
print(c)
```

```
[ 1.    3.25  5.5   7.75 10.  ]
```

6.Access and manipulate elements in the array

In [23]:
```
a=np.array([1,2,3,4,5])
print(a[a>3])
```

```
[4 5]
```

7.Create a 2 dimensional array and check the shape of the array

In [31]:
```
a=np.array([[1,2,3,4],[2,4,5,6]])
print(np.shape(a))
```

```
(2, 4)
```

8.Using arange() and linspace() func to evenly space values in a specified interval

In [34]:
```
a=np.arange(1,10,4)
b=(np.linspace(1,9,num=3,dtype=np.int64))
print(a)
print(b)
```

```
[1 5 9]
[1 5 9]
```

9.CReate an array of random values between 0 and 1 in a gn shape

In [ ]:
```

```

10.Repeat each element of an array by a specified num of times using repeat() and tile() fun

In [35]:
```
print(np.repeat(a,3))
print(np.tile(a,3))
```

```
[1 1 1 5 5 5 9 9 9]
[1 5 9 1 5 9 1 5 9]
```

11.How do you know the shape and size of an array?

with the help of np.shape() and np.size(),we can able to know the shape and size of an array.

1. Create an array that indicates the total num of elements in an array

In [36]:
```
a=np.array([1,2,3,4,5])
print(np.size(a))
```

```
5
```

13.To find the num of dimensions of array

In [39]:
```
a=np.array([[1,2,3],[2,4,6]])
print(np.ndim(a))
```

```
2
```

14.Create an array and reshape into a new array

In [43]:
```
a=np.array([1,2,3,4])
print(a.reshape(2,2))
```

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

15.Create a null array of size 10

In [ ]:
```

```

16.Create any array with values ranging from 10 to 49 whic is divisible by 7 and print num

In [47]:
```
a=np.arange(10,49)
print(a[a%7==0])
```

```
[14 21 28 35 42]
```

17.Create an array and check any two condn and print output

In [45]:
```
a=np.array([2,50,60,10,25])
print(a[a>45])
print(a[a<25])
```

```
[50 60]
[ 2 10]
```

18.Use arithmetic operator and print the ouput using array

In [50]:
```
a=np.arra
print(a)
```

```
---------------------------------------------------------------------------
IndexError                                Traceback (most recent call last)
<ipython-input-50-756820743e55> in <module>
      1 a=np.array([10,20])
----> 2 print(a[a[0]+a[1]])

IndexError: index 30 is out of bounds for axis 0 with size 2
```

In [ ]:
```
19.Use relational operator
```

In [ ]:
```

```

In [ ]:
```
20.Diff btwn python and ipython
```

Python is a general purpose programming language which has list of commands that excecutes line by line.Beside python,Ipython is an interactive command line terminal , that executes the code instantly if we write one line command