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# 20-07-2023 Create array with 0's and 1's
import numpy as np
print(np.array([[0,0,0,0],[1,1,1,1]]))
# Create array and print
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x=np.array([1,2,3,4])
print(x)
# Create array whose intial content is random and print  it
y=np.random.rand(1,5)
print(y)
# Create an array with the range of values with even intervals
print(np.linspace(1,100,2))
# Create an array with values that are spaced linearly in a specified interval
print(np.arange(0,100,+3))
# Access and manipulate elements in the array
x[1]
x[1]=29
x[1]
# Create a 2-dimensional array and check the shape of the array
print(np.shape(x))
# Using the arange() and linspace() function to evenly space values in a specified interval
print(np.arange(0,100,2))
print(np.linspace(0,100,num=17,dtype=np.int32))
# Create an array of random values between 0 and 1 in a given shape
print(np.random.rand(2,5))
# Repeat each element of an array by a specified number of times using repeat() and tile() functions
print(np.repeat(x,2))
print(np.tile(x,2))
# How do you know the shape and size of an array?
with the help of np.shape and np.size
# Create an array that indicates the total number of elements in an array
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b=np.array([1,2,3,4,5,6,7,8,9])
print(np.size(b))
 # To find the number of dimensions of the array
d=np.array([[1,2,3,4,5],[6,7,8,9,10]])
print(np.ndim(d))
# Create an array and reshape into a new array
c=np.array([1,5,10,15,20,25])
print(c)
print()
print(c.reshape(6,1))
# Create a null array of size 10
f=np.array(10,dtype=np.int32)
print(f)
# Create any array with values ranging from 10 to 49 and print the numbers whose remainders are zero when divided by 7
for g in range(10,50,+1):
   if(g%7==0):
      print(g)
# Create an array and check any two conditions and print the output
h=np.array([1,2,3,4,5,6,7,8,9,10])
i=h[(h<10)&(h>2)]
print(i)
# Use Arithmetic operator and print the output using array
j=np.array([1,2,3])
k=np.array([4,5,6])
l=j+k
print(l)
# Use Relational operators and print the results using array
m=np.array([2,4,6,8,10,12,14,16,18,20])
n=m[(m>10)]
print(n)
```

Difference between python and ipython

Python is a general purpose programming language which provides the basic idle operations, functionset,. while Ipython provides a varitey of features like code auto completion and history review and visualiztion.