import numpy as np

a=np.array([1,2,3])

print("type:%s" %type(a))

print("shape:%s" %a.shape)

print(a[0],a[1],a[2])

a[0]=7

print(a)

a=np.zeros((2,2))

print("zeros:%s" %a)

b=np.array([[1,2,3],[4,5,6]])

print("type:%s" %type(b))

print(b[0,0],[0,1],[1,0])

b=np.ones((1,2))

print("Ones:%s" %b)

e=np.eye(2)

print("Identity:%s" %e)

x=np.array([[1,2],[3,4]])

print("x:%s" %x)

print("sum:%s" %np.sum(x))

print("sum axis=0:%s" %np.sum(x,axis=0))

print("sum axis=1:%s" %np.sum(x,axis=1))

a=np.arange(10000)

b=np.arange(10000)

dp=np.dot(a,b)

print("dot:%s" %dp)

op=np.outer(a,b)

print("outer:%s" %op)

mul=np.multiply(a,b)

print("multiply:%s" %mul)