**AIM: Perform all metrix functions using python**

**Program**

import numpy

# Two matrices are initialized by value

x = numpy.array([[1, 2], [4, 5]])

y = numpy.array([[7, 8], [9, 10]])

# add()is used to add matrices

print ("Addition of two matrices: ")

print (numpy.add(x,y))

# subtract()is used to subtract matrices

print ("Subtraction of two matrices : ")

print (numpy.subtract(x,y))

# divide()is used to divide matrices

print ("Matrix Division : ")

print (numpy.divide(x,y))

print ("Multiplication of two matrices: ")

print (numpy.multiply(x,y))

print ("The product of two matrices : ")

print (numpy.dot(x,y))

print ("square root is : ")

print (numpy.sqrt(x))

print ("The summation of elements : ")

print (numpy.sum(y))

print ("The column wise summation : ")

print (numpy.sum(y,axis=0))

print ("The row wise summation: ")

print (numpy.sum(y,axis=1))

# using "T" to transpose the matrix

print ("Matrix transposition : ")

print (x.T)

print ("Dot of two matrix")

print(numpy.dot(x,y))

**Output**



