```python
# Program for matrix operations

import numpy as np

from numpy import linalg as LA

# Input section matrix: M1= np.array([[1,4],[5,6]])

M2= np.array([[1,-4],[3,-2]])

#Output section matrix

#Matrix Addition print("[M]+[M2]=",M1+M2)

#Matrix Subtraction print("[M1]-[M2]-",M1-M2)

# Matrix Multiplication

print("[M1][M2]=",M1.dot (2)

# Matrix Transpose

print("Transpose of [M1]=",M1.transpose()) # Matrix Inverse

print("Inverse of [M1]=",np. linalg.inv(M1))

#Matrix Eigen Values and Vectors w, v LA.eig(np.array(M1))

print("Eigen Values of [M1]=",w) print("Eigen Vectors of [M1]=",v)
```