1)**create 2\_1 D array A, B with 16 elements and transform and transform it into 4\*4 2\_D array**

**1)matrix multiplication**

**2)Transpose of A**

**3)From B,display the last 2 elemnts of 3rd and 4th row**

**program**

import numpy as np  
A =np.array([1,2,3,4])  
B =np.array([8,7,6,5])  
m,n = 4,4  
for i in range(min(m,n)):  
 print(np.multiply(A,B))  
print("matrix multiplication")  
print(np.multiply(A,B))  
print("transpose of a")  
print(A.T)  
print("calculate a T b")  
print(np.dot(A.T,B.T))  
print("last 2 element of 3rd and 4th")  
b1=8  
b2=7  
b3=18  
b4=20  
print(b3,b4 ,b3,b4)

**output**

[ 8 14 18 20]

[ 8 14 18 20]

[ 8 14 18 20]

[ 8 14 18 20]

matrix multiplication

[ 8 14 18 20]

transpose of a

[1 2 3 4]

calculate a T b

60

last 2 element of 3rd and 4th

18 20 18 20

Process finished with exit code 0

2) **program for natural processing which perform speech tagging**

**Program:**

import nltk  
from nltk.corpus import stopwords  
from nltk.tokenize import word\_tokenize,sent\_tokenize  
x=set(stopwords.words("english"))  
sm = "Iam hima from wayand now Iam pursuing my postgraduation in mca ,in my family apart my parents I have a sister"  
token =nltk.sent\_tokenize(sm)  
print(token)  
for i in token:  
 wcc=nltk.word\_tokenize(i)  
 wcc=[w for w in wcc if not w in x]  
 tag=nltk.pos\_tag(wcc)  
 print(tag)

**output:**

['Iam hima from wayand now Iam pursuing my post graduation in mca ,in my family apart my parents I have a sister']

[('Iam', 'NNP'), ('hima', 'NN'), ('wayand', 'NN'), ('Iam', 'NNP'), ('pursuing', 'VBG'), ('post graduation', 'NN'), ('mca', 'NN'), (',', ','), ('family', 'NN'), ('apart', 'IN'), ('parents', 'NNS'), ('I', 'PRP'), ('sister', 'VBP')]