1. Write a Python Program to Add two Matrices ?

def addMatrices(a,b):

print(f'Inputs: {a},{b}')

if len(a) == len(b):

out\_matrix = []

for ele in range(len(a)):

if len(a[ele]) == len(b[ele]):

out\_matrix.append([])

for sub\_ele in range(len(a[ele])):

out matrix[ele].append(a[ele][sobre ele]+b[ele][subele])

else:

print('Both Matrices must contains same no of rows and columns')

else:

print('Both Matrices must contains same no of rows and columns')

print(f Output: {out\_matrix}')

addMatrices([[1,2,3],[4,5,6],[7,8,9]],[[9,8,7],[6,5,4],[3,2,1]])

addMatrices([[2,3,5],[1,1,1],[2,2,2]],[[4,3,5],[1,2,3],[3,2,1]])

Inputs: [[1, 2, 3], [4, 5, 6], [7, 8, 9]],[[9, 8, 7], [6, 5, 4], [3, 2, 1]]

Output: [[10, 10, 10], [10, 10, 10], [10, 10, 10]]

Inputs: [[2, 3, 5], [1, 1, 1], [2, 2, 2]],[[4, 3, 5], [1, 2, 3], [3, 2, 1]]

Output: [[6, 6, 10], [2, 3, 4], [5, 4, 3]]

2. Write a Python Program to Multiply two Matrices ?

a = [[1,2,3],[4,5,6],[7,8,9]]

b = [[1,4,7],[2,5,8],[3,6,9]]

def multiply\_matrice(a,b):

output = []

if len(a[0]) == len(b):

for ele in range(len(a[0])):

output.append([0 for ele in range(len(b[0]))])

for i in range(len(a)):

for j in range(len(b[0])):

for k in range(len(b)):

output[i][j] += a[i][k]\*b[k][j]

print(output)

else:

print('Matrix Multiplication is Not Possible')

multiply\_matrice(a,b)

[[14, 32, 50], [32, 77, 122], [50, 122, 194]]

3. Write a Python Program to transpose a Matrix ?

a = [[1,2,3],[4,5,6],[7,8,9]]

b = [[1,2],[4,5],[7,8]]

c = [[1,2,3],[4,5,6]]

def generate\_transpose(in\_matrix):

out\_matrix = []

for ele in range(len(in\_matrix[0])):

out\_matrix.append([0 for i in range(len(in\_matrix))])

for i in range(len(in\_matrix)):

for j in range(len(in\_matrix[i])):

out\_matrix[j][i] = in\_matrix[i][j]

print(f'{in\_matrix} -> {out\_matrix}')

generate\_transpose(a)

generate\_transpose(b)

generate\_transpose(c)

[[1, 2, 3], [4, 5, 6], [7, 8, 9]] -> [[1, 4, 7], [2, 5, 8], [3, 6, 9]]

[[1, 2], [4, 5], [7, 8]] -> [[1, 4, 7], [2, 5, 8]]

[[1, 2, 3], [4, 5, 6]] -> [[1, 4], [2, 5], [3, 6]]

4. Write a Python Program to sort Words in an Alphabetical Order ?

def sortString():

in\_string = input("Enter a String: ").title()

sorted\_list = sorted(in\_string.split(' '))

print(' '.join(sorted\_list))

sortString()

Enter a String: Ineuron Full Stack Data Science

Data Full Ineuron Science Stack

5. Write a Python Program to remove Punctuations From a String ?

def remove Punctuations():

punctuations = '''!()-[]{};:'"\,<>./?@#$%^&\*\_~'''

in\_string = input('Enter a String: ')

out\_string = ''

for ele in in\_string:

if else not in punctuations:

out\_string += ele

print(out\_string)

remove Punctuations()

Enter a String: "Full Stacks DS" @ Ineuron

Full Stacks DS Ineuron