**Programming Assignment-8**

1. **Write a Python Program to Add Two Matrices?**

# Program to add two matrices using list comprehension

X = [[12,7,3],

[4 ,5,6],

[7 ,8,9]]

Y = [[5,8,1],

[6,7,3],

[4,5,9]]

result = [[X[i][j] + Y[i][j] for j in range(len(X[0]))] for i in range(len(X))]

for r in result:

print(r)

1. **Write a Python Program to Multiply Two Matrices?**

import numpy as np

# take a 3x3 matrix

A = [[12, 7, 3],

[4, 5, 6],

[7, 8, 9]]

B = [[5, 8, 1, 2],

[6, 7, 3, 0],

[4, 5, 9, 1]]

result= [[0,0,0,0],

[0,0,0,0],

[0,0,0,0]]

result = np.dot(A,B)

for r in result:

print(r)

1. **Write a Python Program to Transpose a Matrix?**

X = [[12,7],

[4 ,5],

[3 ,8]]

result = [[X[j][i] for j in range(len(X))] for i in range(len(X[0]))]

for r in result:

print(r)

1. **Write a Python Program to Sort Words in Alphabetic Order?**

my\_str = "Hello this Is an Example With cased letters"

# To take input from the user

#my\_str = input("Enter a string: ")

words = [word.lower() for word in my\_str.split()]

words.sort()

print("The sorted words are:")

for word in words:

print(word)

1. **Write a Python Program to Remove Punctuation From a String?**

def Punctuation(string):

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

# traverse the given string and if any punctuation

# marks occur replace it with null

for x in string.lower():

if x in punctuations:

string = string.replace(x, "")

# Print string without punctuation

print(string)

string = "Welcome???@@##$ to#$% Geeks%$^for$%^&Geeks"

Punctuation(string)