1. Write a Python Program to Add Two Matrices?

**Sol:** # Program to add two matrices using nested loop

X = [[12,7,3],

[4 ,5,6],

[7 ,8,9]]

Y = [[5,8,1],

[6,7,3],

[4,5,9]]

result = [[0,0,0],

[0,0,0],

[0,0,0]]

# iterate through rows

for i in range(len(X)):

# iterate through columns

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

result[i][j] = X[i][j] + Y[i][j]

for r in result:

print(r)

2. Write a Python Program to Multiply Two Matrices?

A) # Program to multiply two matrices using nested loops

# 3x3 matrix

X = [[12,7,3],

[4 ,5,6],

[7 ,8,9]]

# 3x4 matrix

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

[6,7,3,0],

[4,5,9,1]]

# result is 3x4

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

[0,0,0,0],

[0,0,0,0]]

# iterate through rows of X

for i in range(len(X)):

# iterate through columns of Y

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

# iterate through rows of Y

for k in range(len(Y)):

result[i][j] += X[i][k] \* Y[k][j]

for r in result:

print(r)

3. Write a Python Program to Transpose a Matrix?

# Program to transpose a matrix using a nested loop

X = [[12,7],

[4 ,5],

[3 ,8]]

result = [[0,0,0],

[0,0,0]]

# iterate through rows

for i in range(len(X)):

# iterate through columns

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

result[j][i] = X[i][j]

for r in result:

print(r)

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

A) # Program to sort alphabetically the words form a string provided by the user

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

# To take input from the user

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

# breakdown the string into a list of words

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

# sort the list

words.sort()

# display the sorted words

print("The sorted words are:")

for word in words:

print(word)

5. Write a Python Program to Remove Punctuation From a String?

# define punctuation

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

my\_str = "Hello!!!, he said ---and went."

# To take input from the user

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

# remove punctuation from the string

no\_punct = ""

for char in my\_str:

if char not in punctuations:

no\_punct = no\_punct + char

# display the unpunctuated string

print(no\_punct)