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

# create the matrices

matrix1 = [[1, 2, 3],

[4, 5, 6],

[7, 8, 9]]

matrix2 = [[10, 11, 12],

[13, 14, 15],

[16, 17, 18]]

# initialize the result matrix with all zeroes

result = [[0, 0, 0],

[0, 0, 0],

[0, 0, 0]]

# iterate through each element of the matrices and add them

for i in range(len(matrix1)):

for j in range(len(matrix1[0])):

result[i][j] = matrix1[i][j] + matrix2[i][j]

# print the result matrix

print("Result:")

for row in result:

print(row)

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

def multiply\_matrices(m1, m2):

# Checking if the matrices can be multiplied

if len(m1[0]) != len(m2):

print("Matrices cannot be multiplied.")

return

# Creating a new matrix to store the result

result = [[0 for j in range(len(m2[0]))] for i in range(len(m1))]

# Multiplying the matrices and storing the result in the new matrix

for i in range(len(m1)):

for j in range(len(m2[0])):

for k in range(len(m2)):

result[i][j] += m1[i][k] \* m2[k][j]

return result

# Example matrices

matrix1 = [[1, 2, 3],

[4, 5, 6],

[7, 8, 9]]

matrix2 = [[9, 8, 7, 6],

[6, 5, 4, 3],

[3, 2, 1, 0]]

# Multiplying the matrices and printing the result

result\_matrix = multiply\_matrices(matrix1, matrix2)

if result\_matrix:

print("Result:")

for row in result\_matrix:

print(row)

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

rows = int(input("Enter the number of rows: "))

cols = int(input("Enter the number of columns: "))

# initialize the matrix

matrix = []

for i in range(rows):

row = []

for j in range(cols):

value = int(input(f"Enter the element [{i}][{j}]: "))

row.append(value)

matrix.append(row)

# display the original matrix

print("Original Matrix:")

for row in matrix:

print(row)

# transpose the matrix

transpose = [[matrix[j][i] for j in range(rows)] for i in range(cols)]

# display the transposed matrix

print("Transposed Matrix:")

for row in transpose:

print(row)

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

string = input("Enter a string: ")

words = string.split()

sorted\_words = sorted(words)

result = ' '.join(sorted\_words)

print("Sorted words: ", result)

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

import string

def remove\_punctuation(input\_string):

# create a translation table using string module

translator = str.maketrans('', '', string.punctuation)

# remove punctuation from input string and return result

return input\_string.translate(translator)

# example usage

my\_string = "Hello, world!"

no\_punct\_string = remove\_punctuation(my\_string)

print(no\_punct\_string)

# output: "Hello world"