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

# Function to add two matrices

def add\_matrices(mat1, mat2):

result = []

if len(mat1) != len(mat2) or len(mat1[0]) != len(mat2[0]):

return "Matrices must have the same dimensions for addition."

for i in range(len(mat1)):

row = []

for j in range(len(mat1[0])):

row.append(mat1[i][j] + mat2[i][j])

result.append(row)

return result

# Input the matrices

mat1 = [[1, 2, 3], [4, 5, 6], [7, 8, 9]]

mat2 = [[9, 8, 7], [6, 5, 4], [3, 2, 1]]

# Add the matrices and print the result

result = add\_matrices(mat1, mat2)

if isinstance(result, str):

print(result)

else:

print("The sum of the matrices is:")

for row in result:

print(row)

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

# Function to multiply two matrices

def multiply\_matrices(mat1, mat2):

if len(mat1[0]) != len(mat2):

return "Number of columns in the first matrix must be equal to the number of rows in the second matrix."

result = [[0 for \_ in range(len(mat2[0]))] for \_ in range(len(mat1))]

for i in range(len(mat1)):

for j in range(len(mat2[0])):

for k in range(len(mat2)):

result[i][j] += mat1[i][k] \* mat2[k][j]

return result

# Input the matrices

mat1 = [[1, 2], [3, 4]]

mat2 = [[5, 6], [7, 8]]

# Multiply the matrices and print the result

result = multiply\_matrices(mat1, mat2)

if isinstance(result, str):

print(result)

else:

print("The product of the matrices is:")

for row in result:

print(row)

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

# Function to transpose a matrix

def transpose\_matrix(mat):

return [[mat[j][i] for j in range(len(mat))] for i in range(len(mat[0]))]

# Input the matrix

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

# Transpose the matrix and print the result

result = transpose\_matrix(mat)

print("The transposed matrix is:")

for row in result:

print(row)

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

# Input a string

text = input("Enter a string: ")

# Split the string into words and sort them

words = text.split()

words.sort()

# Print the sorted words

print("Words in alphabetic order:")

for word in words:

print(word)

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

import string

# Input a string

text = input("Enter a string: ")

# Remove punctuation from the string

text\_without\_punctuation = "".join(char for char in text if char not in string.punctuation)

# Print the string without punctuation

print("String without punctuation:")

print(text\_without\_punctuation)