**1. Add Two Matrices**

python

Copy code

def add\_matrices(matrix1, matrix2):

rows = len(matrix1)

cols = len(matrix1[0])

result = [[0 for \_ in range(cols)] for \_ in range(rows)]

for i in range(rows):

for j in range(cols):

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

return result

matrix1 = [[1, 2, 3], [4, 5, 6]]

matrix2 = [[7, 8, 9], [10, 11, 12]]

result = add\_matrices(matrix1, matrix2)

print("Sum of matrices:")

for row in result:

print(row)

**2. Multiply Two Matrices**

python

Copy code

def multiply\_matrices(matrix1, matrix2):

rows1 = len(matrix1)

cols1 = len(matrix1[0])

rows2 = len(matrix2)

cols2 = len(matrix2[0])

if cols1 != rows2:

raise ValueError("Number of columns in the first matrix must be equal to the number of rows in the second matrix.")

result = [[0 for \_ in range(cols2)] for \_ in range(rows1)]

for i in range(rows1):

for j in range(cols2):

for k in range(cols1):

result[i][j] += matrix1[i][k] \* matrix2[k][j]

return result

matrix1 = [[1, 2, 3], [4, 5, 6]]

matrix2 = [[7, 8], [9, 10], [11, 12]]

result = multiply\_matrices(matrix1, matrix2)

print("Product of matrices:")

for row in result:

print(row)

**3. Transpose a Matrix**

python

Copy code

def transpose\_matrix(matrix):

rows = len(matrix)

cols = len(matrix[0])

result = [[0 for \_ in range(rows)] for \_ in range(cols)]

for i in range(rows):

for j in range(cols):

result[j][i] = matrix[i][j]

return result

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

result = transpose\_matrix(matrix)

print("Transpose of the matrix:")

for row in result:

print(row)

**4. Sort Words in Alphabetic Order**

python

Copy code

def sort\_words(sentence):

words = sentence.split()

words.sort()

return ' '.join(words)

sentence = "python is an easy to learn programming language"

sorted\_sentence = sort\_words(sentence)

print("Sorted words:")

print(sorted\_sentence)

**5. Remove Punctuation From a String**

python

Copy code

import string

def remove\_punctuation(text):

return text.translate(str.maketrans('', '', string.punctuation))

text = "Hello, world! How's it going?"

clean\_text = remove\_punctuation(text)

print("Text without punctuation:")

print(clean\_text)