**Python Program to Add two Matrices**

we will see **how to add two matrices in Python**. Before we see how to implement matrix addition in Python, lets see what it looks like:

M1 = [[1,1,1],

[1,1,1],

[1,1,1]]

M2 = [[1,2,3],

[4,5,6],

[7,8,9]]

Sum of these matrices:

= [[2,3,4],

[5,6,7],

[8,9,10]]

**Program for adding two matrices**

To represent a matrix, we are using the concept of [nested lists](https://beginnersbook.com/2018/02/python-list/). All the elements of both the input matrices are represented as nested lists. All the elements of output list are initialized as zero.

We are iterating the matrix and adding the corresponding elements of both the given matrices and assigning the value in the output matrix.

# This program is to add two given matrices

# We are using the concept of nested lists to represent matrix

# first matrix

M1 = [[1, 1, 1],

[1, 1, 1],

[1, 1, 1]]

# second matrix

M2 = [[1, 2, 3],

[4, 5, 6],

[7, 8, 9]]

# In this matrix we will store the sum of above matrices

# we have initialized all the elements of this matrix as zero

sum = [[0, 0, 0],

[0, 0, 0],

[0, 0, 0]]

# iterating the matrix

# rows: number of nested lists in the main list

# columns: number of elements in the nested lists

for i in range(len(M1)):

for j in range(len(M1[0])):

sum[i][j] = M1[i][j] + M2[i][j]

# displaying the output matrix

for num in sum:

print(num)

Output:

[2, 3, 4]

[5, 6, 7]

[8, 9, 10]