1. Python program to add two Matrices

X = [[12,7,3],

    [4 ,5,6],

    [7 ,8,9]]

Y = [[5,8,1],

    [6,7,3],

    [4,5,9]]

result = [[X[i][j] + Y[i][j]  for j in range(len(X[0]))] for i in range(len(X))]

for r in result:

   print(r)

1. Python program to multiply two matrices

X = [[12,7,3],

    [4 ,5,6],

    [7 ,8,9]]

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

    [6,7,3,0],

    [4,5,9,1]]

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

         [0,0,0,0],

         [0,0,0,0]]

for i in range(len(X)):

   for j in range(len(Y[0])):

       for k in range(len(Y)):

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

for r in result:

   print(r)

1. Python program for Matrix Product

X = [[12,7,3],

[4 ,5,6],

[7 ,8,9]]

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

[6,7,3,0],

[4,5,9,1]]

result = [[sum(a\*b for a,b in zip(X\_row,Y\_col)) for Y\_col in zip(\*Y)] for X\_row in X]

for r in result:

print(r)

1. Adding and Subtracting Matrices in Python

import numpy as np

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

B=[ [5, 6, 7], [1, 2, 3], [5, 3, 8] ]

print(np.add(A,B))

print(np.subtract(A,B))

1. Transpose a matrix in Single line in Python

matrix= [ [2,3],[4,5],[7,8]]

for m in matrix:

print(m)

transpose= [ [matrix[j][i] for j in range(len(matrix))] for i in range(len(matrix[0]))]

print("Transpose: ")

for t in transpose:

print(t)

1. Python | Matrix creation of n\*n

N = 4

print("The dimension : " + str(N))

res = [list(range(1 + N \* i, 1 + N \* (i + 1)))

                            for i in range(N)]

print("The created matrix of N \* N: " + str(res))

1. Python | Get Kth Column of Matrix

test\_list = [[4, 5, 6], [8, 1, 10], [7, 12, 5]]

print("The original list is : " + str(test\_list))

K = 2

res = [sub[K] for sub in test\_list]

print("The Kth column of matrix is : " + str(res))

1. Python – Vertical Concatenation in Matrix

test\_list = [["Gfg", "good"], ["is", "for"], ["Best"]]

print("The original list : " + str(test\_list))

res = []

N = 0

while N != len(test\_list):

    temp = ''

    for idx in test\_list:

        try: temp = temp + idx[N]

        except IndexError: pass

    res.append(temp)

    N = N + 1

res = [ele for ele in res if ele]

print("List after column Concatenation : " + str(res))

1. Python program to check if a string is palindrome or not

def isPalindrome(s):

    return s == s[::-1]

s = "malayalam"

ans = isPalindrome(s)

if ans:

    print("Yes")

else:

    print("No")

1. Python program to check whether the string is Symmetrical or Palindrome

|  |
| --- |
| string = 'amaama'  half = int(len(string) / 2)    if len(string) % 2 == 0:  # even      first\_str = string[:half]      second\_str = string[half:]  else:      first\_str = string[:half]      second\_str = string[half+1:]    if first\_str == second\_str:      print(string, 'string is symmertical')  else:      print(string, 'string is not symmertical')    if first\_str == second\_str[::-1]:      print(string, 'string is palindrome')  else:      print(string, 'string is not palindrome') |