Write a program for matrix addition?

Sample Input:

Mat1 =

Mat2 =

CODE:

def matrix\_addition(A, B):

rows\_A = len(A)

cols\_A = len(A[0])

rows\_B = len(B)

cols\_B = len(B[0])

if rows\_A != rows\_B or cols\_A != cols\_B:

print("Matrix addition is not possible. Matrices must have the same dimensions.")

return None

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

for i in range(rows\_A):

for j in range(cols\_A):

result[i][j] = A[i][j] + B[i][j]

return result

# Get user input for matrices

def get\_matrix\_from\_user(rows, cols):

matrix = []

for i in range(rows):

row = []

for j in range(cols):

element = int(input(f"Enter element at position ({i + 1}, {j + 1}): "))

row.append(element)

matrix.append(row)

return matrix

# Get dimensions of matrices from the user

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

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

# Get matrices from the user

matrix\_A = get\_matrix\_from\_user(rows, cols)

matrix\_B = get\_matrix\_from\_user(rows, cols)

# Perform matrix addition

result\_matrix = matrix\_addition(matrix\_A, matrix\_B)

# Display the result

if result\_matrix:

print("\nResultant Matrix (Sum of Matrices A and B):")

for row in result\_matrix:

print(row)

OUTPUT:

Enter the number of rows for the matrices: 2

Enter the number of columns for the matrices: 2

Enter element at position (1, 1): 1

Enter element at position (1, 2): 2

Enter element at position (2, 1): 5

Enter element at position (2, 2): 3

Enter element at position (1, 1): 2

Enter element at position (1, 2): 3

Enter element at position (2, 1): 4

Enter element at position (2, 2): 1

Resultant Matrix (Sum of Matrices A and B):

[3, 5]

[9, 4]

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