

```

def MATMUL(A, B):
    C = []
    for i in range(len(A)):
        lst = []
        for j in range(len(B)):
            lst.append(0)
        C.append(lst)
    for i in range(len(A)):
        for j in range(len(A)):
            for k in range(len(A)):
                C[i][j] = C[i][j] + (int(A[i][k]) * int(B[k][j]))
    print("Matrix C : ")
    for i in range(len(A)):
        for j in range(len(A)):
            print(C[i][j], end=' ')
        print()
    print()

```

```

n = int(input("Enter the order of matrices : "))
matA = []
matB = []
print()
for i in range(n):
    lst = []
    num = input(f"Enter {n} numbers for row {i+1} separated by commas for matA : ")
    lst = num.split(",")
    matA.append(lst)
print()
for i in range(n):
    lst = []
    num = input(f"Enter {n} numbers for row {i+1} separated by commas for matB : ")
    lst = num.split(",")
    matB.append(lst)
print()

MATMUL(matA, matB)

```

Enter the order of matrices : 2

Enter 2 numbers for row 1 separated by commas for matA : 1,6

Enter 2 numbers for row 2 separated by commas for matA : 6,1

Enter 2 numbers for row 1 separated by commas for matB : 1,5

Enter 2 numbers for row 2 separated by commas for matB : 5,1

Matrix C :

31 11

11 31

```
def creatingmatrix(row, column, n):
    matrix = list()
    print()
    for i in range(row):
        print('Enter', column, 'values for row', i + 1, 'of the Matrix', n, 'separated by commas : ', end='')
        values = input()
        lvalues = values.split(',')
        matrix.append(lvalues)
        if len(matrix[i]) > column or len(matrix[i]) < column:
            print()
            print('Kindly Enter Correct Number of Values in Matrix', n, 'row', i + 1)
            return
    return matrix
```

```
def matrixMULT():
    print('Important Point : Make sure that for Multiplication of '
          '2 Matrices that Column of Matrix 1 and Row of Matrix 2 must be same \n')
    row1 = int(input('Enter number of rows for matrix 1 : '))
    column1 = int(input('Enter number of column for matrix 1: '))
    matrix1 = creatingmatrix(row1, column1, 1)
    while matrix1 is None:
        matrix1 = creatingmatrix(row1, column1, 1)
    print()
    row2 = int(input('Enter number of rows for matrix 2 : '))
    column2 = int(input('Enter number of column for matrix 2 : '))
    matrix2 = creatingmatrix(row2, column2, 2)
    while matrix2 is None:
        matrix2 = creatingmatrix(row2, column2, 2)
    if column1 == row2:
        f_row = row1
        f_column = column2
```

```

final_matrix = []
for i in range(f_row):
    lst = []
    for j in range(f_column):
        lst.append(0)
    final_matrix.append(lst)

    for i in range(f_row):
        for j in range(f_column):
            for k in range(row2):
                final_matrix[i][j] = int(final_matrix[i][j]) + (int(matrix1[i][k]) * int(matrix2[k][j]))
print()
print("Matrix C : \n")
for i in range(f_row):
    for j in range(f_column):
        print(final_matrix[i][j], end=' ')
    print()
print()
print()
else:
    if column1 != row2:
        print()
        print('The order of Matrix1', '(', row1, 'x', column1, ')', 'and Matrix2', '(', row2, 'x', column2, ')',
              'does not support Multiplication \n')
        return

matrixMULT()

```

Important Point : Make sure that for Multiplication of 2 Matrices that Column of Matrix 1 and Row of Matrix 2 must be same

```

Enter number of rows for matrix 1 : 2
Enter number of column for matrix 1: 4

Enter 1 values for row 1 of the Matrix 1 separated by commas : 4
Enter 1 values for row 2 of the Matrix 1 separated by commas : 5

Enter number of rows for matrix 2 : 1
Enter number of column for matrix 2 : 2

Enter 2 values for row 1 of the Matrix 2 separated by commas : 5,4

Matrix C :

20 24
25 30

```