

Matrix Multiplication | Recursive

```
MAX = 100
i = 0
j = 0
k = 0

def multiplyMatrixRec(row1, col1, A, row2, col2, B, C):
    global i
    global j
    global k
    if (i >= row1):
        return

    if (j < col2):
        if (k < col1):
            C[i][j] += A[i][k] * B[k][j]
            k += 1
            multiplyMatrixRec(row1, col1, A, row2, col2, B, C)
        k = 0
        j += 1
        multiplyMatrixRec(row1, col1, A,
                        row2, col2, B, C)

    j = 0
    i += 1
    multiplyMatrixRec(row1, col1, A,
                    row2, col2, B, C)

def multiplyMatrix(row1, col1, A, row2, col2, B):
    if (row2 != col1):
        print("Not Possible")
        return

    C = [[0 for i in range(MAX)]
          for i in range(MAX)]
    multiplyMatrixRec(row1, col1, A, row2, col2, B, C)
```

```
    for i in range(row1):
        for j in range(col2):
            print( C[i][j], end = " ")
        print()

# Driver Code
A = [[1, 2, 3],
      [4, 5, 6],
      [7, 8, 9]]
B = [[1, 2, 3],
      [4, 5, 6],
      [7, 8, 9]]

row1 = 3
col1 = 3
row2 = 3
col2 = 3
multiplyMatrix(row1, col1, A, row2, col2, B)
```