

Program :-

```
M1 = []
M2 = []

r1 = int(input("Enter the number of rows in M1: "))
c1 = int(input("Enter the number of columns in M1: "))
r2 = int(input("Enter the number of rows in M2: "))
c2 = int(input("Enter the number of columns in M2: "))

if c1 != r2:
    print("Matrix multiplication is not possible: Invalid dimensions")
else:
    print('Enter values for matrix M1:')
    for i in range(r1):
        row = []
        for j in range(c1):
            a = int(input(f"M1[{i+1}][{j+1}]: "))
            row.append(a)
        M1.append(row)

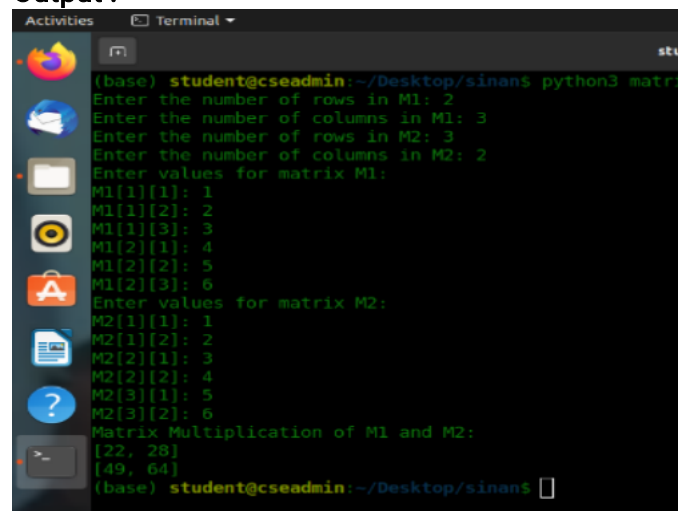
    print('Enter values for matrix M2:')
    for i in range(r2):
        row = []
        for j in range(c2):
            a = int(input(f"M2[{i+1}][{j+1}]: "))
            row.append(a)
        M2.append(row)

    result = [[0 for j in range(c2)] for i in range(r1)]

    for i in range(r1):
        for j in range(c2):
            for k in range(c1):
                result[i][j] += M1[i][k] * M2[k][j]

    print('Matrix Multiplication of M1 and M2:')
    for row in result:
        print(row)
```

Output :-



```
(base) student@cseadmin:~/Desktop/sinan$ python3 matrix.py
Enter the number of rows in M1: 2
Enter the number of columns in M1: 3
Enter the number of rows in M2: 3
Enter the number of columns in M2: 2
Enter values for matrix M1:
M1[1][1]: 1
M1[1][2]: 2
M1[1][3]: 3
M1[2][1]: 4
M1[2][2]: 5
M1[2][3]: 6
Enter values for matrix M2:
M2[1][1]: 1
M2[1][2]: 2
M2[2][1]: 3
M2[2][2]: 4
M2[3][1]: 5
M2[3][2]: 6
Matrix Multiplication of M1 and M2:
[22, 28]
[49, 64]
(base) student@cseadmin:~/Desktop/sinan$
```