

7.. 2D MATRIX MULTIPLICATION PROGRAM

```
#include <stdio.h>
int main() {
    int r1, c1, r2, c2;
    scanf("%d %d", &r1, &c1);
    scanf("%d %d", &r2, &c2);
    if (c1 != r2) {
        printf("Multiplication not possible\n");
        return 0;
    }
    int A[r1][c1], B[r2][c2], C[r1][c2];

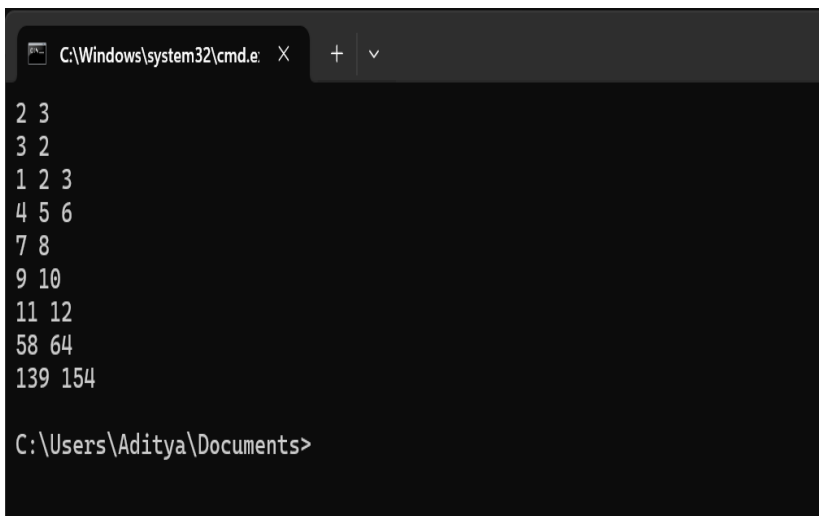
    for (int i = 0; i < r1; i++)
        for (int j = 0; j < c1; j++)
            scanf("%d", &A[i][j]);
    for (int i = 0; i < r2; i++)
        for (int j = 0; j < c2; j++)
            scanf("%d", &B[i][j]);

    for (int i = 0; i < r1; i++) {
        for (int j = 0; j < c2; j++) {
            C[i][j] = 0;
            for (int k = 0; k < c1; k++) {
                C[i][j] += A[i][k] * B[k][j];
            }
        }
    }

    for (int i = 0; i < r1; i++) {
        for (int j = 0; j < c2; j++) {
            printf("%d ", C[i][j]);
        }
        printf("\n");
    }

    return 0;
}
```

Output:



```
C:\Windows\system32\cmd.e X + v
2 3
3 2
1 2 3
4 5 6
7 8
9 10
11 12
58 64
139 154
C:\Users\Aditya\Documents>
```

