**1. Write a C program to perform Matrix Multiplication**

#include <stdio.h>

int main() {

int a[10][10], b[10][10], c[10][10];

int m, n, p, q;

printf("Enter rows and cols of first matrix: ");

scanf("%d%d", &m, &n);

printf("Enter rows and cols of second matrix: ");

scanf("%d%d", &p, &q);

if (n != p) {

printf("Multiplication not possible\n");

return 0;

}

printf("Enter first matrix:\n");

for (int i=0;i<m;i++)

for (int j=0;j<n;j++)

scanf("%d",&a[i][j]);

printf("Enter second matrix:\n");

for (int i=0;i<p;i++)

for (int j=0;j<q;j++)

scanf("%d",&b[i][j]);

for (int i=0;i<m;i++)

for (int j=0;j<q;j++) {

c[i][j]=0;

for (int k=0;k<n;k++)

c[i][j]+=a[i][k]\*b[k][j];

}

printf("Result:\n");

for (int i=0;i<m;i++) {

for (int j=0;j<q;j++)

printf("%d ",c[i][j]);

printf("\n");

}

return 0;

}

**Output**

