#include<stdio.h> int main()

{

int a[10][10],b[10][10],c[10][10]; int m,n,p,q;

int i,j,k;

printf("Enter the order of matrix A"); scanf("%d %d",&m,&n);

printf("Enter the order of matrix B:");

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

if(n!=p)

{

printf("Number of columns of Matrix A is not equal to number of rows of matrix B\n"); printf("Multiplication of matrices not possible....\n"); return (-1);

}

printf("\nEnter %d elements into matrix A : ", m\*n); for(i=0;i<m;i++)

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

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

printf("\nThe matrix A is ---\n"); for(i=0;i<m;i++)

{

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

{

printf("%d\t",a[i][j]);

}

printf("\n");

}

printf("\nEnter %d elements into matrix B : ", p\*q);

for (i=0;i<p;i++) for (j=0;j<q;j++) scanf("%d",&b[i][j]);

printf("\nThe matrix B is ---\n");

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

{

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

{

printf("%d\t",b[i][j]);

}

printf("\n");

}

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

{

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

{

c[i][j] = 0;

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

{

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

}

}

}

printf("\nThe product matrix is ---\n\n"); for(i=0;i<m;i++)

{

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

{

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

}

printf("\n");

}

return 0;

}

Out put:

$ cc matrix.c

$ ./a.out

Enter the order of matrix A2

2

Enter the order of matrix B:2

2

Enter 4 elements into matrix A :1

2

3

4

The matrix A is ---

1. 2
2. 4

Enter 4 elements into matrix B :1

3

2

4

The matrix B is ---

1. 3
2. 4

The product matrix is----

5 11

11 25