MATRIX MULTIPLICATION

#include<stdio.h>

int main()

{

int i,j,p,q,m,n,k,tot=0;

int first[3][3],sec[3][3],mul[3][3];

printf("Insert the number of rows and columns for the first matrix\n:");

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

printf("Insert your matrix elements\n:");

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

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

{

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

}

printf("Enter the number of rows and columns for the second matrix\n:");

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

{

printf("Insert your elements for second matrix\n:");

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

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

{

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

}

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

{

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

{

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

{

tot=tot+first[i][k]\*sec[j][k];

}

mul[i][j]=tot;

}

}

printf("The result of the matrix multiplication is\n:");

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

{

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

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

printf("\n");

}

}

return 0;

}

OUTPUT

Insert the number of rows and columns for the first matrix

:3 3

Insert your matrix elements

:1 2 3 1 2 3 1 2 3

Enter the number of rows and columns for the second matrix

:3 3

Insert your elements for second matrix

:1 2 3 1 2 3 1 2 3

The result of the matrix multiplication is

:14 28 42

56 70 84

98 112 126