**Write a program to multiply two 3\*3 matrix.**

**#include<stdio.h>**

**#include<conio.h>**

**int main()**

**{**

**int m1,m2,n1,n2,i,j,k;**

**printf("Enter the dimension of first matrix (m,n):\t");**

**scanf("%d%d",&m1,&n1);**

**int mat1[m1][n1];**

**printf("\nEnter the dimension of second matrix (m,n):\t");**

**scanf("%d%d",&m2,&n2);**

**int mat2[m2][n2];**

**int prod[m1][n2];**

**for(i=0;i<m1;i++)**

**{**

**for (j=0;j<n2;j++)**

**{**

**prod[i][j]=0;**

**}**

**}**

**if (n1==m2 && (n1&&n2&&m1&&m2!=0))**

**{**

**printf("\n\nFor matrix 1:\n");**

**for (i=0;i<m1;i++)**

**{**

**for (j=0;j<n1;j++)**

**{**

**printf("\nEnter the value of a(%d,%d):\t",(i+1),(j+1));**

**scanf("%d",&mat1[i][j]);**

**}**

**}**

**printf ("\n\nFor matrix 2:\n");**

**for (i=0;i<m2;i++)**

**{**

**for (j=0;j<n2;j++)**

**{**

**printf("\nEnter the value of a(%d,%d):\t",(i+1),(j+1));**

**scanf("%d",&mat2[i][j]);**

**}**

**}**

**for(i=0;i<m1;i++)**

**{**

**for(k=0;k<n2;k++)**

**{**

**for (j=0;j<m2;j++)**

**{**

**prod[i][k]=prod[i][k]+(mat1[i][j]\*mat2[j][k]);**

**}**

**}**

**}**

**printf("\n\nProduct:\n");**

**for(i=0;i<m1;i++)**

**{**

**for(k=0;k<n2;k++)**

**{**

**printf("%d\t",prod[i][k]);**

**}**

**printf("\n");**

**}**

**}**

**else**

**{**

**printf("\n\nInvalid dimension for multiplication!!");**

**}**

**getch();**

**return 0;**

**}**