

Write a program to multiply two 3*3 matrix.

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#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++)
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        {
            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;
}

```