PF LAB8 TASK 4

#include <stdio.h>

int main()

{

    int m,n,p,q;    // Here : m is for no of rows of 1st matrix, n is for no of columns of 1st matrix

                    // Here : p is for no of rows of 2nd matrix, q is for no of columns of 2nd matrix

    printf("\nEnter no of rows of first matrix :\n ");

    scanf("%d",&m);

    printf("Enter no of columns of first matrix :\n ");

    scanf("%d",&n);

    printf("Enter no of rows of second matrix :\n ");

    scanf("%d",&p);

    printf("Enter no of columns of second matrix :\n ");

    scanf("%d",&q);

    if (n!=p){

        printf("Please Enter the correct data!");

        return 1;

    }

    int matrix1[m][n];

    int matrix2[p][q];

    int result[m][q];

    //loop to take first matrix

    for (int x=0;x<m;x++)

    {

        for (int y=0;y<n;y++)

        {

            printf("Enter the (%d,%d) element of first matrix :",x+1,y+1);

            scanf("%d",&matrix1[x][y]);

        }

    }

    //loop to take 2nd matrix

    for (int x=0;x<p;x++)

    {

        for (int y=0;y<q;y++)

        {

            printf("Enter the (%d,%d) element of second matrix :",x+1,y+1);

            scanf("%d",&matrix2[x][y]);

        }

    }

    //loop to traverse the result matrix

    for (int i=0;i<m;i++)

    {

        for (int j=0;j<q;j++)

        {

            result[i][j] = 0;

            for (int k=0;k<n;k++)

            {

                result[i][j]+=matrix1[i][k]\*matrix2[k][j];

            }

        }

    }

    // loop to print the result matrix

    for (int i=0;i<m;i++)

    {

        for (int j=0;j<q;j++)

        {

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

        }

        printf("\n");

    }

    return 0;

}

Output :

