//matrix

// matrix

#include <stdio.h>

#include <stdlib.h>

//simple matric 2d array

int main() {

int mat[3][3];

int i,j;

printf("Enter any elemets in matrix\n");

for(i=0;i<3;i++)

{

for(j=0;j<3;j++)

{

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

}

}

printf("\nMatrix1\n");

for(i=0;i<3;i++)

{

for(j=0;j<3;j++){

printf("%5d",mat[i][j]);

}

printf("\n");

}

return 0;

}

//addition of two matrix

#include <stdio.h>

#include <stdlib.h>

int main() {

int mat1[3][3],mat2[3][3],

mat3[3][3];

int i,j;

printf("Enter elements in matrix1\n");

for(i=0;i<3;i++)

{

for(j=0;j<3;j++)

{

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

}

}

printf("Enter elements in matrix2\n");

for(i=0;i<3;i++)

{

for(j=0;j<3;j++)

{

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

}

}

for(i=0;i<3;i++)

{

for(j=0;j<3;j++)

{

mat3[i][j]=mat1[i][j]+mat2[i][j];

}

}

printf("addition of matrix is\n");

for(i=0;i<3;i++)

{

for(j=0;j<3;j++)

{

printf("%5d",mat3[i][j]);

}

printf("\n");

}

return 0;

}

//addition of matrix by taking size from user

#include <stdio.h>

#include <stdlib.h>

#define max 20

int main() {

int mat1[max][max],mat2[max][max],mat3[max][max];

int i,j;

int c1,c2,r1,r2;

int x=0;

printf("How many row and col do you want in matrix 1\n");

scanf("%d%d",&r1,&c1);

printf("How many row and col do you want in matrix 2\n");

scanf("%d%d",&r2,&c2);

if((r1==r2)&&(c1==c2))

{

x=1;

printf("Enter elements in matrix1\n");

for(i=0;i<r1;i++)

{

for(j=0;j<c1;j++)

{

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

}

}

printf("Enter elements in matrix2\n");

for(i=0;i<r2;i++)

{

for(j=0;j<c2;j++)

{

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

}

}

for(i=0;i<3;i++)

{

for(j=0;j<3;j++)

{

mat3[i][j]=mat1[i][j]+mat2[i][j];

}

}

printf("addition of matrix is\n");

for(i=0;i<r1;i++)

{

for(j=0;j<c1;j++)

{

printf("%5d",mat3[i][j]);

}

printf("\n");

}

}

else

{

printf("inavaid matrix\n");

}

return 0;

}

//subtraction of matrix by taking size from user

#include <stdio.h>

#include <stdlib.h>

#define max 20

int main() {

int mat1[max][max],mat2[max][max],mat3[max][max];

int i,j;

int c1,c2,r1,r2;

int x=0;

printf("How many row and col do you want in matrix 1\n");

scanf("%d%d",&r1,&c1);

printf("How many row and col do you want in matrix 2\n");

scanf("%d%d",&r2,&c2);

if((r1==r2)&&(c1==c2))

{

x=1;

printf("Enter elements in matrix1\n");

for(i=0;i<r1;i++)

{

for(j=0;j<c1;j++)

{

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

}

}

printf("Enter elements in matrix2\n");

for(i=0;i<r2;i++)

{

for(j=0;j<c2;j++)

{

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

}

}

for(i=0;i<3;i++)

{

for(j=0;j<3;j++)

{

mat3[i][j]=mat1[i][j]-mat2[i][j];

}

}

printf("addition of matrix is\n");

for(i=0;i<r1;i++)

{

for(j=0;j<c1;j++)

{

printf("%5d",mat3[i][j]);

}

printf("\n");

}

}

else

{

printf("inavaid matrix\n");

}

return 0;

}

// matrix search

1addiotion

2suntraction

Row che sum colub che sum

//matrix multiplication(personal)

#include<stdio.h>

#include<stdlib.h>

int main(){

int a[10][10],b[10][10],mul[10][10],r,c,i,j,k;

system("cls");

printf("enter the number of row=");

scanf("%d",&r);

printf("enter the number of column=");

scanf("%d",&c);

printf("enter the first matrix element=\n");

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

{

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

{

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

}

}

printf("enter the second matrix element=\n");

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

{

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

{

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

}

}

printf("multiply of the matrix=\n");

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

{

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

{

mul[i][j]=0;

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

{

mul[i][j]+=a[i][k]\*b[k][j];

}

}

}

//for printing result

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

{

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

{

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

}

printf("\n");

}

return 0;

}

//multi matrix (sir)

#include<stdio.h>

#include<stdlib.h>

int main(){

int mat1[2][3],mat2[3][4],mat3[2][4]={0};

int i,j,k;

printf("Enter elements in matrix 1\n");

for(i=0;i<2;i++)

{

for(j=0;j<3;j++)

{

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

}

}

printf("Enter elements in matrix 2\n");

for(i=0;i<3;i++)

{

for(j=0;j<4;j++)

{

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

}

}

//multiplication

for(i=0;i<2;i++)

{

for(k=0;k<4;k++)

{

for(j=0;j<3;j++)

{

mat3[i][k]=mat3[i][k]+mat1[i][j]\*mat2[j][k];

}

}

}

printf("\n ------------------MATRIX MULTIPICATION----------------------\n");

for(i=0;i<2;i++)

{

for(k=0;k<4;k++)

{

printf("%5d",mat3[i][k]);

}

printf("\n");

}

return 0;

}

//user input matrix multiplication(personal)

#include<stdio.h>

#include<stdlib.h>

#define max 20

int main(){

int mat1[max][max],mat2[max][max],mat3[max][max]={0};

int i,j,k;

int c1,c2,r1,r2;

int flag=0;

printf("How many row and col do you want in matrix 1\n");

scanf("%d%d",&r1,&c1);

printf("How many row and col do you want in matrix 2\n");

scanf("%d%d",&r2,&c2);

if(c1==r2)

{

flag=1;

printf("Enter elements in matrix 1\n");

for(i=0;i<r1;i++)

{

for(j=0;j<c1;j++)

{

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

}

}

printf("Enter elements in matrix 2\n");

for(i=0;i<r2;i++)

{

for(j=0;j<c2;j++)

{

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

}

}

//multiplication

for(i=0;i<r1;i++)

{

for(k=0;k<c2;k++)

{

for(j=0;j<r2;j++) //c1 or r2 can be use

{

mat3[i][k]=mat3[i][k]+mat1[i][j]\*mat2[j][k];

}

}

}

printf("\n ------------------MATRIX MULTIPICATION----------------------\n");

for(i=0;i<r1;i++)

{

for(k=0;k<c2;k++)

{

printf("%5d",mat3[i][k]);

}

printf("\n");

}

}

else

{

printf("\nMULTIPLICATION NOT POSSIBLE");

}

return 0;

}

Make matix program

If 1 add

2 sub

3 mul