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#includr<stdio.h>
int main(){
 int a[2][2], b[2][2], c[2][2], i, j;
 int m1, m2, m3, m4 , m5, m6, m7;

 printf("Enter the 4 elements of first matrix: ");
 for(i = 0;i < 2; i++)
    for(j = 0;j < 2; j++)
        scanf("%d", &a[i][j]);

 printf("Enter the 4 elements of second matrix: ");
 for(i = 0; i < 2; i++)
    for(j = 0;j < 2; j++)
        scanf("%d", &b[i][j]);

 printf("\nThe first matrix is\n");
 for(i = 0; i < 2; i++){
    printf("\n");
    for(j = 0; j < 2; j++)
        printf("%d\t", a[i][j]);
 }

 printf("\nThe second matrix is\n");
 for(i = 0;i < 2; i++){
    printf("\n");
    for(j = 0;j < 2; j++)
        printf("%d\t", b[i][j]);
 }

 m1= (a[0][0] + a[1][1]) * (b[0][0] + b[1][1]);
 m2= (a[1][0] + a[1][1]) * b[0][0];
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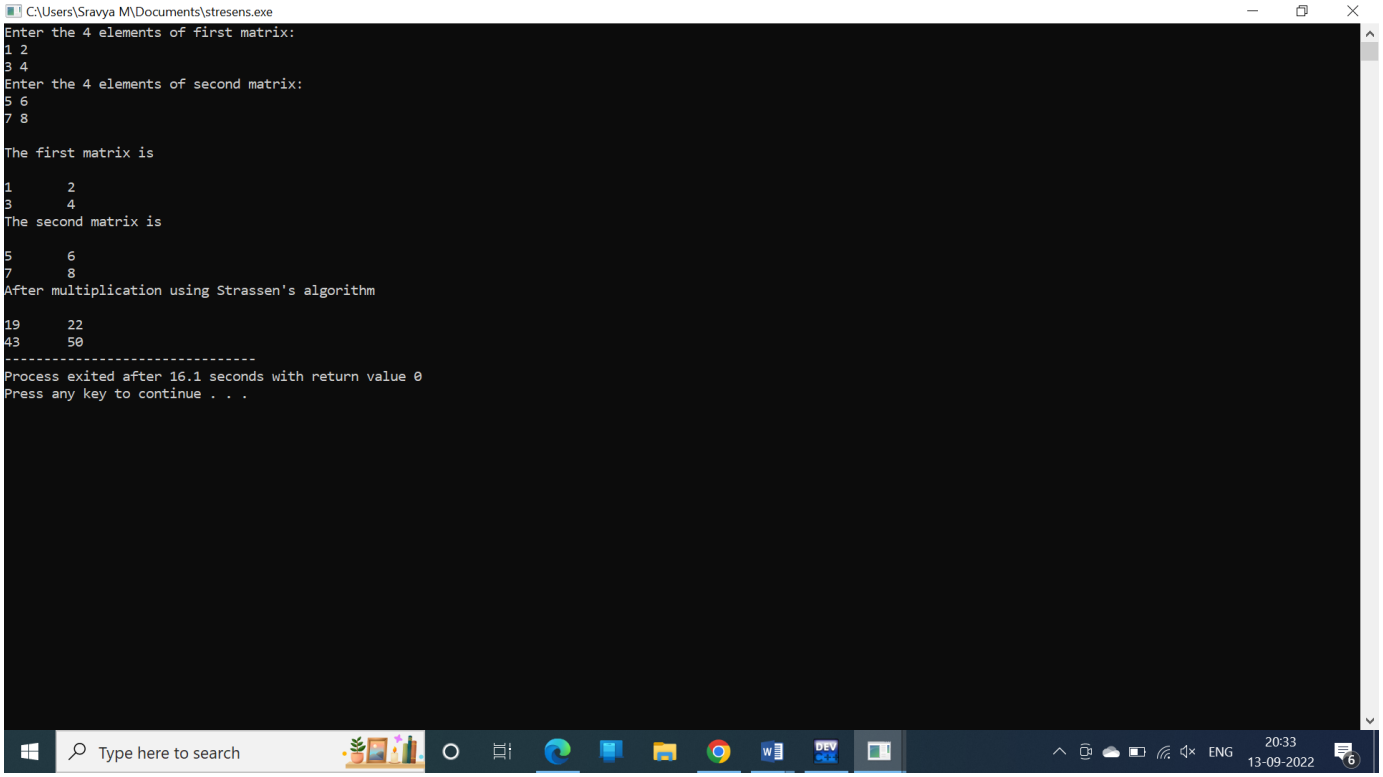
m3= a[0][0] * (b[0][1] - b[1][1]);
m4= a[1][1] * (b[1][0] - b[0][0]);
m5= (a[0][0] + a[0][1]) * b[1][1];
m6= (a[1][0] - a[0][0]) * (b[0][0]+b[0][1]);
m7= (a[0][1] - a[1][1]) * (b[1][0]+b[1][1]);

c[0][0] = m1 + m4- m5 + m7;
c[0][1] = m3 + m5;
c[1][0] = m2 + m4;
c[1][1] = m1 - m2 + m3 + m6;

 printf("\nAfter multiplication using Strassen's algorithm \n");
 for(i = 0; i < 2 ; i++){
    printf("\n");
    for(j = 0;j < 2; j++)
        printf("%d\t", c[i][j]);
 }

 return 0;
```


C:\Users\Sravya M\Documents\stresens.exe
Enter the 4 elements of first matrix:
1 2
3 4
Enter the 4 elements of second matrix:
5 6
7 8
The first matrix is
1 2
3 4
The second matrix is
5 6
7 8
After multiplication using Strassen's algorithm
19 22
43 50
Process exited after 16.1 seconds with return value 0
Press any key to continue . . .
Type here to search
ENG
20:33
13-09-2022