Strassen’s matrix multiplication

**#include<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];**

**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”);**

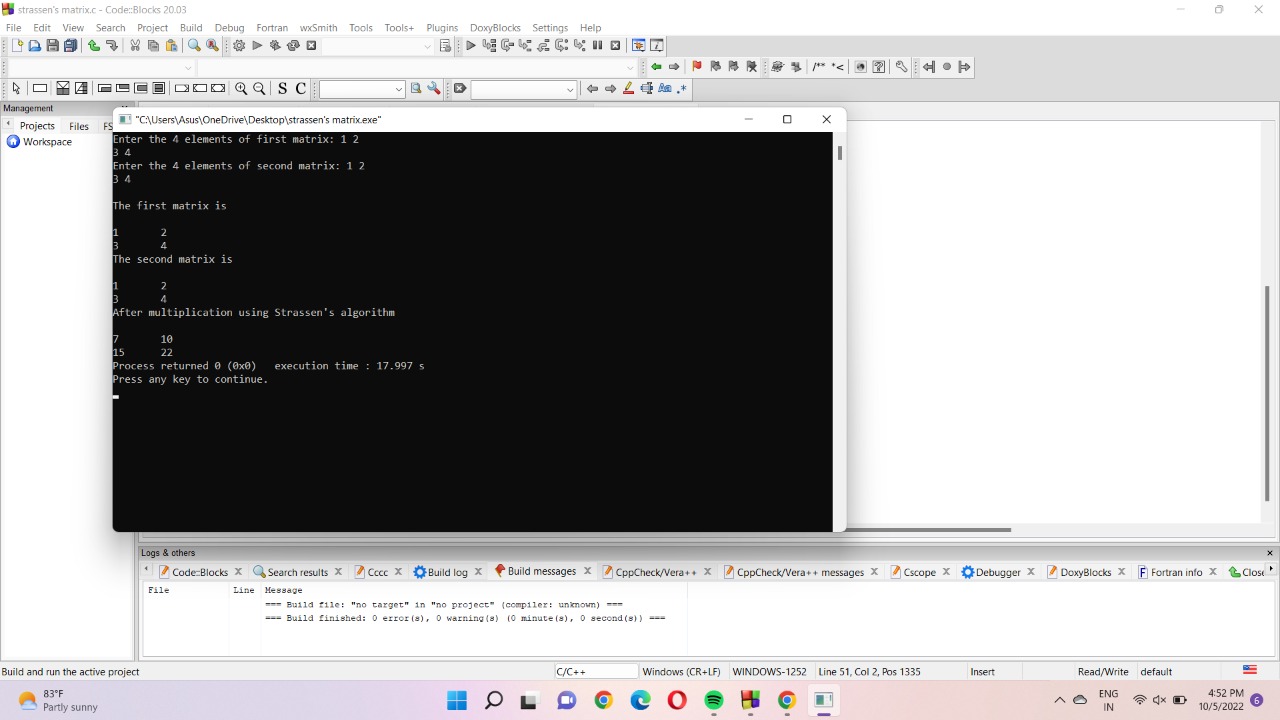
**For(j = 0;j < 2; j++)**

**Printf(“%d\t”, c[i][j]);**

**}**

**Return 0;**

**}**

****