

**PROBLEM STATEMENT: Write a program to translate an object.**

**Code:-**

```
#include <stdio.h>

#include <graphics.h>

int main( )
{ int gd=DETECT,gm;

    int t[3][3]={1,0,0,0,1,0,0,0,1},a[3][3],r[3][3]={0},i,j,k;

    printf("Enter value of x1 and y1: "); scanf("%d %d", &a[0][0], &a[0][1]);
    printf("Enter value of x2 and y2: "); scanf("%d %d", &a[1][0], &a[1][1]);
    printf("Enter value of x3 and y3: "); scanf("%d %d", &a[2][0], &a[2][1]);
    printf("Enter value of tx and ty: "); scanf("%d %d", &t[2][0], &t[2][1]);

    a[0][2]=a[1][2]=a[2][2]=1;

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

$$r[i][j] = r[i][j] + (a[i][k]*t[k][j]);$$

            }
        }
    }

    initgraph(&gd,&gm,"NULL");

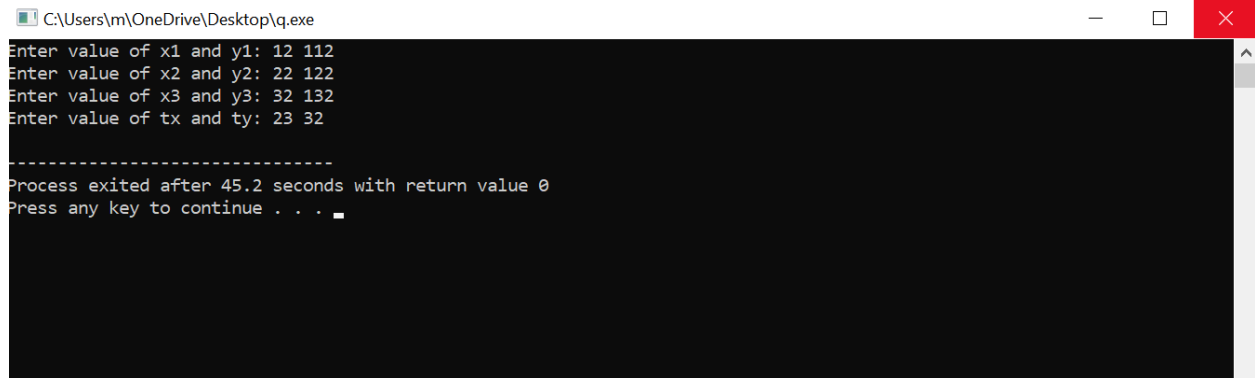
    line(a[0][0],a[0][1],a[1][0],a[1][1]);

    line(a[1][0],a[1][1],a[2][0],a[2][1]);

    line(a[0][0],a[0][1],a[2][0],a[2][1]);
```

```
    outtext("- - - Before Translation - - -");  
    delay(5000);  
    cleardevice();  
    line(r[0][0],r[0][1],r[1][0],r[1][1]);  
    line(r[1][0],r[1][1],r[2][0],r[2][1]);  
    line(r[0][0],r[0][1],r[2][0],r[2][1]);  
    outtext("- - - After Translation - - -");  
    delay(5000);  
    closegraph( );  
    return 0;  
}
```

# OUTPUT



```
C:\Users\m\OneDrive\Desktop\q.exe
Enter value of x1 and y1: 12 112
Enter value of x2 and y2: 22 122
Enter value of x3 and y3: 32 132
Enter value of tx and ty: 23 32

-----
Process exited after 45.2 seconds with return value 0
Press any key to continue . . .
```



```
Windows BGI
--- Before Translation ---
```



Windows BGI

--- After Translation ---

