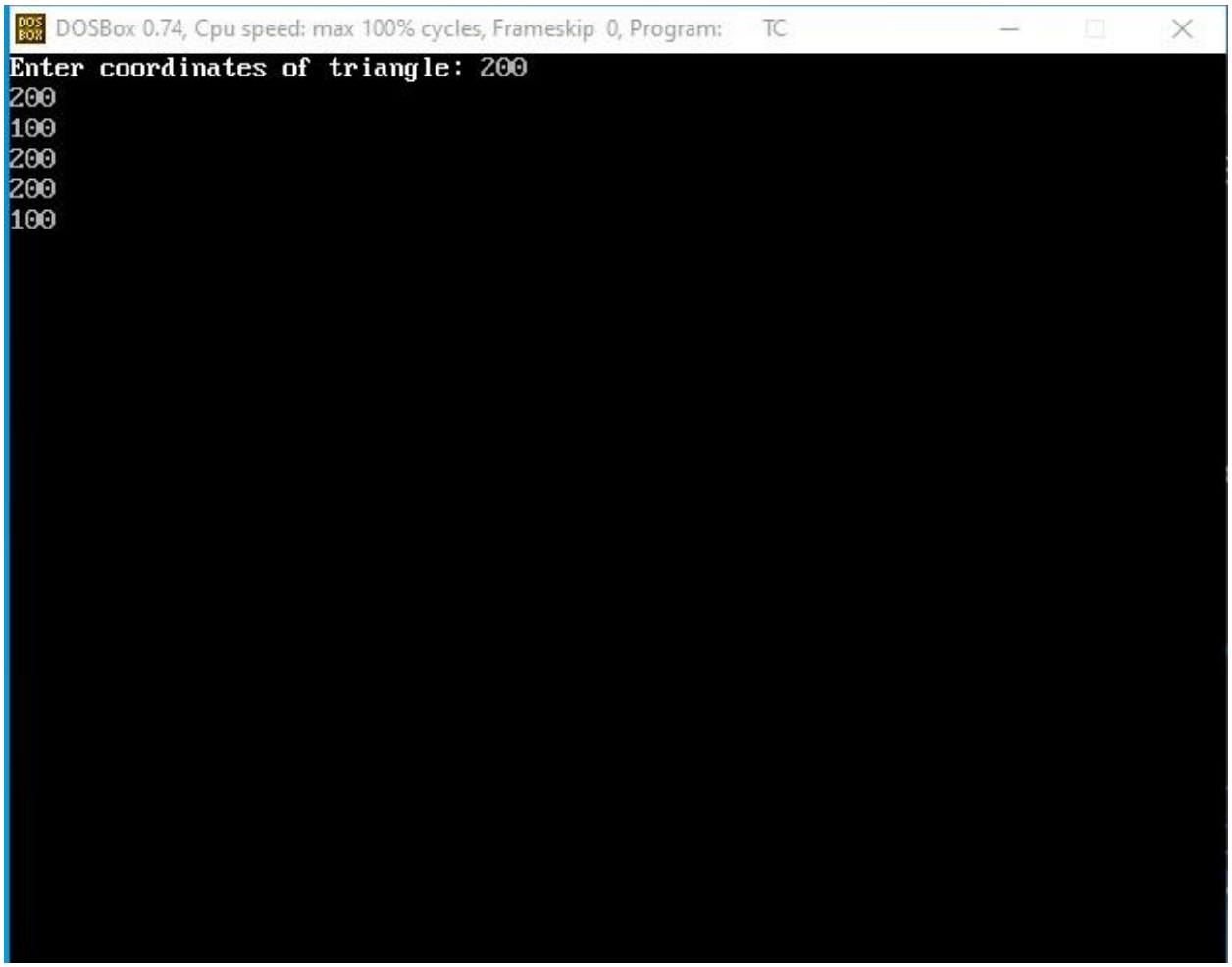
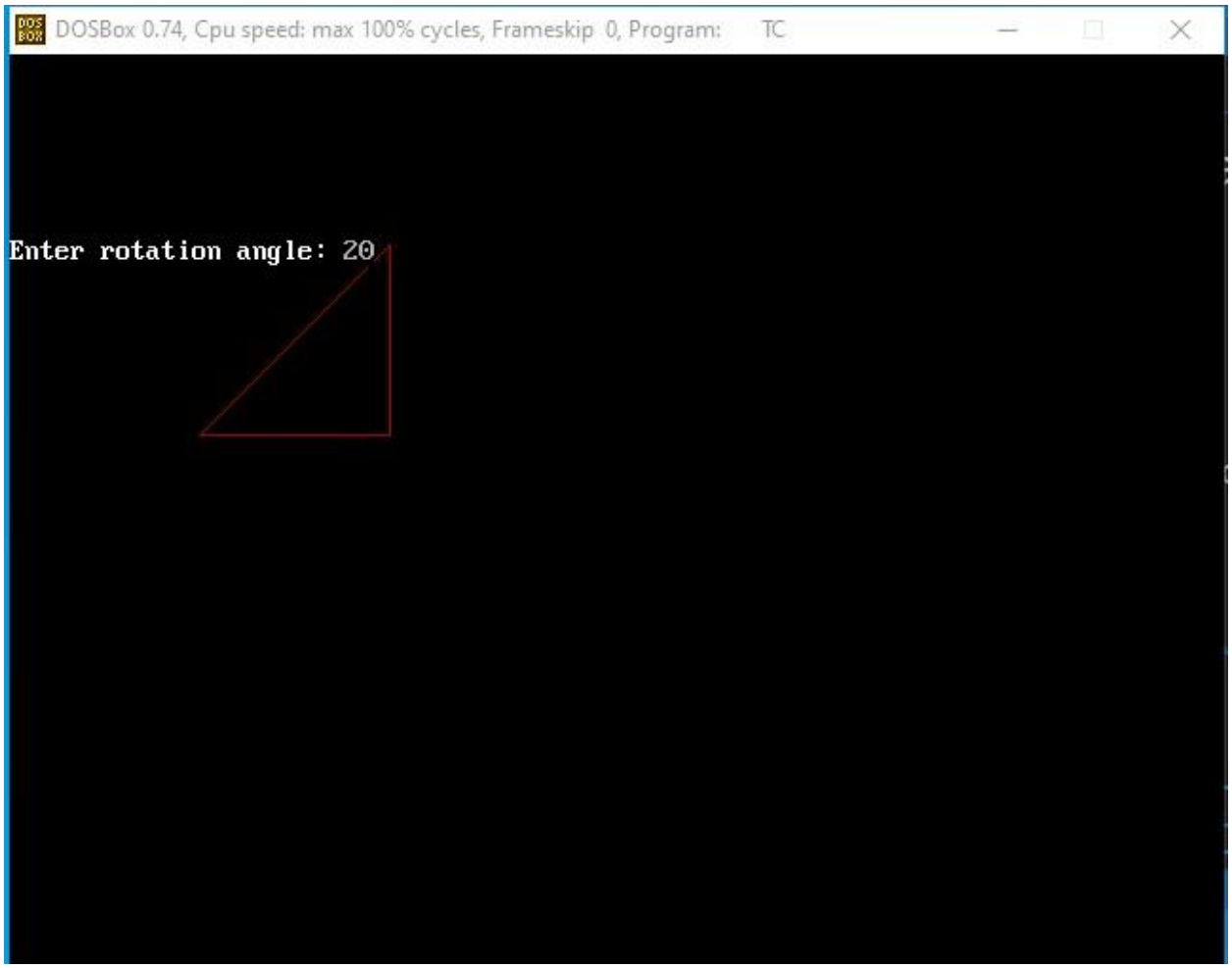
Write a program to implement two-dimenstional rotation of an object.

```
#include<stdio.h>
#include<graphics.h>
#include<math.h>
#include<conio.h>
main()
{
   int gd=DETECT,gm,x1,y1,x2,y2,x3,y3;
   double s,c, angle;
   initgraph(&gd, &gm, "C:\\TURBOC3\\BGI");
   setcolor(RED);
   printf("Enter coordinates of triangle: ");
   scanf("%d%d%d%d%d%d",&x1,&y1,&x2,&y2, &x3, &y3);
   setbkcolor(WHITE);
   cleardevice();
   line(x1,y1,x2,y2);
   line(x2,y2, x3,y3);
   line(x3, y3, x1, y1);
   getch();
   setbkcolor(BLACK);
   printf("Enter rotation angle: ");
   scanf("%lf", &angle);
   setbkcolor(WHITE);
```

```
    c = cos(angle *M_PI/180);
    s = sin(angle *M_PI/180);
    x1 = floor(x1 * c + y1 * s);
    y1 = floor(-x1 * s + y1 * c);
    x2 = floor(x2 * c + y2 * s);
    y2 = floor(-x2 * s + y2 * c);
    x3 = floor(x3 * c + y3 * s);
    y3 = floor(-x3 * s + y3 * c);
    cleardevice();
    line(x1, y1 ,x2, y2);
    line(x2,y2, x3,y3);
    line(x3, y3, x1, y1);
    getch();
    closegraph();
    return 0;
}
```


DOSBox 0.74, Cpu speed: max 100% cycles, Frameskip 0, Program: TC
Enter coordinates of triangle: 200
200
100
200
200
100


DOSBox 0.74, Cpu speed: max 100% cycles, Frameskip 0, Program: TC
Enter rotation angle: 20

DOSBox 0.74, Cpu speed: max 100% cycles, Frameskip 0, Program: TC