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/*****
Title : Sunflower
Name : Dona Mariya Shaju
Rollno: 20
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*****/
#include<stdio.h>
#include<stdlib.h>
#include<graphics.h>
#include<math.h>
void bezier(int x[4],int y[4])
{
int i;
double t;
for(t=0.0;t<1.0;t+=0.010)
{
double xt=pow(1-t,3)*x[0]+3*t*pow(1-
t,2)*x[1]+3*pow(t,2)*(1-t)*x[2]+pow(t,3)*x[3];
double yt=pow(1-t,3)*y[0]+3*t*pow(1-
t,2)*y[1]+3*pow(t,2)*(1-t)*y[2]+pow(t,3)*y[3];
putpixel(xt,yt,GREEN);
}
return;
}
void main()
{
int gd=DETECT,gm;
initgraph(&gd,&gm,"");
double
FlowerRadius=15,SunRadius,SunAngle,CircleCenterx,CircleCe
ntery;
int xmax = getmaxx();
line(0,400,xmax,400);
setcolor(GREEN);
double xmid = xmax/2;
double ymid = 400;
double SunCenterx=xmax-50-
xmid,SunCentery=0,si,co,xcord,ycord;
line(300,400,300,300);
int x[4] = {300,300,335,335},y[4] = {300,290,290,300};
bezier(x,y);
CircleCenterx = 335;
CircleCentery = 300;
setcolor(YELLOW);

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fillellipse(CircleCenterx,CircleCentery,FlowerRadius,FlowerRadius);

fillellipse(CircleCenterx+FlowerRadius*2*si,CircleCentery,10,4);

fillellipse(CircleCenterx,CircleCentery+FlowerRadius*2,4,10);
    fillellipse(CircleCenterx,CircleCentery-FlowerRadius*2,4,10);
    fillellipse(CircleCenterx-FlowerRadius*2,CircleCentery,10,4);
    setcolor(RED);
    fillellipse(xmid+SunCenterx,430+SunCentery,30,30);
    setcolor(BLACK);
    fillellipse(xmid+SunCenterx,430+SunCentery,30,30);
    setcolor(RED);
    for(int i=0;i<180;i++)
    {
        cleardevice();
        line(0,400,xmax,400);
        setcolor(GREEN);
        line(300,400,300,300);
        si = sin(i*3.14/180);
        co = cos(i*3.14/180);
        xcord = SunCenterx*co;
        ycord = SunCenterx*si;
        int x[4] = {300,300,CircleCenterx,CircleCenterx},y[4]
= {300,CircleCentery-10,CircleCentery-10,300};
        bezier(x,y);
        setcolor(RED);
        fillellipse(xmid+xcord,370-ycord,30,30);
        double xflower = co*35;
        double yflower = si*35;
        CircleCenterx = 300 + xflower;
        CircleCentery = 300 - yflower;
        FlowerRadius = 15 + 5*si;
        setcolor(YELLOW);
        fillellipse(CircleCenterx-8+FlowerRadius*2*si,CircleCentery,20*si,15*si);
        fillellipse(CircleCenterx,CircleCentery-8+FlowerRadius*2*si,15*si,20*si);
        fillellipse(CircleCenterx,CircleCentery+8-FlowerRadius*2*si,15*si,20*si);
        fillellipse(CircleCenterx+8-

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FlowerRadius*2*si,CircleCentery,20*si,15*si);  
  
fillellipse(CircleCenterx,CircleCentery,FlowerRadius,Flow  
erRadius);  
    setcolor(RED);  
    fillellipse(CircleCenterx,CircleCentery,13,13);  
    setcolor(WHITE);  
    outtextxy(400,50, "SUNFLOWER");  
    //moveto(400+xflower,200);  
    delay(100);  
}  
getch();  
}
```