CODE:

#include<stdio.h>

#include<conio.h>

#include<graphics.h>

#include<math.h>

void koch(float x1,float y1,float x2,float y2,int n);

int main()

{

int gd=DETECT,gm,n;

float x1,x2,y1,y2;

initgraph(&gd,&gm,"c:\\tc\\bgi");

printf("(x1,y1):");

scanf("%f %f",&x1,&y1);

printf("(x2,y2):");

scanf("%f %f",&x2,&y2);

printf("enter the level of curve generation:");

scanf("%d",&n);

koch(x1,y1,x2,y2,n);

getch();

closegraph();

return 0;

}

void koch(float x1,float y1,float x2,float y2,int n)

{

int i;

float x[5],y[5],r,lx,ly;

r=-60\*3.1416/180;

lx=(x2-x1)/3;

ly=(y2-y1)/3;

x[0]=x1;

y[0]=y1;

x[1]=x1+lx;

y[1]=y1+ly;

x[3]=x1+(2\*lx);

y[3]=y1+(2\*ly);

x[4]=x2;

y[4]=y2;

x[2]=x[3]\*cos(r)-y[3]\*sin(r)-x[1]\*cos(r)+y[1]\*sin(r)+x[1];

y[2]=x[3]\*sin(r)+y[3]\*cos(r)-x[1]\*sin(r)-y[1]\*cos(r)+y[1];

if(n>1)

{

koch(x[0],y[0],x[1],y[1],n-1);

koch(x[1],y[1],x[2],y[2],n-1);

koch(x[2],y[2],x[3],y[3],n-1);

koch(x[3],y[3],x[4],y[4],n-1);

}

else

{

line(x[0],y[0],x[1],y[1]);

line(x[1],y[1],x[2],y[2]);

line(x[2],y[2],x[3],y[3]);

line(x[3],y[3],x[4],y[4]);

}

}

OUTPUT:





