

ASSIGNMENT NO 4

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#include<iostream>
#include<math.h>
#include<graphics.h>
using namespace std;
class kochCurve
{
public:
void koch(int it,int x1,int y1,int x5,int y5)
{
int x2,y2,x3,y3,x4,y4;
int dx,dy;

if(it==0)
{
line(x1,y1,x5,y5);
}
else
{
delay(10);
dx=(x5-x1)/3;
dy=(y5-y1)/3;
x2=x1+dx;
y2=y1+dy;
x3=(int)(0.5*(x1+x5)+sqrt(3)*(y1-y5)/6);
y3=(int)(0.5*(y1+y5)+sqrt(3)*(x5-x1)/6);
x4=2*dx+x1;
y4=2*dy+y1;
koch(it-1,x1,y1,x2,y2);
koch(it-1,x2,y2,x3,y3);
koch(it-1,x3,y3,x4,y4);
koch(it-1,x4,y4,x5,y5);
}
}
};

int main()
{
kochCurve k;
int it,len;
cout<<"enter number of iterations";
cin>>it;

int gd=DETECT,gm;
initgraph(&gd,&gm,NULL);
k.koch(it,20,280,280,280);
k.koch(it,150,20,20,280);
k.koch(it,280,280,150,20);
getch();
closegraph();
```

```
return 0;
}
```

//OUTPUT

