# Practical no : 12

**Title:-** Write C++ program to generate fractal patterns by using Koch curves.

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**Class:-**AIDS

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# Input:

#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)

{

}

else

{

}

}

};

line(x1,y1,x5,y5);

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;

cout<<"SATTYAM SAGAR CHAVAN 73 AI&DS"<<endl;

cout<<"Enter Number Of Iterations : "<<endl; cin>>it;

int gd=DETECT,gm;initgraph(&gd,&gm,NULL);

k.koch(it,150,20,20,280);

k.koch(it,280,280,150,20);

k.koch(it,20,280,280,280);

getch(); closegraph(); return 0;

}

# Output:

