/*

Title: - Write C++ program to generate Hilbert curve using concept of fractals.

Roll No:-

Class:-SE Computer

Sub:-OOPL & CGL

Date:-

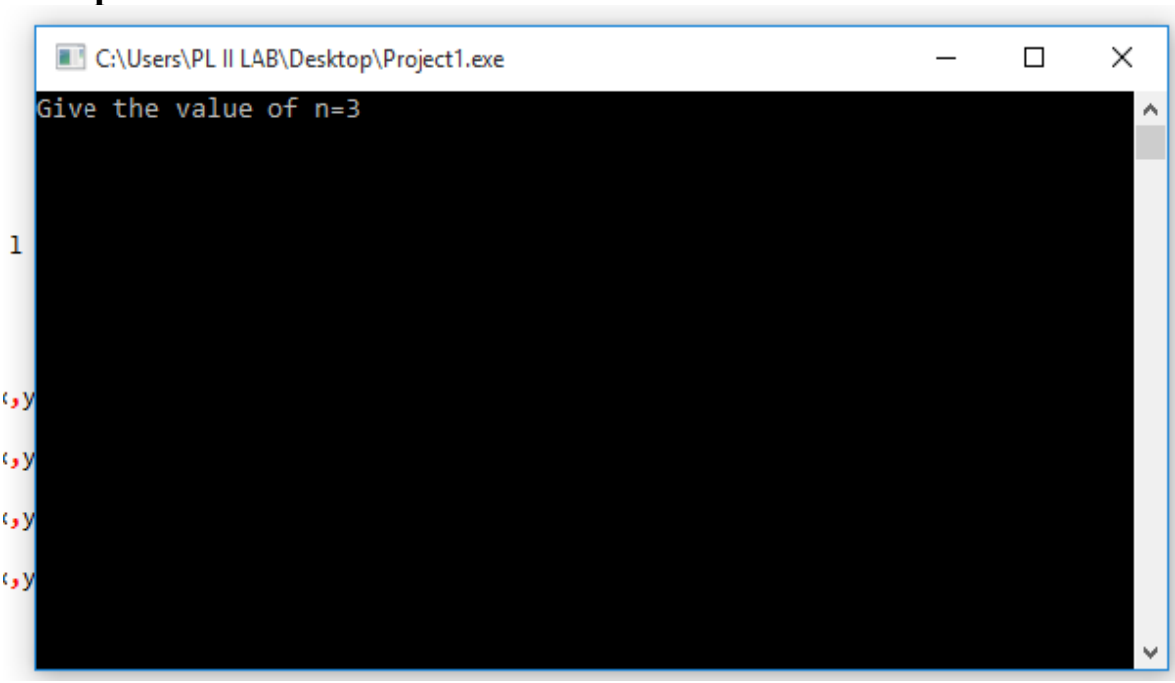
**********/

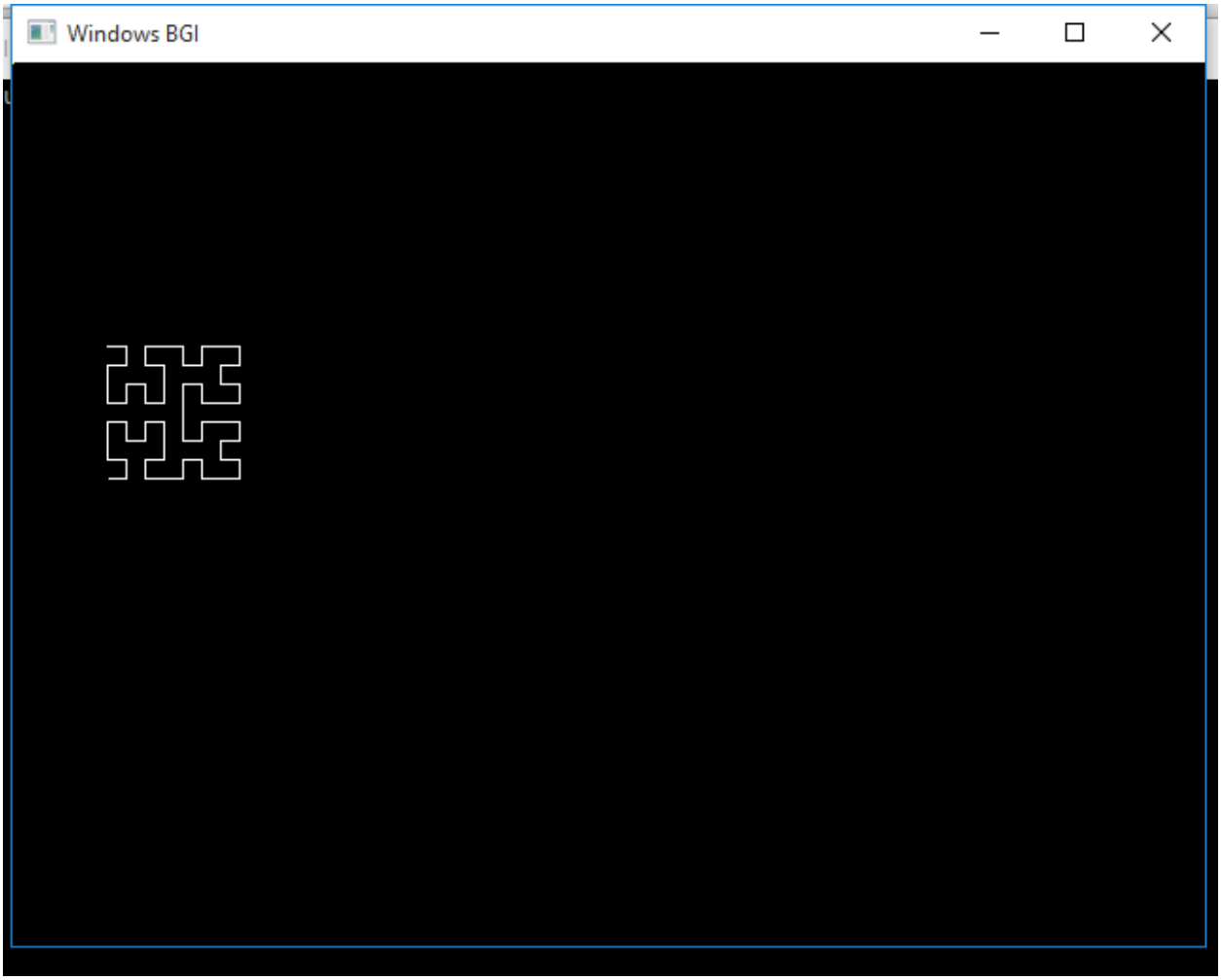
Program-

```
#include<iostream>
#include<graphics.h>
#include<math.h>
#include<cstdlib>
using namespace std;
void move(int j, int h, int &x,int &y)
{
        if(j==1)
                y-=h;
        else
        if(j==2)
                x+=h;
        else if(j==3)
                y+=h;
        else if(j==4)
                x-=h;
        lineto(x,y);
}
void hilbert(int r,int d,int l ,int u,int i,int h,int &x,int &y)
{
        if(i>0)
        {
                i--;
                hilbert(d,r,u,l,i,h,x,y);
                move(r,h,x,y);
                hilbert(r,d,l,u,i,h,x,y);
                move(d,h,x,y);
                hilbert(r,d,l,u,i,h,x,y);
                move(l,h,x,y);
                hilbert(u,l,d,r,i,h,x,y);
        }
}
int main()
{
```

```
        int n,x1,y1;
        int x0=50,y0=150,x,y,h=10,r=2,d=3,l=4,u=1;
        cout<<"Give the value of n=";
        cin>>n;
        x=x0;
        y=y0;
        int driver=DETECT,mode=0;
        initgraph(&driver,&mode,NULL);
        moveto(x,y);
        hilbert(r,d,l,u,n,h,x,y);
        delay(10000);
        closegraph();
        return 0;
}
```

/*Output:-




Windows BGI