#include<graphics.h>

#include<iostream>

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 u,int r,int d,int l,int i,int h,int &x,int &y)

{

if(i>0)

{

i--;

hilbert(r,u,l,d,i,h,x,y);

move(u,h,x,y);

delay(1000);

hilbert(u,r,d,l,i,h,x,y);

move(r,h,x,y);

delay(1000);

hilbert(u,r,d,l,i,h,x,y);

move(d,h,x,y);

delay(1000);

hilbert(l,d,r,u,i,h,x,y);

delay(1000);

}

}

int main()

{

int n,x=50,y=150,h=10,r=2,d=3,l=4,u=1;

int gd=DETECT,gm=0;

initgraph(&gd,&gm,NULL);

cout<<"Enter the value of n:";

cin>>n;

moveto(x,y);

hilbert(u,r,d,l,n,h,x,y);

delay(1000);

closegraph();

return 0;

}