NAME:- BHAMARE LAJARI ANIL CLASS:- SE DIV:- B

ROLL NO.:- SE205 BATCH:- B2

**ASSIGNMENT NO.:-5**

AIM:-Write c++ program to generate Hilbert curve using concept of fractals.

**SOURCE CODE:-**

#include <iostream>

#include <stdlib.h>

#include <graphics.h>

#include <math.h>

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<<"\nGive the value of n: ";

cin>>n;

x=x0;y=y0;

int gm,gd=DETECT;

initgraph(&gd,&gm,NULL);

moveto(x,y);

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

delay(10000);

closegraph();

return 0;

}

**OUTPUT:-**

