Assignment Title:	Write C++ program to generate Hilbert curve using concept of fractals..
Assignment No.:	5
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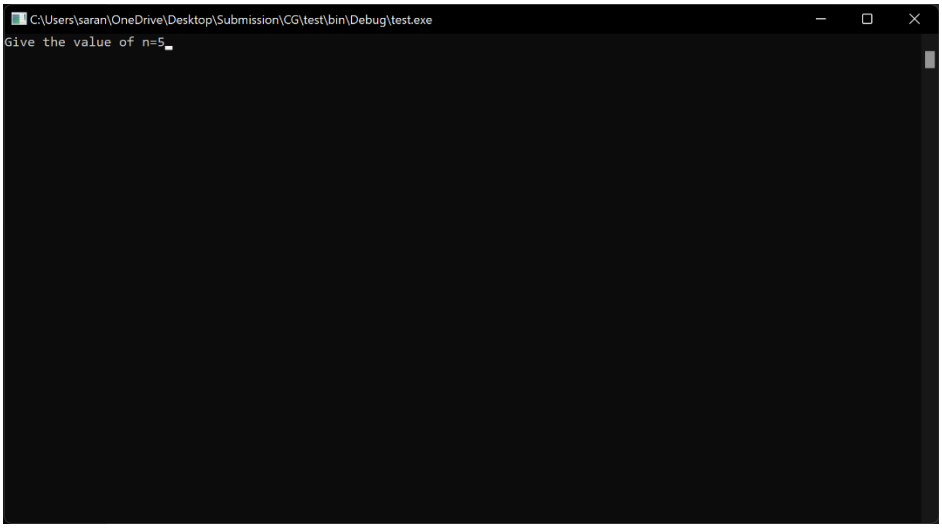
Year & DIV.:	SE A
Batch:	C
Roll No:	45

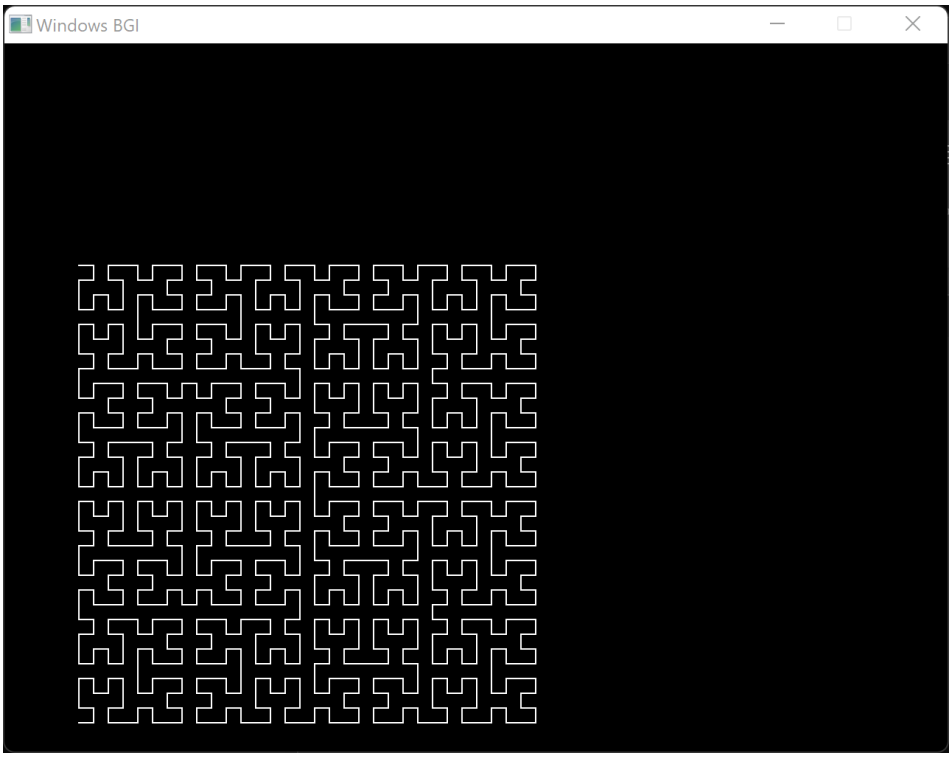
Program Code:

```
#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;
}
```

Program Output:


C:\Users\saran\OneDrive\Desktop\Submission\CG\test\bin\Debug\test.exe
Give the value of n=5


Windows BGI