

East Delta University

Experiment Name: Implementation of Sierpinsky gasket

Name: Pranesh Chowdhury

ID: 202003112

Section: 02

Instructor Name: Tasnimatul Jannah

Course Name: CSE 322 Computer Graphics Lab

THE: Implementation of Sierrainsky Garket

Introduction:

Sierpinsky garbet algorithm is exercise to understand recursion and plotting shapes. It is a fractaland attractive tixed set with the overall shape of an equilateral triangle. It was savided recurriedly into smaller tolorgle.

Descriptions

thought to have taken three points for the thertices of the throught to be the precion to draw a triangle. This horastal triangle composed of similar and smaller triangles and divided "into four smaller triangles and divided "into four smaller triangles using the mid points of the three sides of the original triangles triangle as the new vertices. Persone the interior of the middle triangle and to get stil. Then we will get the siempinal, geshet congruent equilateral triangle.

Conclusion: Do was a grander of motor motor ? 3/197

In this experiment, Sierpinky gashet algorithm I bearned how a pattern can terpeat again at a different scales and how this complex shape can be formed by the simple repetition. I sidnet encounter any difficulties during the implementation.

word at nothing all how bear making sitt now it along

the first I have taken there courts for the within a the

for nothing to becomes algorith hitswat sitt algorithe

en triongles and tribert hat species as

a salmont to remark the real party of the points

The state of the s

The state of the safety

thoughos tolers interiors of the souppost

Code:

```
*main.cpp [Gasket] - Code::Blocks 20.03
                                                                                                                                                                                                - o ×
File Edit View Search Project Build Debug Fortran ws/Smith Tools Tools+ Plugins Doxy8locks Settings Help
                               √ | ← → <u>/</u> ⊕ &s.*
Projects Files F

Workspace
Gasket
Sources
                                  #include<GL/glut.h>
#include<stdlib.h>
                                  #include<stdio.h>
#include<bits/stdc++.h>
#include<math.h>
                            x12=(x1+x2)/2;
y12=(x1+y2)/2;
y13=(x1+x3)/2;
y13=(x1+x3)/2;
x23=(x2+x3)/2;
x23=(x2+x3)/2;
SG(x1,z1,x12,y12,x13,y13,n-1);
SG(x12,y12,x2,y2,x23,y23,n-1);
SG(x13,y13,x23,y23,x3,y3,n-1);
                             30
31
32
33
34
35
36
37
                                          else
                                               triangle(x1,z1,x2,v2,x3,v3);
                                                                                     - 📯 🖦 刘 🧿 🧿 🔃 🗒 🕫 🛂 📳
                                                                                                                                                                                              Q Search
🕌 main.cpp [Gasket] - Code::Blocks 20.03
                                                                                                                                                                                                             - o ×
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
                               ~ | ← → <u>/</u> ⊕ An .*
                            32
33
34
35
36
37
38
39
40
41
42
43
   Projects Files F
                                                SG(x13,y13,x23,y23,x3,y3,n-1);
Workspace
Gasket
Sources
                                         triangle(x1, z1, x2, y2, x3, y3);
                                     void display(void)
                                       SG(x1,z1,x2,y2,x3,y3,n);
glFlush();
                                     void init(void)
                            44 v
45 ⊟{
                                          qlClear (GL COLOR BUFFER BIT);
                             46
                            46
47
48
49
50
51
                                         glClearColor(0,0,0,0);
glMatrixMode(GL_PROJECTION);
glLoadIdentity();
gluOrtho2D(-100,100,-100,100);
                                    int main(int argc, char** argv)
                                         printf("Enter the three points: \n");
scanf("%t %f %f %f %f %f %f", &xl, &zl, &x2, &y2, &x3, &y3);
scanf("%d", &n);
glutInit(&argc, argv);
glutInitUsiplayMode(GLUT_SINGLE | GLUT_RGB);
glutInitWindowSize(500,500);
glutInitWindowPosition(100,100);
glutCreateWindow("Gasket");
                             53
54
55
56
57
58
59
60
                             61
62
                            62
63
64
65
66
67
                                          glutDisplayFunc(display);
glutMainLoop();
return 0;
                                                          👯 Q Search 🔀 🙀 🔰 🕐 🧿 [N] 🗒 🔞 👔 🕎
                                                                                                                                                                       へ 令 切 ■ 06:38 PM ① 24-03-2023 ①
```

