// Name – Dahiwal Satyam Santoshkumar

// Roll Number -207019

#include <GL/glut.h>

#include <iostream>

#include <math.h>

GLfloat oldx=-0.7,oldy=0.5;

void drawkoch(GLfloat dir,GLfloat len,GLint iter)

{

GLdouble dirRad = 0.0174533 \* dir ;

GLfloat newX = oldx + len \* cos(dirRad);

GLfloat newY = oldy + len \* sin(dirRad);

if (iter==0)

{

glVertex2f(oldx, oldy);

glVertex2f(newX, newY);

oldx = newX;

oldy = newY;

}

else

{

iter--;

//draw the four parts of the side \_/\\_

drawkoch(dir, len, iter);

dir += 60.0;

drawkoch(dir, len, iter);

dir -= 120.0;

drawkoch(dir, len, iter);

dir += 60.0;

drawkoch(dir, len, iter);

}

}

void display()

{

glClearColor(1.0,1.0,1.0,0);

glColor3f(0.0, 0.0, 0.0);

glClear( GL\_COLOR\_BUFFER\_BIT );

glBegin(GL\_LINES);

/\*

drawkoch(0.0,0.5,1);

drawkoch(-120.0, 0.5, 1);

drawkoch(120.0,0.5,1);

drawkoch(0.0,0.15,2);

drawkoch(-120.0, 0.15, 2)

drawkoch(120.0,0.15,2)

drawkoch(0.0,0.05,3);

drawkoch(-120.0, 0.05, 3);

drawkoch(120.0,0.05,3);

glEnd()p

glFlush()

}

int main(int argc, char\*\* arg

glutInit(&argc,argv);

glutInitDisplayMode(GLUT\_SINGLE|GLUT\_RGB);

glutInitWindowSize(500,500);

glutInitWindowPosition(0,0);

glutCreateWindow("Koch Curves");

glutDisplayFunc(display);

glutMainLoop();

}

Output

satyam@ubuntu:~$ g++ nine.cpp -lglut -lGL -lGLEW -lGLU -o nine

satyam@ubuntu:~$ ./nine

