EXNO: **OPENGL-FRACTAL CURVES**
DATE:

AIM: To display the Kochcurve in openGL.

ALGORITHM:

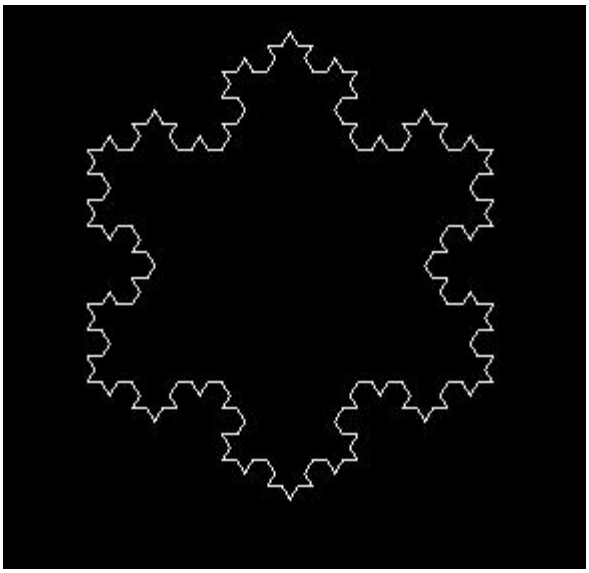
1.Start
2.Initialise the colors
3.Initialise the begin( ) with GL_LINES to draw lines
4.Initialise the vertices for lines for the kochcurve using drwakoch( )
5.Decrement the iter value by 1
6.Increment the dir value by 60
7.Decrement the dir value by 120
8.Create a window for the display of kochcurve
9.Call the display( ) method
10.Stop

PROGRAM:

```
#include<stdafx.h>
#include<GL/glut.h>
#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--;
		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 mydisplay(){
	glClear(GL_COLOR_BUFFER_BIT);
```

```
        glBegin(GL_LINES);
        glColor3f(1.0,1.0,1.0);
        drawkoch(0.0,0.05,3);
        drawkoch(-120.0,0.05,3);
        drawkoch(120.0,0.05,3);
        glEnd();
        glFlush();
}
int main(int argc, char** argv)
{
        glutInit(&argc,argv);
        glutCreateWindow("Koch snowflake");
        glutDisplayFunc(mydisplay);
        glutMainLoop();
}
```

SAMPLE OUTPUT:



RESULT: Thus the kochcurve was executed successfully in openGL.