**/\*EXPERIMENT NO.- 7B**

**PROBLEM STATEMENT-** Generate fractal patterns using Koch curve

**ROLL NO.-** ITSA01

**NAME-** Rahul Devidas Thakare

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**INPUT**

#include<GL/glut.h>

#include<math.h>

GLfloat oldx=-0.5,oldy=0.5;

*void* drawkoch(GLfloat dir,GLfloat len,*int* iter){

    GLdouble dirRad=0.0174533\*dir;

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

*float* 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(){

    glClearColor(1,1,1,0);

    glClear(GL\_COLOR\_BUFFER\_BIT);

    glBegin(GL\_LINES);

        glColor3f(0.0,0.0,0.0);

        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);

    glutInitDisplayMode(GLUT\_SINGLE | GLUT\_RGB);

    glutInitWindowSize(500,500);

    glutInitWindowPosition(0,0);

    glutCreateWindow("Koch SnowFlake- Marcus Young");

    glutDisplayFunc(myDisplay);

    glutMainLoop();

}