import com.jogamp.opengl.GL2;

import com.jogamp.opengl.GLAutoDrawable;

import com.jogamp.opengl.GLCapabilities;

import com.jogamp.opengl.GLEventListener;

import com.jogamp.opengl.GLProfile;

import com.jogamp.opengl.awt.GLCanvas;

import com.jogamp.opengl.glu.GLU;

import java.lang.Math;

import java.util.Random;

import javax.swing.JFrame;

class ThirdGLEventListener implements GLEventListener {

/\*\*

\* Interface to the GLU library.

\*/

private GLU glu;

/\*\*

\* Take care of initialization here.

\*/

public void init(GLAutoDrawable gld) {

GL2 gl = gld.getGL().getGL2();

glu = new GLU();

gl.glClearColor(10.0f, 10.0f, 0.0f, 1.0f);

gl.glViewport(-250, -150, 250, 150);

gl.glMatrixMode(GL2.GL\_PROJECTION);

gl.glLoadIdentity();

glu.gluOrtho2D(-250.0, 250.0, -150.0, 150.0);

}

/\*\*

\* Take care of drawing here.

\*/

public void display(GLAutoDrawable drawable) {

GL2 gl = drawable.getGL().getGL2();

gl.glClear(GL2.GL\_COLOR\_BUFFER\_BIT);

/\*

\* put your code here

\*/

gl.glPointSize(10.0f);

gl.glColor3d(0.1f, 0.0f, 0.1f);

DDA(gl,-50,30,50,30) ;

DDA(gl,0,-50,0,30) ;

}

public static void DDA(GL2 gl,float x1,float y1,float x2,float y2){

gl.glPointSize(2.0f);

gl.glColor3d(0, 0, 1);

gl.glBegin(GL2.GL\_POINTS);

float x=x1;float y=y1;

float m=(y2-y1)/(x2-x1);

if(m<=-1||m>=1){

for(float j=y;j<=y2;j++){

float i=x;

int x3 = Math.round(i);

int y3 = Math.round(j);

gl.glVertex2d(x3,y3);

i=i+(1/m);

}

}

else{

for(float i=x;i<=x2;i++){

float j=y;

int x3 = Math.round(i);

int y3 = Math.round(j);

gl.glVertex2d(x3,y3);

j=j+m;

}

}

gl.glEnd();

}

public void reshape(GLAutoDrawable drawable, int x, int y, int width,

int height) {

}

public void displayChanged(GLAutoDrawable drawable,

boolean modeChanged, boolean deviceChanged) {

}

public void dispose(GLAutoDrawable arg0)

{

}

}

public class 19301186\_Fahim

{

public static void main(String args[])

{

//getting the capabilities object of GL2 profile

final GLProfile profile=GLProfile.get(GLProfile.GL2);

GLCapabilities capabilities=new GLCapabilities(profile);

// The canvas

final GLCanvas glcanvas=new GLCanvas(capabilities);

ThirdGLEventListener b=new ThirdGLEventListener();

glcanvas.addGLEventListener(b);

glcanvas.setSize(800,800);

//creating frame

final JFrame frame=new JFrame("Task3");

//adding canvas to frame

frame.add(glcanvas);

frame.setSize(1000,1000);

frame.setVisible(true);

}

}