**Assignment number: 3**

**Subject: COMPUTER GRAPHICS LAB**

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Class: ***SECOND YEAR ENGINEERING***

Division: ***B***

Roll no: ***222008***

Batch: ***B1***

**PROBLEM STATEMENT:**

Write C++/Java program to draw the following pattern using any Line drawing algorithms.

**Code:**

package dda\_pattern;

import java.awt.\*;

import javax.swing.\*;

public class DDA\_pattern extends JFrame {

public void Drawline1(Graphics g,double x1,double y1,double x2,double y2){

double dx,dy,length;

double x,y;

dx=Math.abs(x2-x1);

dy=Math.abs(y2-y1);

if(dx>=dy)

length=dx;

else

length=dy;

dx=(x2-x1)/length;

dy=(y2-y1)/length;

x=x1+0.5\*Math.signum(dx);

y=y1+0.5\*Math.signum(dy);

int i=1;

while(i<=length)

{

g.fillOval((int)x,(int)y,2,2);

x=x+dx;

y=y+dy;

i=i+1;

}

}

public void paint(Graphics g)

{

Drawline1(g,100,200,500,200);

Drawline1(g,100,200,100,500);

Drawline1(g,100,500,500,500);

Drawline1(g,500,200,500,500);

Drawline1(g,300,200,100,350);

Drawline1(g,100,350,300,500);

Drawline1(g,300,500,500,350);

Drawline1(g,500,350,300,200);

Drawline1(g,200,280,200,420);

Drawline1(g,200,420,400,420);

Drawline1(g,400,420,400,280);

Drawline1(g,400,280,200,280);

}

public static void main(String[] args) {

// TODO code application logic here

DDA\_pattern d=new DDA\_pattern();

d.setSize(800,800);

d.setVisible(true);

d.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

}

}

Output:

