---------------------------------------------------------------------- Write C++/Java program to draw any object such as flower, waves using any curve generation techniques

----------------------------------------------------------------------#include "mainwindow.h"

#include "ui\_mainwindow.h"

#include<QPainter>

#include<math.h>

MainWindow::MainWindow(QWidget \*parent) :

QMainWindow(parent),

ui(new Ui::MainWindow)

{

ui->setupUi(this);

}

MainWindow::~MainWindow()

{

delete ui;

}

void MainWindow::changeEvent(QEvent \*e)

{

QMainWindow::changeEvent(e);

switch (e->type()) {

case QEvent::LanguageChange:

ui->retranslateUi(this);

break;

default:

break;

}

}

void MainWindow::paintEvent(QPaintEvent \*)

{

QPainter P(this);

int i;

float u;

float px[10][5],py[10][5],cx,cy;

/\* Upper petal\*/

px[0][0]=200;

px[0][1]=120;

px[0][2]=280;

px[0][3]=200;

py[0][0]=150;

py[0][1]=50;

py[0][2]=50;

py[0][3]=150;

/\* Down petal\*/

px[1][0]=200;

px[1][1]=280;

px[1][2]=120;

px[1][3]=200;

py[1][0]=210;

py[1][1]=310;

py[1][2]=310;

py[1][3]=210;

/\* Left petal\*/

px[2][0]=170;

px[2][1]=70;

px[2][2]=70;

px[2][3]=170;

py[2][0]=180;

py[2][1]=100;

py[2][2]=260;

py[2][3]=180;

/\* Right petal\*/

px[3][0]=230;

px[3][1]=330;

px[3][2]=330;

px[3][3]=230;

py[3][0]=180;

py[3][1]=100;

py[3][2]=260;

py[3][3]=180;

/\* right upper petal\*/

px[4][0]=220;

px[4][1]=250;

px[4][2]=350;

px[4][3]=220;

py[4][0]=160;

py[4][1]=30;

py[4][2]=150;

py[4][3]=160;

/\* right lower petal\*/

px[5][0]=220;

px[5][1]=350;

px[5][2]=250;

px[5][3]=220;

py[5][0]=200;

py[5][1]=210;

py[5][2]=330;

py[5][3]=200;

/\* Left lower petal\*/

px[6][0]=180;

px[6][1]=50;

px[6][2]=150;

px[6][3]=180;

py[6][0]=200;

py[6][1]=210;

py[6][2]=330;

py[6][3]=200;

/\* Left upper petal\*/

px[7][0]=180;

px[7][1]=50;

px[7][2]=150;

px[7][3]=180;

py[7][0]=160;

py[7][1]=150;

py[7][2]=30;

py[7][3]=160;

/\* For Drawing Tail of Flower\*/

px[8][0]=215;

px[8][1]=200;

px[8][2]=340;

px[8][3]=320;

py[8][0]=200;

py[8][1]=280;

py[8][2]=260;

py[8][3]=460;

P.setPen(QPen(Qt::yellow,7));

P.drawEllipse(174,154,50,50);

P.setPen(QPen(Qt::blue,10));

P.drawEllipse(190,170,20,20);

P.setPen(QPen(Qt::red,7));

for(i=0;i<4;i++)

{

for(u=0.0;u<=1.0;u=(u+0.005))

{

cx=(px[i][0]\*pow(1-u,3))+(3\*px[i][1]\*u\*pow(1-u,2))+(3\*px[i][2]\*pow(u,2)\*(1-u))+(px[i][3]\*pow(u,3));

cy=(py[i][0]\*pow(1-u,3))+(3\*py[i][1]\*u\*pow(1-u,2))+(3\*py[i][2]\*pow(u,2)\*(1-u))+(py[i][3]\*pow(u,3));

P.drawPoint(cx,cy);

//delay(100);

}

}

P.setPen(QPen(Qt::blue,7));

for(i=4;i<8;i++)

{

for(u=0.0;u<=1.0;u=(u+0.005))

{

cx=(px[i][0]\*pow(1-u,3))+(3\*px[i][1]\*u\*pow(1-u,2))+(3\*px[i][2]\*pow(u,2)\*(1-u))+(px[i][3]\*pow(u,3));

cy=(py[i][0]\*pow(1-u,3))+(3\*py[i][1]\*u\*pow(1-u,2))+(3\*py[i][2]\*pow(u,2)\*(1-u))+(py[i][3]\*pow(u,3));

P.drawPoint(cx,cy);

//delay(100);

}

}

P.setPen(QPen(Qt::green,4));

for(u=0.0;u<=1.0;u=(u+0.005))

{

cx=(px[8][0]\*pow(1-u,3))+(3\*px[8][1]\*u\*pow(1-u,2))+(3\*px[8][2]\*pow(u,2)\*(1-u))+(px[8][3]\*pow(u,3));

cy=(py[8][0]\*pow(1-u,3))+(3\*py[8][1]\*u\*pow(1-u,2))+(3\*py[8][2]\*pow(u,2)\*(1-u))+(py[8][3]\*pow(u,3));

P.drawPoint(cx,cy);

//delay(100);

}

}

**OUTPUT:**

