Каріна Зубко 4 варіант

Лаболаторна 15:

import scalafx.Includes.\_

import scalafx.application.JFXApp3

import scalafx.scene.Scene

import scalafx.scene.canvas.Canvas

import scalafx.scene.paint.Color

object BloomingTrees extends JFXApp3 {

def drawBranch(gc: scalafx.scene.canvas.GraphicsContext, x1: Double, y1: Double, angle: Double, depth: Int): Unit = {

if (depth > 0) {

val angle1 = angle + math.Pi / 6

val angle2 = angle - math.Pi / 6

val length = 60 \* math.pow(0.8, depth)

val x2 = x1 + length \* math.cos(angle)

val y2 = y1 - length \* math.sin(angle)

gc.stroke = Color.Brown

gc.strokeLine(x1, y1, x2, y2)

drawBranch(gc, x2, y2, angle1, depth - 1)

drawBranch(gc, x2, y2, angle2, depth - 1)

if (depth == 1) {

gc.fill = Color.Pink

gc.fillOval(x2 - 5, y2 - 5, 10, 10)

}

}

}

override def start(): Unit = {

stage = new JFXApp3.PrimaryStage {

title = "Blooming Trees"

scene = new Scene(800, 600) {

val canvas = new Canvas(800, 600)

content = canvas

val gc = canvas.graphicsContext2D

drawBranch(gc, 400, 550, -math.Pi / 2, 7)

}

}

}

}





