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\* 原子核模型

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package application.Model;

import java.util.Random;

import javafx.scene.paint.Color;

import javafx.scene.paint.CycleMethod;

import javafx.scene.paint.RadialGradient;

import javafx.scene.paint.Stop;

import javafx.scene.shape.Circle;

public class NucleusModel {

private int no;

private Circle circle; //用两个连接的圆来描绘原子核

private int Xvelocity; //横坐标方向速度

private int Yvelocity; //纵坐标方向速度

private int XCoordinates; //横坐标

private int YCoordinates; //纵坐标

private RadialGradient gradient;

public NucleusModel() {

Random rand = new Random();

//圆的位置不得超出显示范围

XCoordinates=rand.nextInt(430) + 1;

YCoordinates=rand.nextInt(330) + 1;

//设置渐变颜色

gradient = new RadialGradient( 0, .1, 40, 40, 20, false,

CycleMethod.NO\_CYCLE, new Stop(0, Color.WHITE), new Stop(1, Color.BLUE));

circle = new Circle(40,40,20);

Xvelocity=0;

Yvelocity=0;

//中心坐标

circle.setCenterX(XCoordinates);

circle.setCenterY(YCoordinates);

circle.setFill(gradient);

}

public void setCoordinates(int XCoordinatesMin,int XCoordinatesMax,int YCoordinatesMin,int YCoordinatesMax) {

Random rand = new Random();

XCoordinates=rand.nextInt(XCoordinatesMax-XCoordinatesMin+1) + XCoordinatesMin;

circle.setCenterX(XCoordinates);

YCoordinates=rand.nextInt(YCoordinatesMax-YCoordinatesMin+1) + YCoordinatesMin;

circle.setCenterY(YCoordinates);

}

public void setNo(int no) {

this.no=no;

}

public int getNo() {

return no;

}

public void setColor() {

//被碰撞后设置颜色为白色，以达到去除的目的

RadialGradient gradient1 = new RadialGradient( 0, .1, 40, 40, 20, false,

CycleMethod.NO\_CYCLE, new Stop(0, Color.WHITE), new Stop(1, Color.WHITE));

circle.setFill(gradient1);

}

public int getXVelocity() {

return Xvelocity;

}

public int getYVelocity() {

return Yvelocity;

}

public Circle getCircle() {

return circle;

}

public void setCircle(Circle circle) {

this.circle=circle;

}

public void setXvelocity(int velocity) {

this.Xvelocity=velocity;

}

public void setYvelocity(int velocity) {

this.Yvelocity=velocity;

}

public void setXCoordinates(int Coordinates) {

this.XCoordinates=Coordinates;

}

public void setYCoordinates(int Coordinates) {

this.YCoordinates=Coordinates;

}

public int getX() {

int X;

double xMin = circle.getBoundsInParent().getMinX();

double xMax = circle.getBoundsInParent().getMaxX();

X=(int)((xMax+xMin)/2);

// TODO Auto-generated method stub

return X;

}

public int getY() {

int Y;

double yMin = circle.getBoundsInParent().getMinY();

double yMax = circle.getBoundsInParent().getMaxY();

Y=(int)((yMax+yMin)/2);

// TODO Auto-generated method stub

return Y;

}

public int getSize() {

// TODO Auto-generated method stub

return 20;

}

}