技职教育系
Department of Vocational Education

软件工程与移动应用程序开发课程
Software Engineering and Application Developer (SEMD)

个人作业
Assignment

科目 Subject	Multimedia Programming in Java
科目编号 Subject Code	SEMD019
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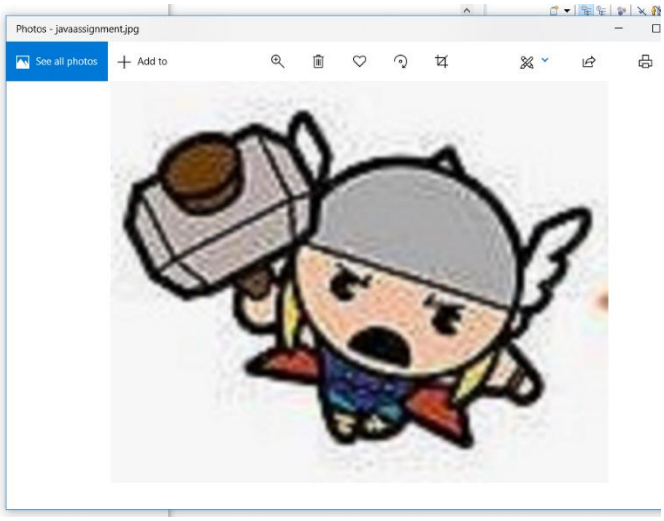
分数 Marks	



Source Code

```
import javafx.application.Application;
import javafx.stage.Stage;
import javafx.scene.shape.*;
import javafx.scene.*;
import javafx.scene.paint.Color;
import javafx.scene.paint.CycleMethod;
import javafx.scene.paint.LinearGradient;
import javafx.scene.paint.Stop;
import javafx.scene.transform.*;

public class Assignment1 extends Application{

	public void start(Stage assignment1Stage) throws Exception{

		/////hammmer
		//hammerLine
		Line hammerline1 = new Line(190,320,425,255);
		Line hammerline2 = new Line(150,350,190,320);
		Line hammerline3 = new Line(425,255,470,255);
		Line hammerline4 = new Line(160,200,190,320);
		Line hammerline5 = new Line(190,320,240,415);
		Line hammerline6 = new Line(400,150,425,255);
		Line hammerline7 = new Line(425,255,430,360);

		//hammerStickTop
		Ellipse hammerTop = new Ellipse(285,160,80,50);
		Ellipse hammerTop2 = new Ellipse(285,190,69,50);

		Line hammerTopLine1 = new Line(205,225,222,250);
		Line hammerTopLine2 = new Line(354,190,350,220);
```

```
//hammerStickBot
Ellipse hammerBot = new Ellipse(380,420,30,90);

//thor hammer
Polygon decagon = new Polygon();

decagon.getPoints().addAll(new Double[] {
                    160.0, 200.0,
                    400.0, 150.0,
                    450.0, 180.0,
                    470.0, 255.0,
                    470.0, 325.0,
                    430.0, 360.0,
                    240.0, 415.0,
                    185.0, 410.0,
                    150.0, 350.0,
                    130.0, 255.0,
          });

//Rotate (hammerTop)
Rotate hammerTopRotate = new Rotate();
hammerTopRotate.setAngle(-15);
hammerTopRotate.setPivotX(400);
hammerTopRotate.setPivotY(210);

hammerTop.getTransforms().addAll(hammerTopRotate);
hammerTop2.getTransforms().addAll(hammerTopRotate);

//Rotate (hammerStickBot)
Rotate hammerBotRotate = new Rotate();
hammerBotRotate.setAngle(-15);
hammerBotRotate.setPivotX(300);
hammerBotRotate.setPivotY(600);

hammerBot.getTransforms().addAll(hammerBotRotate);

//hammer color
Color hammerColor = Color.rgb(197,186,182);
Color hammerStickColor = Color.rgb(106,60,11);

//face color
Color faceColor = Color.rgb(244,215,185);
Color face2Color = Color.rgb(173,171,172);

//mouth color
Color mouthColor = Color.rgb(16, 20, 31);

//eyesColor
```

```
Color eyesColor = Color.rgb(36, 23, 17);

//set color hammer
decagon.setFill(hammerColor);
decagon.setStroke(Color.BLACK);
decagon.setStrokeWidth(10);

//set color hammerStick
hammerTop.setFill(hammerStickColor);
hammerTop.setStroke(Color.BLACK);
hammerTop.setStrokeWidth(12);

hammerTop2.setFill(hammerStickColor);
hammerTop2.setStroke(Color.BLACK);
hammerTop2.setStrokeWidth(12);

//hammer stick line
hammerTopLine1.setStroke(Color.BLACK);
hammerTopLine1.setStrokeWidth(12);

hammerTopLine2.setStroke(Color.BLACK);
hammerTopLine2.setStrokeWidth(12);

//hammer Bot color
hammerBot.setFill(hammerStickColor);
hammerBot.setStroke(Color.BLACK);
hammerBot.setStrokeWidth(10);

/////////
//face
Circle face = new Circle(600,410,180);
Arc face2 = new Arc();
face2.setCenterX(600);
face2.setCenterY(410);
face2.setRadiusX(180);
face2.setRadiusY(180);
face2.setStartAngle(-15);
face2.setLength(180);
face2.setType(ArcType.ROUND);

QuadCurve face3 = new QuadCurve(750,422,785,350,776,430);

//mouth
Arc mouth2 = new Arc();
mouth2.setCenterX(560);
mouth2.setCenterY(575);
mouth2.setRadiusX(60);
mouth2.setRadiusY(60);
```

```
mouth2.setStartAngle(-360);
mouth2.setLength(160);
mouth2.setType(ArcType.CHORD);

//eyes1
Ellipse eyes1 = new Ellipse(540,435,26,28);
Ellipse eyes1In = new Ellipse(527,440,10,8);
Ellipse eyes2 = new Ellipse(700,470,26,28);
Ellipse eyes2In = new Ellipse(670,485,10,8);

//face colors
face.setFill(faceColor);
face.setStroke(Color.BLACK);
face.setStrokeWidth(5);

//face2Color
face2.setFill(face2Color);
face2.setStroke(Color.BLACK);
face2.setStrokeWidth(5);

face3.setFill(face2Color);

//mouth color
mouth2.setFill(mouthColor);

//rotateEyes
Rotate eyesRotate = new Rotate();
eyesRotate.setAngle(30);
eyesRotate.setPivotX(510);
eyesRotate.setPivotY(390);

eyes1.getTransforms().addAll(eyesRotate);

Rotate eyes2Rotate = new Rotate();
eyes2Rotate.setAngle(30);
eyes2Rotate.setPivotX(650);
eyes2Rotate.setPivotY(390);

eyes2.getTransforms().addAll(eyes2Rotate);

Rotate eyes1InRotate = new Rotate();
eyes1InRotate.setAngle(30);
eyes1InRotate.setPivotX(527);
eyes1InRotate.setPivotY(440);

eyes1In.getTransforms().addAll(eyes1InRotate);

Rotate eyes2InRotate = new Rotate();
```

```
eyes2InRotate.setAngle(30);
eyes2InRotate.setPivotX(670);
eyes2InRotate.setPivotY(485);

eyes2In.getTransforms().addAll(eyes2InRotate);

//eyesColor
eyes1.setFill(eyesColor);
eyes1In.setFill(Color.WHITE);
eyes2.setFill(eyesColor);
eyes2In.setFill(Color.WHITE);

//Body
Polyline body = new Polyline();
body.getPoints().addAll(new Double[] {
        450.0,535.0,
        470.0,750.0,
        520.0,750.0,
        535.0,690.0,
        555.0,685.0,
        540.0,740.0,
        590.0,740.0,
        620.0,680.0,
        615.0,660.0,
        660.0,550.0
        });

body.setFill(faceColor);
body.setStroke(Color.BLACK);
body.setStrokeWidth(5);

//Rotate Body
Rotate bodyRotate = new Rotate();
bodyRotate.setAngle(10);
bodyRotate.setPivotX(590);
bodyRotate.setPivotY(500);

body.getTransforms().addAll(bodyRotate);

//hand
Polyline hand = new Polyline();
hand.getPoints().addAll(new Double[] {
        460.0,500.0,
        380.0,470.0,
        360.0,530.0,
        460.0,580.0,
        600.0,620.0,
        690.0,650.0,
```

```
        700.0,610.0,
        650.0,570.0
});

hand.setFill(faceColor);
hand.setStroke(Color.BLACK);
hand.setStrokeWidth(5);

//leftHand
Circle leftHand = new Circle(350,490,40);

leftHand.setFill(faceColor);

leftHand.setStroke(Color.BLACK);
leftHand.setStrokeWidth(5);

//rightHand
Circle rightHand = new Circle(718,645,30);

rightHand.setFill(faceColor);
rightHand.setStroke(Color.BLACK);
rightHand.setStrokeWidth(5);

Polyline rightHandBlock = new Polyline();

rightHandBlock.getPoints().addAll(new Double[] {
        695.0,605.0,
        675.0,652.0,
        690.0,655.0,
        710.0,614.0,
        695.0,605.0
});

rightHandBlock.setFill(Color.YELLOW);

//hair
Polyline hair1 = new Polyline();

hair1.getPoints().addAll(new Double[] {
        415.0,400.0,
        400.0,580.0,
        440.0,480.0
});

CubicCurve hair11 = new CubicCurve(418,400,400,500,380,560,400,580);
hair11.setFill(Color.rgb(230,210,115));
hair11.setStroke(Color.BLACK);
hair11.setStrokeWidth(3);
```

```
Line hair12 = new Line(400,580,480,400);
hair12.setStroke(Color.BLACK);
hair12.setStrokeWidth(3);

Polyline hair2 = new Polyline();

hair2.getPoints().addAll(new Double[] {
        680.0,520.0,
        640.0,650.0,
        750.0,520.0
});

hair2.setStrokeWidth(0);

CubicCurve hair21 = new CubicCurve(750,520,700,600,650,640,640,650);
hair21.setFill(Color.rgb(230,210,115));
hair21.setStroke(Color.BLACK);
hair21.setStrokeWidth(3);

Line hair22 = new Line(640,650,680,520);
hair22.setStroke(Color.BLACK);
hair22.setStrokeWidth(3);

hair1.setFill(Color.rgb(230,210,115));
hair1.setStrokeWidth(0);
hair2.setFill(Color.rgb(230,210,115));

Polyline cloak = new Polyline();
cloak.getPoints().addAll(new Double[] {
        450.0,480.0,
        330.0,600.0,
        450.0,630.0,
        600.0,690.0,
        680.0,720.0,
        600.0,550.0
});

cloak.setFill(Color.RED);
cloak.setStroke(Color.BLACK);
cloak.setStrokeWidth(0);

Polyline head1 = new Polyline();

head1.getPoints().addAll(new Double[] {
        420.0,200.0,
        440.0,110.0,
        500.0,190.0,
```

```
        465.0,300.0
});

head1.setFill(Color.rgb(238, 238, 238));
head1.setStroke(Color.BLACK);
head1.setStrokeWidth(5);

Polyline head2 = new Polyline();

head2.getPoints().addAll(new Double[] {
        660.0,220.0,
        635.0,240.0,
        665.0,255.0,
        660.0,220.0
});

head2.setFill(face2Color);
head2.setStroke(Color.BLACK);
head2.setStrokeWidth(4);

Polyline head3 = new Polyline();

head3.getPoints().addAll(new Double[] {
        730.0,495.0,
        800.0,250.0,
        920.0,240.0,
        870.0,300.0,
        830.0,310.0,
        865.0,320.0,
        840.0,370.0,
        810.0,380.0,
        830.0,390.0,
        810.0,440.0,
        790.0,445.0,
        800.0,460.0,
        790.0,490.0,
        730.0,495.0,
});

head3.setFill(Color.rgb(238, 238, 238));
head3.setStroke(Color.BLACK);
head3.setStrokeWidth(0);

Polyline shirt = new Polyline();

shirt.getPoints().addAll(new Double[] {
        445.0,505.0,
        430.0,680.0,
```

```
                500.0,685.0,
                505.0,678.0,
                520.0,678.0,
                517.0,680.0,
                580.0,690.0,
                590.0,680.0,
                590.0,660.0,
                650.0,565.0,
                445.0,505.0
        });

        Stop[] stops = new Stop[] {
                        new Stop(0,Color.rgb(50, 51, 95)),
                        new Stop(1,Color.rgb(90, 135, 141))
                };

        LinearGradient linearGradient = new LinearGradient(0,0,5,0, true,
CycleMethod.NO_CYCLE, stops);

        shirt.setFill(linearGradient);
        shirt.setStroke(Color.BLACK);
        shirt.setStrokeWidth(5);

        Color wings = (Color.rgb(238, 238, 238));

        //head3 curve
        CubicCurve head31 = new CubicCurve(800,250,835,240,860,230,920,240);
        head31.setFill(wings);
        head31.setStroke(Color.BLACK);
        head31.setStrokeWidth(4);
        CubicCurve head32 = new CubicCurve(920,240,920,260,890,290,870,300);
        head32.setFill(wings);
        head32.setStroke(Color.BLACK);
        head32.setStrokeWidth(4);
        CubicCurve head33 = new CubicCurve(872,300,860,310,835,310,830,310);
        head33.setFill(wings);
        head33.setStroke(Color.BLACK);
        head33.setStrokeWidth(4);
        CubicCurve head34 = new CubicCurve(830,310,850,310,870,310,865,320);
        head34.setFill(wings);
        head34.setStroke(Color.BLACK);
        head34.setStrokeWidth(4);
        CubicCurve head35 = new CubicCurve(865,315,870,340,855,360,840,370);
        head35.setFill(wings);
        head35.setStroke(Color.BLACK);
        head35.setStrokeWidth(4);
        CubicCurve head36 = new CubicCurve(840,370,825,385,815,380,810,380);
        head36.setFill(wings);
```

```
head36.setStroke(Color.BLACK);
head36.setStrokeWidth(4);
CubicCurve head37 = new CubicCurve(810,380,820,385,828,375,830,390);
head37.setFill(wings);
head37.setStroke(Color.BLACK);
head37.setStrokeWidth(4);
CubicCurve head38 = new CubicCurve(830,390,835,415,820,435,810,440);
head38.setFill(wings);
head38.setStroke(Color.BLACK);
head38.setStrokeWidth(4);
CubicCurve head39 = new CubicCurve(810,440,805,445,795,450,790,445);
head39.setFill(wings);
head39.setStroke(Color.BLACK);
head39.setStrokeWidth(4);
QuadCurve head310 = new QuadCurve(790,445,800,445,800,460);
head310.setFill(wings);
head310.setStroke(Color.BLACK);
head310.setStrokeWidth(4);
QuadCurve head311 = new QuadCurve(800,460,800,480,790,490);
head311.setFill(wings);
head311.setStroke(Color.BLACK);
head311.setStrokeWidth(4);
Line head312 = new Line(730.0,495.0,800.0,250.0);
head312.setStroke(Color.BLACK);
head312.setStrokeWidth(4);
Line head313 = new Line(790.0,490.0,730.0,495.0);
head313.setStroke(Color.BLACK);
head313.setStrokeWidth(4);

//feet
CubicCurve feet1 = new CubicCurve(430,723,430,745,470,750,480,730);
feet1.setFill(faceColor);
feet1.setStroke(Color.BLACK);
feet1.setStrokeWidth(5);

CubicCurve feet2 = new CubicCurve(500,725,485,750,540,760,553,730);
feet2.setFill(faceColor);
feet2.setStroke(Color.BLACK);
feet2.setStrokeWidth(5);

Line cutline = new Line(435,630,590,660);
cutline.setStroke(Color.BLACK);
cutline.setStrokeWidth(5);

CubicCurve cloak1 = new CubicCurve(330,600,340,660,420,650,550,630);
cloak1.setFill(Color.RED);
cloak1.setStroke(Color.BLACK);
cloak1.setStrokeWidth(5);
```

```
CubicCurve cloak2 = new CubicCurve(520,650,620,750,660,740,680,720);
cloak2.setFill(Color.RED);
cloak2.setStroke(Color.BLACK);
cloak2.setStrokeWidth(5);

Line cloak3 = new Line(450,480,330,600);
cloak3.setStroke(Color.BLACK);
cloak3.setStrokeWidth(5);

Line cloak4 = new Line(680,720,600,550);
cloak4.setStroke(Color.BLACK);
cloak4.setStrokeWidth(5);

Polyline eyes3 = new Polyline();
eyes3.getPoints().addAll(new Double[] {
        500.0,410.0,
        540.0,435.0,
        545.0,415.0
});

eyes3.setStroke(Color.BLACK);
eyes3.setStrokeWidth(0);
eyes3.setFill(faceColor);

QuadCurve eyes31 = new QuadCurve(545,415,535,425,540,435);
eyes31.setStroke(Color.BLACK);
eyes31.setStrokeWidth(3);
eyes31.setFill(faceColor);

Line eyes32 = new Line(500,410,540,435);
eyes32.setStroke(Color.BLACK);
eyes32.setStrokeWidth(3);

Polyline eyes4 = new Polyline();
eyes4.getPoints().addAll(new Double[] {
        690.0,460.0,
        630.0,460.0,
        640.0,440.0
});
eyes4.setFill(faceColor);
eyes4.setStroke(Color.BLACK);
eyes4.setStrokeWidth(0);

QuadCurve eyes41 = new QuadCurve(640,440,640,450,630,460);
eyes41.setFill(faceColor);
eyes41.setStroke(Color.BLACK);
eyes41.setStrokeWidth(3);
```

```
		Line eyes42 = new Line(630,460,690,460);
		eyes42.setStroke(Color.BLACK);
		eyes42.setStrokeWidth(3);

		//Group
		Group root = new
Group( cloak,cloak1,cloak2,cloak3,cloak4,head1,head2,head31,head32,head33

	,head34,head35,head36,head37,head38,head39,

	head310,head311,head3,head312,head313,
							hand,hair1,hair2,
							leftHand,body,hair22,hair12,shirt,
							face,face2,
							face3,
							eyes1,eyes1In,
							eyes2,eyes2In,
							mouth2,
							hammerBot,
							decagon,hammerline1,
							hammerline2,hammerline3,
							hammerline4,hammerline5,
							hammerline6,hammerline7,
							hammerTop2,hammerTop,
							hammerTopLine1,hammerTopLine2,
							rightHand,rightHandBlock,

	feet1,feet2,cutline,hair11,hair21,eyes3,eyes4,eyes31,eyes32,
							eyes41,eyes42
							);

		//Scene
		Scene scene = new Scene(root,1200,1080);

		assignment1Stage.setTitle("Baby Thor");
		assignment1Stage.setScene(scene);

		assignment1Stage.show();
	}

	public static void main(String[] args) {
		// TODO Auto-generated method stub
		launch(args);
	}

}
```