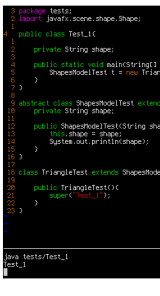
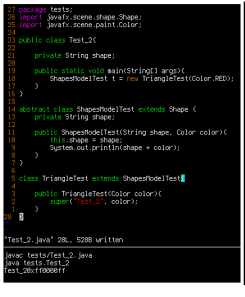
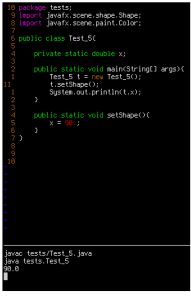
Shapes

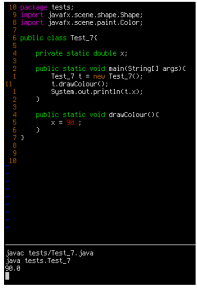
Contents

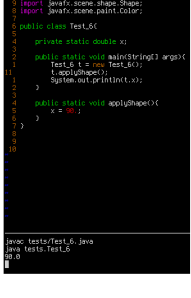
ShapesModelTests







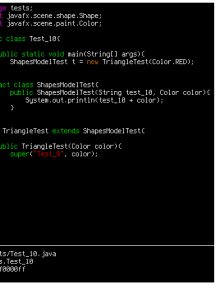




Triangle Tests

```
package tests;
import javafx.scene.shape.Shape;
import javafx.scene.paint.Color;

public class Test_9{

    public static void main(String[] args){
        ShapesModelTest t = new TriangleTest();
    }
}
abstract class ShapesModelTest{
        public ShapesModelTest(String test_9){
            System.out.println(test_9);
        }
}

class TriangleTest extends ShapesModelTest{

    public TriangleTest(){
        super("Test_9");
    }
}
```

```
javac tests/Test_9.java
java tests.Test_9
Test_9
```

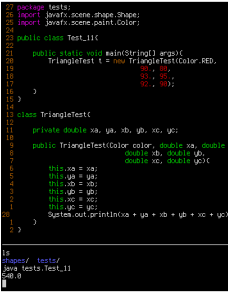


```
package tests;
import javafx.scene.shape.Shape;
import javafx.scene.paint.Color;

public class Test_10{

    public static void main(String[] args){
        ShapesModelTest t = new TriangleTest(Color.RED);
    }
}
abstract class ShapesModelTest{
        public ShapesModelTest(String test_10, Color color){
            System.out.println(test_10 + color);
        }
}

class TriangleTest extends ShapesModelTest{

    public TriangleTest(Color color){
        super("Test_9 ", color);
    }
}
```

```
javac tests/Test_10.java
java tests.Test_10
Test_9ColorffRed
```

```
package tests;
import javafx.scene.shape.Polygon;
import javafx.scene.paint.Color;

public class Test_12{

    private static Polygon s;

    public static void main(String[] args){
        Test_12 t = new Test_12();
        t.makeTriangle();
        System.out.println(s);
    }
    public static void  makeTriangle(){
        s = new Polygon();
    }
}
```

```
java tests.Test_12
Polygon[points=[], fill=0x000000ff]
```



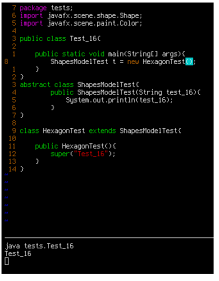
```
package tests;
import javafx.scene.shape.Shape;
import javafx.scene.paint.Color;

public class Test_11{

    public static void main(String[] args){
        TriangleTest t = new TriangleTest(Color.RED,
                                          90 , 80,
                                          50 , 50 ,
                                          92 , 90);
    }
}

class TriangleTest{

    private double xa, ya, xb, yb, xc, yc;

    public TriangleTest(Color color, double xa, double ya,
                                     double xb, double yb,
                                     double xc, double yc){

        this.xa = xa;
        this.ya = ya;
        this.xb = xb;
        this.yb = yb;
        this.xc = xc;
        this.yc = yc;
        System.out.println(xa + ya + xb + yb + xc + yc);
    }
}
```

```
ls
shapes/  tests/
java tests.Test_11
640.0
```

```
package tests;
import javafx.scene.shape.Polygon;
import javafx.scene.paint.Color;

public class Test_13{

    private static Polygon s;

    public static void main(String[] args){
        Test_13 t = new Test_13();
        t.makeTriangle405et();
        System.out.println(s);
    }
    public static void  makeTriangle405et(){
        s = new Polygon();
    }
}
```

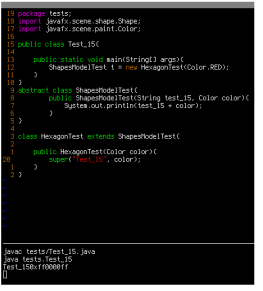
```
javac tests/Test_13.java
java tests.Test_13
Polygon[points=[], fill=0x000000ff]
```

Hexagon Tests



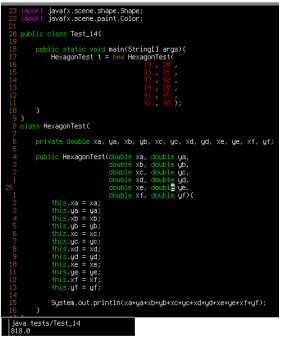
```
package tests;
import javafx.scene.shape.Shape;
import javafx.scene.paint.Color;

public class Test_16{

    public static void main(String[] args){
        ShapesModelTest t = new HexagonTest();
    }
}
abstract class ShapesModelTest{
    public ShapesModelTest(String test_16){
        System.out.println(test_16);
    }
}

class HexagonTest extends ShapesModelTest{

    public HexagonTest(){
        super("Test_16");
    }
}
```

```
java tests.Test_16
Test_16
[]
```



```
package tests;
import javafx.scene.shape.Shape;
import javafx.scene.paint.Color;

public class Test_15{

    public static void main(String[] args){
        ShapesModelTest t = new HexagonTest(Color.RED);
    }
}
abstract class ShapesModelTest{
    public ShapesModelTest(String test_15, Color color){
        System.out.println(test_15 + color);
    }
}

class HexagonTest extends ShapesModelTest{

    public HexagonTest(Color color){
        super("Test_15", color);
    }
}
```

```
javac tests/Test_15.java
java tests.Test_15
Test_15ffff0000ff
[]
```



```
import javafx.scene.shape.Shape;
import javafx.scene.paint.Color;

public class Test_14{

    public static void main(String[] args){
        HexagonTest t = new HexagonTest(
                                    91 , 20 ,
                                    93 , 85 ,
                                    92 , 90 ,
                                    71 , 20 ,
                                    93 , 85 ,
                                    92 , 90 );
    }
}
class HexagonTest{

    private double xa, ya, xb, yb, xc, yc, xd, yd, xe, ye, xf, yf;

    public HexagonTest(double xa, double ya,
                       double xb, double yb,
                       double xc, double yc,
                       double xd, double yd,
                       double xe, double ye,
                       double xf, double yf){

        this.xa = xa;
        this.ya = ya;
        this.xb = xb;
        this.yb = yb;
        this.xc = xc;
        this.yc = yc;
        this.xd = xd;
        this.yd = yd;
        this.xe = xe;
        this.ye = ye;
        this.xf = xf;
        this.yf = yf;

        System.out.println(xa+ya+xb+yb+xc+yc+xd+yd+xe+ye+xf+yf);
    }
```

```
java tests/Test_14
610.0
```

```
package tests;
import javafx.scene.shape.Polygon;
import javafx.scene.paint.Color;

public class Test_17{

    private static Polygon s;

    public static void main(String[] args){
        Test_17 t = new Test_17();
        t.makeHexagon();
        System.out.println(s);
    }
    public static void makeHexagon(){
        s = new Polygon();
    }
}
```

```
javac tests/Test_17.java
java tests.Test_17
Polygon[points=[], fill=0x000000ff]
[]
```

Rectangle Tests

```
package tests;
import javafx.scene.shape.Shape;
import javafx.scene.paint.Color;

public class Test_19{

    public static void main(String[] args){
        ShapesModelTest t = new RecTest();
    }
}
abstract class ShapesModelTest{
        public ShapesModelTest(String test_19){
            System.out.println(test_19);
        }
}

class RecTest extends ShapesModelTest{

    public RecTest(){
        super("Test_19");
    }
}
```

```
java tests.Test_19
Test_19
```

```
package tests;
import javafx.scene.shape.Shape;
import javafx.scene.paint.Color;

public class Test_20{

    public static void main(String[] args){
        ShapesModelTest t = new RecTest(Color.GREY);
    }
}
abstract class ShapesModelTest{
        public ShapesModelTest(String test_20, Color color){
            System.out.println(test_20 + color);
        }
}

class RecTest extends ShapesModelTest{

    public RecTest(Color color){
        super("Test_20", color);
    }
}
```

```
javac tests/Test_20.java
java tests.Test_20
Test_20ab8080ff
```

```
package tests;
import javafx.scene.shape.Rectangle;
import javafx.scene.paint.Color;

public class Test_18{

    private static Rectangle t;

    public static void main(String[] args){
        Test_18 t = new Test_18();
        t.makeRectangle();
        System.out.println(t);
    }
    public static void  makeRectangle(){
        t = new Rectangle();
    }
}
```

```
javac tests/Test_18.java
java tests.Test_18
tests.Test_18@1281284fce
```

States Between Transitions

```
Label message = new Label();
message.setLevel(FillColor.GREY);
message.setWrapText(true);
message.setFont(font);
message.setAllignment(Pos.BASELINE_CENTER);
message.setText('Left mouse button press enter to continue...\n');
root.getChildren().addAll(message);

Group shapes = new Group();
shapes.minHeight(200);
shapes.minWidth(200);
ShapesModel t = new Triangle(Color.GREEN, 100 , 90., 190 , 200., 300., 99.);
ShapesModel r = new Rect();
ShapesModel h = new Hexagon();

RotateTransition rt = new RotateTransition(Duration.millis(4000), shapes);
rt.setByAngle(270);
rt.setCycleCount(1);
rt.setAutoReverse(true);
rt.play();
shapes.setEffect(new GaussianBlur(100));
shapes.getChildren().addAll(h.getShape());
```

```
@Override
public void drawColour(){
    ft = new FillTransition(Duration.millis(2000), triangle, col, super.getColour());
    ft.setCycleCount(1);
    ft.setAutoReverse(false);
    ft.play();
    col = super.getColour();
}
```

```
30          ScaleTransition st = new ScaleTransition(Duration.millis(4000), shapes);
31
32          shapes.setOnMouseEntered(e -> {
33                                      st.setByX(0.25f);
34                                      st.setByY(0.25f);
35                                      st.setCycleCount(1);
36                                      st.setAutoReverse(true);
37                                      shapes.setEffect(new GaussianBlur(0));
38                                      st.play();
39                                      rt.play();
40                                  }
41                                  );
42          shapes.setOnMouseExited(e -> {
43                                      shapes.setEffect(new GaussianBlur(4));
44                                      rt.stop();
45                                  }
46                                  );
```