

ExceptionTester.java

METHOD = C
COLOR = BLUE
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/**
 * This program allows the user to trace program execution under different
 * scenarios involving exceptions. To use this program, make sure to download
 * (or create) the following RuntimeExceptions (all should be in the same folder
 * as this program): RedException BlueException YellowException GreenException
 * OrangeException
 *
 * To run the program, you must provide two command-line arguments: mmm ccc
 * where
 * mmm represents the method and is c, d, or e
 * and
 * ccc represents the color of the exception and is red, blue, yellow, green,
 * or orange
 *
 * To use command-line arguments when you run this program using Eclipse:
 * 1) Right click on this source file in the "Package Explorer" window.
 * 2) Select "Run As" from the pop-up menu.
 * 3) Select "Run Configurations..." from the pop-up menu, which brings up the
 * "Run Configurations" window.
 * 4) Click on the "(x)= Arguments" tab.
 * 5) Enter the arguments (separated by a space) in the "Program arguments:"
 * text box.
 * 6) Click either the "Run" button or the "Apply" and "Run" buttons.
 *
 * @author Beck Hasti, copyright 2008-2014
 */
public class ExceptionTester {
    private static String color; // holds the color from the command line
    private static String method; // holds the method from the command line

    public static void main(String[] args) {
        // Set up
        if (args.length != 2) {
            method = "e"; color = "blue";
            //method = ""; color = "";
        } else {
            method = args[0];
            color = args[1];
            System.out.println("Args="+method+";"+color);}

        // This is where the interesting stuff starts to happen
        System.out.print("main["); ①
        try {
            methodA();
            System.out.print("after A,"); ⑤ ⑥
            methodE();
            System.out.print("after E,"); ⑥ ⑦
        } catch (RedException exc) {
            System.out.print("red,");
        } catch (GreenException exc) {
            System.out.print("green,");
        }
        System.out.println("]main"); ⑦ ⑧
    }

    /**
     * A private method with a try and one catch
     */
    private static void methodA() {
        System.out.print("A["); ②
        try {
            methodB();
            System.out.print("after B,");
        }
    }
}
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    } catch (BlueException exc) {
        System.out.print("blue,"); ④
    }

    System.out.print("]A "); ⑤
}

/*
 * A private method with a try, two catches, and a throw
 */
private static void methodB() {
    System.out.print("B["); ③

    try {
        methodC();
        System.out.print("after C,");

    } catch (YellowException exc) {
        System.out.print("yellow,");
        throw new GreenException();

    } catch (RedException exc) {
        System.out.print("red,");
    }

    methodD();
    System.out.print("after D");

    System.out.print("]B ");
}

/*
 * A private exception generating method.
 */
private static void methodC() {
    if (method.equalsIgnoreCase("C")) {
        if (color.equalsIgnoreCase("red"))
            throw new RedException();
        else if (color.equalsIgnoreCase("blue"))
            throw new BlueException();
        else if (color.equalsIgnoreCase("green"))
            throw new GreenException();
        else if (color.equalsIgnoreCase("yellow"))
            throw new YellowException();
        else if (color.equalsIgnoreCase("orange"))
            throw new OrangeException();
    }
}

/*
 * A private exception generating method.
 */
private static void methodD() {
    if (method.equalsIgnoreCase("D")) {
        if (color.equalsIgnoreCase("red"))
            throw new RedException();
        else if (color.equalsIgnoreCase("blue"))
            throw new BlueException();
        else if (color.equalsIgnoreCase("green"))
            throw new GreenException();
        else if (color.equalsIgnoreCase("yellow"))
            throw new YellowException();
        else if (color.equalsIgnoreCase("orange"))
            throw new OrangeException();
    }
}

/*
 * A private exception generating method.
 */
private static void methodE() {
    if (method.equalsIgnoreCase("E")) {

```

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```
        if (color.equalsIgnoreCase("red"))
            throw new RedException();
        else if (color.equalsIgnoreCase("blue"))
            throw new BlueException();
        else if (color.equalsIgnoreCase("green"))
            throw new GreenException();
        else if (color.equalsIgnoreCase("yellow"))
            throw new YellowException();
        else if (color.equalsIgnoreCase("orange"))
            throw new OrangeException();
    }
}
```

METHOD "C"
COLOR = BLUE
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