<JSTORM>

Good Java Style

Document Information

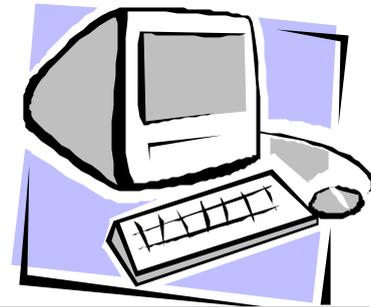|	
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Content Information

Audience	
Abstract	
	.
	Jstorm
	.
	.
Reference	Good Java Style By Thornton Rose
	(http://softwaredev.earthweb.com/java/sdjajt/article/0,,12403_600581,00.html)
Benchmark information	

Table of Contents

Good Java Style

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,

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. (Sun

Microsystems   Java Code Conventions   )

o   (lifetime cost)   80%   (maintena
   nce)   .
o   )   .
o   .
o

                                    ,
      (professional)   .

                                                                      .

o   ,   ,   (homogeneity)   ,
.

o   (trace)
.

o
.

o
.

,
.   .

o   .
o   .
o   (identifier)   .
o   .
o   .(inner
.)
o   80~90   .
o   (whitespace)   (seperator)   .
o   (indentation)   (space)   .

vs   (Tab vs. space)

Tab vs. Spaces
(religious issue)   ,   .

.
.

.

Javadoc (implementation) . Javadoc javadoc
API . " (how)" "
(why)" .
.

o Javadoc . ( )
o , //
(/* */) .

.
. (.)

Example 1.

```
// applyRotAscii() -- Apply ASCII ROT
  private void applyRotAscii(){
try{
  // get rot len
     int rotLength = Integer.parseInt(rotationLengthField.getText().trim());
     RotAscii cipher = new RotAscii(rotLength); // new cipher
     textArea.setText(cipher.transform(textArea.getText())); // transform
   }catch(Exception ex){
     /* Show exception */
     ExceptionDialog.show(this, "Invalid rotation length: ", ex); }
  }
```

Example 2.

```
/**
 * Apply the ASCII rotation cipher to the user's text. The length is retrieved
 * from the rotation length field, and the user's text is retrieved from the
 * text area.
 *
 * @author Thornton Rose
 */
private void applyRotAscii() {
  int    rotLength = 0; // rotation length
  RotAscii cipher = null; // ASCII rotation cipher

  try {
    // Get rotation length field and convert to integer.
```

```
      rotLength = Integer.parseInt(rotatio nLengthField.getText().trim());

      // Create ASCII rotation cipher and transform the user's text with it.

      cipher = new RotAscii(rotLength);
      textArea.setText(cipher.transform(textArea.getText()));

   } catch(Exception ex) {
    // Report the exception to the user.

    ExceptionDialog.show(this, "Invalid rotation length: ", ex);
   }
 }
```

(Block)   (Statement)

.

- o   .
- o   (, *'if'*)   ({})   .
- o   (nested)   ,
            . (,) *// end if*)
- o   .
- o   .
- o

      .
- o   switch   case   (clause)   .
- o   .
- o   if, for, while   .
- o   (expression)   .

   for   .
     for   .   , *for (int i = 0; ...)*

                                        ())
   .
      .

         .

Example 3.   .

```
try{
  for(int i=0;i<5;i++){
    ...
    }
  int threshold=calculateThreshold();
  float variance=(threshold*2.8)-1;
  int c=0;
  if (threshold<=15) c=calculateCoefficient();
  switch(c){
  case 1: setCeiling(c*2); break;
  case 2: setCeiling(c*3); break;
  else: freakOut();
  }
}catch(Exception ex){ ... }
```

Example 4.

```
try {
  int   threshold  = 0;
  float variance   = 0.0;
  int   coefficient = 0;

  // Prepare 5 cycles.

  for (int i = 0; i < 5; i ++){
    prepareCycle(i);
  }

  // Calculate the threshold and variance.

  threshold = calculateThreshold();
  variance = (threshold * 2.8) - 1;

  // If the threshold is less than the maximum, calculate the coefficient.
  // Otherwise, throw an exception.

  if (threshold <= MAX_THRESHOLD) {
    coefficient = calculateCoefficient();
  } else {
    throw new RuntimeException("Threshold exceeded!");
  }

  // Set the ceiling based on the coefficient.

  switch (coefficient) {
```

```
     case 1:
       setCeiling(coefficient * 2);
       break;

     case 2:
       setCeiling(coefficient * 3);
       break;

     else:
       freakOut();
   } // end switch
 } catch(Exception ex) {
   ...
 } // end try
```

.

.

1.   (   )
2.
3.   (seperator)
4.   import
5.   (seperator)
6.   (   )

Example 5.   .

```
package org.rotpad;
import java.awt.*;
import javax.swing.event.*;
import org.javacogs.*;
import javax.swing.*;
import java.awt.event.*;
class Foo {
 ...
}
public class RotPad extends JFrame {
 ...
}
```

Example 6.

```
package org.rotpad;

// Java classes
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
import javax.swing.event.*;

// JavaCogs classes
import org.javacogs.*;

/**
 * RotPad is a simple GUI application for performing
 * rotation ciphers on plain text.
 *
 * @author Thornton Rose
 * @version 1.0
 */
public class RotPad extends JFrame {
   ...
}

//-----------------------------------------------------

/**
 * Foo is ...
 *
 * @author Thornton Rose
 * @version 1.0
 */
class Foo {
   ...
}
```

import

                    (, *java.awt.**)   import
                                  import
          . import   .

           1.   (java.*)
           2.   (javax.*)
           3.
           4.

, .

(//) .

import ..

Example 7.　　import

```
import java.util.*;
import javax.swing.*;
import java.awt.event*;
import com.gensym.com.*;
import javax.swing.table.*;
import com.pv.jfcx.*;
import java.awt.*;
import com.melthorn.util.*;
```

Example 8.　　import

```
import java.awt.*;
import java.awt.event*;
import java.util.*;
import javax.swing.table.*;
import com.gensym.com.*;     // BeanXporter
import com.pv.jfcx.*;        // ProtoView
import com.melthorn.util.*;  // Utilities

// Java classes
import java.awt.*;
import java.awt.event*;
import java.util.*;
import javax.swing.table.*;

// BeanXporter
import com.gensym.com.*;

// ProtoView GUI components
import com.pv.jfcx.*;

// Application classes
import com.melthorn.util.*;
```

.

.

.

1. Javadoc
2.
3.   (field)
4.   (seperator)
5.
6.   (seperator)
7. main()   (method)
8.   (seperator)
9. inner
10.   (seperator)
11. main()

Example 9.

```
// RotPad -- GUI app. for ROT ciphering
public class RotPad extends JFrame {
private static final String TRANSFORM_ROT13   = "ROT13";
private static final String TRANSFORM_ROT13N5 = "ROT13N5";
private static final String TRANSFORM_ROTASCII = "ROT-ASCII";

private void jbInit() throws Exception {
  ...
}

public static final String TITLE   = "RotPad";
public static final String VERSION = "1.0";

public static void main(String[] args) {
  ...
}

public RotPad() {
  ...
}
```

```
    private JPanel jPanel1 = new JPanel();
    private JPanel jPanel2 = new JPanel();
    private BorderLayout borderLayout1 = new BorderLayout();
    ...
}
```

Example 10.

```
  /**
   * RotPad is a simple GUI application for performing
   * rotation ciphers on plain text.
   *
   * @author Thornton Rose
   * @version 1.0
   */
  public class RotPad extends JFrame {
     // Public constants

     public static final String TITLE   = "RotPad";
     public static final String VERSION = "1.0";

     // Private constants

     private static final String TRANSFORM_ROT13    = "ROT13";
     private static final String TRANSFORM_ROT13N5  = "ROT13N5";
     private static final String TRANSFORM_ROTASCII = "ROT-ASCII";

     // GUI components [JBuilder generated]

     private BorderLayout borderLayout1 = new BorderLayout();
     private JPanel jPanel1 = new JPanel();
     private JPanel jPanel2 = new JPanel();
     ...

     /**
      * Construct a new instance of this class.
      */
     public RotPad() {
        ...
     }

     /**
      * Initialize UI components. [JBuilder generated]
      */
     private void jbInit() throws Exception {
        ...
     }

     ...
```

```
        //--------------------------------------------------------

        /**
         * Start the application.
         */
        public static void main(String[] args) {
           ...
        }
    }
```

(Field Declaration)

.

.

1. public   (final   static final)
2. public
3. protected
4. protected
5. package
6. package
7. private
8. private

,   .

o   .
o   public   protected   Javadoc   .
o   (constant)   .   (
   declaration)   (Expression)   .
o   JBuilder   Visual Cafe

.

          UI   .

Example 11.

```
public class CustomerSearchDialog extends JDialog {
  private JLabel firstNameLabel = new JLabel();
  private JLabel lastNameLabel = new JLabel();
  public static final RESULT_SELECT = 1;
  private Vector results = new Vector(); // Search results.
  private DefaultTableModel tableModel = new DefaultTableModel();
```

```
  public static final RESULT_CANCEL = 0;
  // ...
}
```

Example 12.

```
/**
 * ...
 */
public class CustomerSearchDialog extends JDialog {
  /**
   * Indicates that search was cancelled; returned by showDialog() when
   * user clicks cancel button.
   */
  public static final RESULT_CANCEL = 0;

  /**
   * Indicates that a customer was selected; returned by showDialog() when
   * user clicks select button.
   */
  public static final RESULT_SELECT = 1;

  private Vector          results   = new Vector();          // Search results.
  private DefaultTableModel tableModel = new DefaultTableModel();  // Grid model.

  // GUI fields. [JBuilder]

  private JLabel firstNameLabel = new JLabel();
  private JLabel lastNameLabel = new JLabel();
  // ...
}
```

(Method Declaration)

.

- o   Javadoc   .
- o   (access modifier)   .
- o   .
- o
          .
- o   .
- o   (')')   ({}   (line break)
                    .

Example 13.

```
public int getTypeCount (String custType)
{
...
}
static public getInstance(){ ... };
public void showRange()
  throws RangeException {

 ...
}
```

Example 14.

```
/**
 * Return the single instance of this class.
 */
public static CalculationEngine getInstance() {
  return instance;
}

/**
 * Calculate the consumption coefficient.
 */
public float calculateConsumptionCoefficient(int base, float variance,
    int iterations) throws RangeException {
 // ...
}

/**
 * Calculate the consumption coefficient.
 */
public float calculateConsumptionCoefficient(
    int base,
    float variance,
    int iterations)
  throws RangeException
{
 // ...
}

/**
 * Calculate the consumption coefficient.
 */
public float calculateConsumptionCoefficient(int base,
                  float variance,
                  int iterations)
```

```
    throws RangeException
{
  // ...
}
```

.

,   (cf. Raymond "Indent Style")

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- o Indent Style, The Jargon File, Eric S. Raymond.
- o Tabs vs. Spaces, Jamie Zawinski.
- o Writing Robust Java Code — The Ambysoft Inc. Coding Standards for Java,
     Scott Ambler.
- o Draft Java Coding Standard, Doug Lea.
- o Java Code Conventions, Sun Microsystems, Inc.
- o How to Write Doc Comments for Javadoc, Sun Microsystems, Inc.
- o The Jargon File (known in print as *The New Hacker's Dictionary*), Eric S. Ray
     mond

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