| | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-all.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | | |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/Test.html)   [**NEXT CLASS**](http://docs.google.com/ThoughtBalloon.html) | [**FRAMES**](http://docs.google.com/index.html?TextBalloon.html)    [**NO FRAMES**](http://docs.google.com/TextBalloon.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | [CONSTR](#3znysh7) | [METHOD](#2et92p0) | DETAIL: FIELD | [CONSTR](#3dy6vkm) | [METHOD](#4d34og8) |

## Class TextBalloon

[java.lang.Object](http://java.sun.com/javase/6/docs/api/java/lang/Object.html?is-external=true)  
 **TextBalloon**

**Direct Known Subclasses:** [SpeechBalloon](http://docs.google.com/SpeechBalloon.html), [ThoughtBalloon](http://docs.google.com/ThoughtBalloon.html)

public abstract class **TextBalloon**extends [Object](http://java.sun.com/javase/6/docs/api/java/lang/Object.html?is-external=true)

TextBalloon: this is used to represent objects in comic strips which are used to show what a character is saying or thinking. The tip of tail points to the character who is talking or thinking the text

**Author:** Barb Ericson

| **Constructor Summary** | |
| --- | --- |
| [**TextBalloon**](http://docs.google.com/TextBalloon.html#TextBalloon(java.awt.Point,%20int,%20java.awt.Point,%20java.lang.String))([Point](http://java.sun.com/javase/6/docs/api/java/awt/Point.html?is-external=true) uLeft, int theWidth, [Point](http://java.sun.com/javase/6/docs/api/java/awt/Point.html?is-external=true) tEnd, [String](http://java.sun.com/javase/6/docs/api/java/lang/String.html?is-external=true) theMessage)            Constructor that takes the upper left, width, tail end, and message to display |

| **Method Summary** | |
| --- | --- |
| void | [**draw**](http://docs.google.com/TextBalloon.html#draw(java.awt.Graphics))([Graphics](http://java.sun.com/javase/6/docs/api/java/awt/Graphics.html?is-external=true) g)            Method to draw the text ballon using the passed graphics context |
| protected  void | [**drawBalloon**](http://docs.google.com/TextBalloon.html#drawBalloon(int,%20java.awt.Color,%20java.awt.Color,%20java.awt.Graphics2D))(int ellipseHeight, [Color](http://java.sun.com/javase/6/docs/api/java/awt/Color.html?is-external=true) fillColor, [Color](http://java.sun.com/javase/6/docs/api/java/awt/Color.html?is-external=true) outlineColor, [Graphics2D](http://java.sun.com/javase/6/docs/api/java/awt/Graphics2D.html?is-external=true) g2)            Method to draw the speech balloon |
| protected abstract  void | [**drawTail**](http://docs.google.com/TextBalloon.html#drawTail(int,%20java.awt.Color,%20java.awt.Color,%20java.awt.Graphics2D))(int ellipseHeight, [Color](http://java.sun.com/javase/6/docs/api/java/awt/Color.html?is-external=true) fillColor, [Color](http://java.sun.com/javase/6/docs/api/java/awt/Color.html?is-external=true) outlineColor, [Graphics2D](http://java.sun.com/javase/6/docs/api/java/awt/Graphics2D.html?is-external=true) g2)            Method to draw the tail of the balloon |
| protected  void | [**drawText**](http://docs.google.com/TextBalloon.html#drawText(java.awt.font.LineBreakMeasurer,%20java.awt.Color,%20java.awt.Graphics2D))([LineBreakMeasurer](http://java.sun.com/javase/6/docs/api/java/awt/font/LineBreakMeasurer.html?is-external=true) measurer, [Color](http://java.sun.com/javase/6/docs/api/java/awt/Color.html?is-external=true) textColor, [Graphics2D](http://java.sun.com/javase/6/docs/api/java/awt/Graphics2D.html?is-external=true) g2)            Method to draw the text in the balloon |
| protected  [AttributedCharacterIterator](http://java.sun.com/javase/6/docs/api/java/text/AttributedCharacterIterator.html?is-external=true) | [**getAttrIterator**](http://docs.google.com/TextBalloon.html#getAttrIterator())()            Method to get the attributed character iterator used to display the text |
| [Font](http://java.sun.com/javase/6/docs/api/java/awt/Font.html?is-external=true) | [**getFont**](http://docs.google.com/TextBalloon.html#getFont())()            Method to get the font used to display the message |
| int | [**getHeight**](http://docs.google.com/TextBalloon.html#getHeight(java.awt.Graphics2D,%20java.text.AttributedCharacterIterator))([Graphics2D](http://java.sun.com/javase/6/docs/api/java/awt/Graphics2D.html?is-external=true) g2, [AttributedCharacterIterator](http://java.sun.com/javase/6/docs/api/java/text/AttributedCharacterIterator.html?is-external=true) attrCharIter)            Method to get the height of the balloon |
| int | [**getMargin**](http://docs.google.com/TextBalloon.html#getMargin())()            Method to get the margin |
| [String](http://java.sun.com/javase/6/docs/api/java/lang/String.html?is-external=true) | [**getMessage**](http://docs.google.com/TextBalloon.html#getMessage())()            Method to get the message that is displayed in the balloon |
| int | [**getNumLines**](http://docs.google.com/TextBalloon.html#getNumLines())()            Method to get the number of lines of text. |
| [Point](http://java.sun.com/javase/6/docs/api/java/awt/Point.html?is-external=true) | [**getTailEnd**](http://docs.google.com/TextBalloon.html#getTailEnd())()            Method to get the point that is the end of the tail that indicates who is speaking |
| [Point](http://java.sun.com/javase/6/docs/api/java/awt/Point.html?is-external=true) | [**getUpperLeft**](http://docs.google.com/TextBalloon.html#getUpperLeft())()            Method to get the upper left point of the rectangle that encloses the balloon |
| int | [**getWidth**](http://docs.google.com/TextBalloon.html#getWidth())()            Method to get the width of the rectangle that encloses the balloon |
| void | [**setFont**](http://docs.google.com/TextBalloon.html#setFont(java.awt.Font))([Font](http://java.sun.com/javase/6/docs/api/java/awt/Font.html?is-external=true) theFont)            Method to set the font used to display the balloon |
| void | [**setMargin**](http://docs.google.com/TextBalloon.html#setMargin(int))(int theMargin)            Method to set the margin |
| void | [**setMessage**](http://docs.google.com/TextBalloon.html#setMessage(java.lang.String))([String](http://java.sun.com/javase/6/docs/api/java/lang/String.html?is-external=true) theMessage)            Method to set the message that is displayed in the balloon |
| void | [**setTailEnd**](http://docs.google.com/TextBalloon.html#setTailEnd(java.awt.Point))([Point](http://java.sun.com/javase/6/docs/api/java/awt/Point.html?is-external=true) p)            Method to set the end point of the tail which indicates who is speaking |
| void | [**setUpperLeft**](http://docs.google.com/TextBalloon.html#setUpperLeft(java.awt.Point))([Point](http://java.sun.com/javase/6/docs/api/java/awt/Point.html?is-external=true) p)            Method to set the upper left point of the rectangle that encloses the balloon |
| void | [**setWidth**](http://docs.google.com/TextBalloon.html#setWidth(int))(int theWidth)            Method to set the width of the rectangle that encloses the balloon |

| **Methods inherited from class java.lang.**[**Object**](http://java.sun.com/javase/6/docs/api/java/lang/Object.html?is-external=true) |
| --- |
| [clone](http://java.sun.com/javase/6/docs/api/java/lang/Object.html?is-external=true#clone()), [equals](http://java.sun.com/javase/6/docs/api/java/lang/Object.html?is-external=true#equals(java.lang.Object)), [finalize](http://java.sun.com/javase/6/docs/api/java/lang/Object.html?is-external=true#finalize()), [getClass](http://java.sun.com/javase/6/docs/api/java/lang/Object.html?is-external=true#getClass()), [hashCode](http://java.sun.com/javase/6/docs/api/java/lang/Object.html?is-external=true#hashCode()), [notify](http://java.sun.com/javase/6/docs/api/java/lang/Object.html?is-external=true#notify()), [notifyAll](http://java.sun.com/javase/6/docs/api/java/lang/Object.html?is-external=true#notifyAll()), [toString](http://java.sun.com/javase/6/docs/api/java/lang/Object.html?is-external=true#toString()), [wait](http://java.sun.com/javase/6/docs/api/java/lang/Object.html?is-external=true#wait()), [wait](http://java.sun.com/javase/6/docs/api/java/lang/Object.html?is-external=true#wait(long)), [wait](http://java.sun.com/javase/6/docs/api/java/lang/Object.html?is-external=true#wait(long,%20int)) |

| **Constructor Detail** |
| --- |

### TextBalloon

public **TextBalloon**([Point](http://java.sun.com/javase/6/docs/api/java/awt/Point.html?is-external=true) uLeft,  
 int theWidth,  
 [Point](http://java.sun.com/javase/6/docs/api/java/awt/Point.html?is-external=true) tEnd,  
 [String](http://java.sun.com/javase/6/docs/api/java/lang/String.html?is-external=true) theMessage)

Constructor that takes the upper left, width, tail end, and message to display

**Parameters:**uLeft - the upper left corner of a rectangle enclosing the balloontheWidth - the width of the enclosing rectangletEnd - the point which is the end of the tail that shows who is speaking or thinkingtheMessage - the message to display

| **Method Detail** |
| --- |

### getUpperLeft

public [Point](http://java.sun.com/javase/6/docs/api/java/awt/Point.html?is-external=true) **getUpperLeft**()

Method to get the upper left point of the rectangle that encloses the balloon

**Returns:**the upper left point

### setUpperLeft

public void **setUpperLeft**([Point](http://java.sun.com/javase/6/docs/api/java/awt/Point.html?is-external=true) p)

Method to set the upper left point of the rectangle that encloses the balloon

**Parameters:**p - the upper left point to use

### getWidth

public int **getWidth**()

Method to get the width of the rectangle that encloses the balloon

**Returns:**the width of the enclosing rectangle

### setWidth

public void **setWidth**(int theWidth)

Method to set the width of the rectangle that encloses the balloon

**Parameters:**theWidth - the new width to use

### getMargin

public int **getMargin**()

Method to get the margin

**Returns:**the margin in pixels

### setMargin

public void **setMargin**(int theMargin)

Method to set the margin

**Parameters:**theMargin - the new margin to use

### getTailEnd

public [Point](http://java.sun.com/javase/6/docs/api/java/awt/Point.html?is-external=true) **getTailEnd**()

Method to get the point that is the end of the tail that indicates who is speaking

**Returns:**the end point of the tail

### setTailEnd

public void **setTailEnd**([Point](http://java.sun.com/javase/6/docs/api/java/awt/Point.html?is-external=true) p)

Method to set the end point of the tail which indicates who is speaking

**Parameters:**p - the end point to use

### getMessage

public [String](http://java.sun.com/javase/6/docs/api/java/lang/String.html?is-external=true) **getMessage**()

Method to get the message that is displayed in the balloon

**Returns:**the message to display

### setMessage

public void **setMessage**([String](http://java.sun.com/javase/6/docs/api/java/lang/String.html?is-external=true) theMessage)

Method to set the message that is displayed in the balloon

**Parameters:**theMessage - the message to use

### getFont

public [Font](http://java.sun.com/javase/6/docs/api/java/awt/Font.html?is-external=true) **getFont**()

Method to get the font used to display the message

**Returns:**the font used

### setFont

public void **setFont**([Font](http://java.sun.com/javase/6/docs/api/java/awt/Font.html?is-external=true) theFont)

Method to set the font used to display the balloon

**Parameters:**theFont - the font to use

### getNumLines

public int **getNumLines**()

Method to get the number of lines of text. This will be 0 until getHeight is called and then it will be set correctly.

**Returns:**the number of lines of text

### getHeight

public int **getHeight**([Graphics2D](http://java.sun.com/javase/6/docs/api/java/awt/Graphics2D.html?is-external=true) g2,  
 [AttributedCharacterIterator](http://java.sun.com/javase/6/docs/api/java/text/AttributedCharacterIterator.html?is-external=true) attrCharIter)

Method to get the height of the balloon

**Parameters:**g2 - the grahics 2d context to draw inattrCharIter - the attributed character iterator that is used to display the text **Returns:**the height in pixels

### getAttrIterator

protected [AttributedCharacterIterator](http://java.sun.com/javase/6/docs/api/java/text/AttributedCharacterIterator.html?is-external=true) **getAttrIterator**()

Method to get the attributed character iterator used to display the text

**Returns:**the attributed character iterator

### drawBalloon

protected void **drawBalloon**(int ellipseHeight,  
 [Color](http://java.sun.com/javase/6/docs/api/java/awt/Color.html?is-external=true) fillColor,  
 [Color](http://java.sun.com/javase/6/docs/api/java/awt/Color.html?is-external=true) outlineColor,  
 [Graphics2D](http://java.sun.com/javase/6/docs/api/java/awt/Graphics2D.html?is-external=true) g2)

Method to draw the speech balloon

**Parameters:**ellipseHeight - the height of the ellipsefillColor - the color to fill withoutlineColor - the color to outline withg2 - the 2d graphics context

### drawText

protected void **drawText**([LineBreakMeasurer](http://java.sun.com/javase/6/docs/api/java/awt/font/LineBreakMeasurer.html?is-external=true) measurer,  
 [Color](http://java.sun.com/javase/6/docs/api/java/awt/Color.html?is-external=true) textColor,  
 [Graphics2D](http://java.sun.com/javase/6/docs/api/java/awt/Graphics2D.html?is-external=true) g2)

Method to draw the text in the balloon

**Parameters:**measurer - the line break measurertextColor - the color to draw the text ing2 - the 2d graphics context

### drawTail

protected abstract void **drawTail**(int ellipseHeight,  
 [Color](http://java.sun.com/javase/6/docs/api/java/awt/Color.html?is-external=true) fillColor,  
 [Color](http://java.sun.com/javase/6/docs/api/java/awt/Color.html?is-external=true) outlineColor,  
 [Graphics2D](http://java.sun.com/javase/6/docs/api/java/awt/Graphics2D.html?is-external=true) g2)

Method to draw the tail of the balloon

### draw

public void **draw**([Graphics](http://java.sun.com/javase/6/docs/api/java/awt/Graphics.html?is-external=true) g)

Method to draw the text ballon using the passed graphics context

**Parameters:**g - the graphics context to draw on

| | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-all.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | | |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/Test.html)   [**NEXT CLASS**](http://docs.google.com/ThoughtBalloon.html) | [**FRAMES**](http://docs.google.com/index.html?TextBalloon.html)    [**NO FRAMES**](http://docs.google.com/TextBalloon.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | [CONSTR](#3znysh7) | [METHOD](#2et92p0) | DETAIL: FIELD | [CONSTR](#3dy6vkm) | [METHOD](#4d34og8) |