| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/MultipleMaster.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/java/awt/font/LineMetrics.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/font/NumericShaper.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/font/MultipleMaster.html)    [**NO FRAMES**](http://docs.google.com/MultipleMaster.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | CONSTR | [METHOD](#3znysh7) | DETAIL: FIELD | CONSTR | [METHOD](#2et92p0) |

## **java.awt.font**

Interface MultipleMaster

public interface **MultipleMaster**

The MultipleMaster interface represents Type 1 Multiple Master fonts. A particular [Font](http://docs.google.com/java/awt/Font.html) object can implement this interface.

| **Method Summary** | |
| --- | --- |
| [Font](http://docs.google.com/java/awt/Font.html) | [**deriveMMFont**](http://docs.google.com/java/awt/font/MultipleMaster.html#deriveMMFont(float%5B%5D))(float[] axes)            Creates a new instance of a multiple master font based on the design axis values contained in the specified array. |
| [Font](http://docs.google.com/java/awt/Font.html) | [**deriveMMFont**](http://docs.google.com/java/awt/font/MultipleMaster.html#deriveMMFont(float%5B%5D,%20float,%20float,%20float,%20float))(float[] glyphWidths, float avgStemWidth, float typicalCapHeight, float typicalXHeight, float italicAngle)            Creates a new instance of a multiple master font based on detailed metric information. |
| float[] | [**getDesignAxisDefaults**](http://docs.google.com/java/awt/font/MultipleMaster.html#getDesignAxisDefaults())()            Returns an array of default design values for each axis. |
| [String](http://docs.google.com/java/lang/String.html)[] | [**getDesignAxisNames**](http://docs.google.com/java/awt/font/MultipleMaster.html#getDesignAxisNames())()            Returns the name for each design axis. |
| float[] | [**getDesignAxisRanges**](http://docs.google.com/java/awt/font/MultipleMaster.html#getDesignAxisRanges())()            Returns an array of design limits interleaved in the form [from->to] for each axis. |
| int | [**getNumDesignAxes**](http://docs.google.com/java/awt/font/MultipleMaster.html#getNumDesignAxes())()            Returns the number of multiple master design controls. |

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

### getNumDesignAxes

int **getNumDesignAxes**()

Returns the number of multiple master design controls. Design axes include things like width, weight and optical scaling.

**Returns:**the number of multiple master design controls

### getDesignAxisRanges

float[] **getDesignAxisRanges**()

Returns an array of design limits interleaved in the form [from->to] for each axis. For example, design limits for weight could be from 0.1 to 1.0. The values are returned in the same order returned by getDesignAxisNames.

**Returns:**an array of design limits for each axis.

### getDesignAxisDefaults

float[] **getDesignAxisDefaults**()

Returns an array of default design values for each axis. For example, the default value for weight could be 1.6. The values are returned in the same order returned by getDesignAxisNames.

**Returns:**an array of default design values for each axis.

### getDesignAxisNames

[String](http://docs.google.com/java/lang/String.html)[] **getDesignAxisNames**()

Returns the name for each design axis. This also determines the order in which the values for each axis are returned.

**Returns:**an array containing the names of each design axis.

### deriveMMFont

[Font](http://docs.google.com/java/awt/Font.html) **deriveMMFont**(float[] axes)

Creates a new instance of a multiple master font based on the design axis values contained in the specified array. The size of the array must correspond to the value returned from getNumDesignAxes and the values of the array elements must fall within limits specified by getDesignAxesLimits. In case of an error, null is returned.

**Parameters:**axes - an array containing axis values **Returns:**a [Font](http://docs.google.com/java/awt/Font.html) object that is an instance of MultipleMaster and is based on the design axis values provided by axes.

### deriveMMFont

[Font](http://docs.google.com/java/awt/Font.html) **deriveMMFont**(float[] glyphWidths,  
 float avgStemWidth,  
 float typicalCapHeight,  
 float typicalXHeight,  
 float italicAngle)

Creates a new instance of a multiple master font based on detailed metric information. In case of an error, null is returned.

**Parameters:**glyphWidths - an array of floats representing the desired width of each glyph in font spaceavgStemWidth - the average stem width for the overall font in font spacetypicalCapHeight - the height of a typical upper case chartypicalXHeight - the height of a typical lower case charitalicAngle - the angle at which the italics lean, in degrees counterclockwise from vertical **Returns:**a Font object that is an instance of MultipleMaster and is based on the specified metric information.

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/MultipleMaster.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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| SUMMARY: NESTED | FIELD | CONSTR | [METHOD](#3znysh7) | DETAIL: FIELD | CONSTR | [METHOD](#2et92p0) |

[Submit a bug or feature](http://bugs.sun.com/services/bugreport/index.jsp)

For further API reference and developer documentation, see [Java SE Developer Documentation](http://docs.google.com/webnotes/devdocs-vs-specs.html). That documentation contains more detailed, developer-targeted descriptions, with conceptual overviews, definitions of terms, workarounds, and working code examples.

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