| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/Line2D.Double.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/geom/Line2D.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/geom/Line2D.Float.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/geom/Line2D.Double.html)    [**NO FRAMES**](http://docs.google.com/Line2D.Double.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: [NESTED](#2et92p0) | [FIELD](#tyjcwt) | [CONSTR](#3dy6vkm) | [METHOD](#1t3h5sf) | DETAIL: [FIELD](#17dp8vu) | [CONSTR](#1ksv4uv) | [METHOD](#3j2qqm3) |

## **java.awt.geom**

Class Line2D.Double

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 [java.awt.geom.Line2D](http://docs.google.com/java/awt/geom/Line2D.html)  
 **java.awt.geom.Line2D.Double**

**All Implemented Interfaces:** [Shape](http://docs.google.com/java/awt/Shape.html), [Serializable](http://docs.google.com/java/io/Serializable.html), [Cloneable](http://docs.google.com/java/lang/Cloneable.html) **Enclosing class:**[Line2D](http://docs.google.com/java/awt/geom/Line2D.html)

public static class **Line2D.Double**extends [Line2D](http://docs.google.com/java/awt/geom/Line2D.html)implements [Serializable](http://docs.google.com/java/io/Serializable.html)

A line segment specified with double coordinates.

**Since:** 1.2 **See Also:**[Serialized Form](http://docs.google.com/serialized-form.html#java.awt.geom.Line2D.Double)

| **Nested Class Summary** | |
| --- | --- |

| **Nested classes/interfaces inherited from class java.awt.geom.**[**Line2D**](http://docs.google.com/java/awt/geom/Line2D.html) |
| --- |
| [Line2D.Double](http://docs.google.com/java/awt/geom/Line2D.Double.html), [Line2D.Float](http://docs.google.com/java/awt/geom/Line2D.Float.html) |

| **Field Summary** | |
| --- | --- |
| double | [**x1**](http://docs.google.com/java/awt/geom/Line2D.Double.html#x1)            The X coordinate of the start point of the line segment. |
| double | [**x2**](http://docs.google.com/java/awt/geom/Line2D.Double.html#x2)            The X coordinate of the end point of the line segment. |
| double | [**y1**](http://docs.google.com/java/awt/geom/Line2D.Double.html#y1)            The Y coordinate of the start point of the line segment. |
| double | [**y2**](http://docs.google.com/java/awt/geom/Line2D.Double.html#y2)            The Y coordinate of the end point of the line segment. |

| **Constructor Summary** | |
| --- | --- |
| [**Line2D.Double**](http://docs.google.com/java/awt/geom/Line2D.Double.html#Line2D.Double())()            Constructs and initializes a Line with coordinates (0, 0) -> (0, 0). |
| [**Line2D.Double**](http://docs.google.com/java/awt/geom/Line2D.Double.html#Line2D.Double(double,%20double,%20double,%20double))(double x1, double y1, double x2, double y2)            Constructs and initializes a Line2D from the specified coordinates. |
| [**Line2D.Double**](http://docs.google.com/java/awt/geom/Line2D.Double.html#Line2D.Double(java.awt.geom.Point2D,%20java.awt.geom.Point2D))([Point2D](http://docs.google.com/java/awt/geom/Point2D.html) p1, [Point2D](http://docs.google.com/java/awt/geom/Point2D.html) p2)            Constructs and initializes a Line2D from the specified Point2D objects. |

| **Method Summary** | |
| --- | --- |
| [Rectangle2D](http://docs.google.com/java/awt/geom/Rectangle2D.html) | [**getBounds2D**](http://docs.google.com/java/awt/geom/Line2D.Double.html#getBounds2D())()            Returns a high precision and more accurate bounding box of the Shape than the getBounds method. |
| [Point2D](http://docs.google.com/java/awt/geom/Point2D.html) | [**getP1**](http://docs.google.com/java/awt/geom/Line2D.Double.html#getP1())()            Returns the start Point2D of this Line2D. |
| [Point2D](http://docs.google.com/java/awt/geom/Point2D.html) | [**getP2**](http://docs.google.com/java/awt/geom/Line2D.Double.html#getP2())()            Returns the end Point2D of this Line2D. |
| double | [**getX1**](http://docs.google.com/java/awt/geom/Line2D.Double.html#getX1())()            Returns the X coordinate of the start point in double precision. |
| double | [**getX2**](http://docs.google.com/java/awt/geom/Line2D.Double.html#getX2())()            Returns the X coordinate of the end point in double precision. |
| double | [**getY1**](http://docs.google.com/java/awt/geom/Line2D.Double.html#getY1())()            Returns the Y coordinate of the start point in double precision. |
| double | [**getY2**](http://docs.google.com/java/awt/geom/Line2D.Double.html#getY2())()            Returns the Y coordinate of the end point in double precision. |
| void | [**setLine**](http://docs.google.com/java/awt/geom/Line2D.Double.html#setLine(double,%20double,%20double,%20double))(double x1, double y1, double x2, double y2)            Sets the location of the end points of this Line2D to the specified double coordinates. |

| **Methods inherited from class java.awt.geom.**[**Line2D**](http://docs.google.com/java/awt/geom/Line2D.html) |
| --- |
| [clone](http://docs.google.com/java/awt/geom/Line2D.html#clone()), [contains](http://docs.google.com/java/awt/geom/Line2D.html#contains(double,%20double)), [contains](http://docs.google.com/java/awt/geom/Line2D.html#contains(double,%20double,%20double,%20double)), [contains](http://docs.google.com/java/awt/geom/Line2D.html#contains(java.awt.geom.Point2D)), [contains](http://docs.google.com/java/awt/geom/Line2D.html#contains(java.awt.geom.Rectangle2D)), [getBounds](http://docs.google.com/java/awt/geom/Line2D.html#getBounds()), [getPathIterator](http://docs.google.com/java/awt/geom/Line2D.html#getPathIterator(java.awt.geom.AffineTransform)), [getPathIterator](http://docs.google.com/java/awt/geom/Line2D.html#getPathIterator(java.awt.geom.AffineTransform,%20double)), [intersects](http://docs.google.com/java/awt/geom/Line2D.html#intersects(double,%20double,%20double,%20double)), [intersects](http://docs.google.com/java/awt/geom/Line2D.html#intersects(java.awt.geom.Rectangle2D)), [intersectsLine](http://docs.google.com/java/awt/geom/Line2D.html#intersectsLine(double,%20double,%20double,%20double)), [intersectsLine](http://docs.google.com/java/awt/geom/Line2D.html#intersectsLine(java.awt.geom.Line2D)), [linesIntersect](http://docs.google.com/java/awt/geom/Line2D.html#linesIntersect(double,%20double,%20double,%20double,%20double,%20double,%20double,%20double)), [ptLineDist](http://docs.google.com/java/awt/geom/Line2D.html#ptLineDist(double,%20double)), [ptLineDist](http://docs.google.com/java/awt/geom/Line2D.html#ptLineDist(double,%20double,%20double,%20double,%20double,%20double)), [ptLineDist](http://docs.google.com/java/awt/geom/Line2D.html#ptLineDist(java.awt.geom.Point2D)), [ptLineDistSq](http://docs.google.com/java/awt/geom/Line2D.html#ptLineDistSq(double,%20double)), [ptLineDistSq](http://docs.google.com/java/awt/geom/Line2D.html#ptLineDistSq(double,%20double,%20double,%20double,%20double,%20double)), [ptLineDistSq](http://docs.google.com/java/awt/geom/Line2D.html#ptLineDistSq(java.awt.geom.Point2D)), [ptSegDist](http://docs.google.com/java/awt/geom/Line2D.html#ptSegDist(double,%20double)), [ptSegDist](http://docs.google.com/java/awt/geom/Line2D.html#ptSegDist(double,%20double,%20double,%20double,%20double,%20double)), [ptSegDist](http://docs.google.com/java/awt/geom/Line2D.html#ptSegDist(java.awt.geom.Point2D)), [ptSegDistSq](http://docs.google.com/java/awt/geom/Line2D.html#ptSegDistSq(double,%20double)), [ptSegDistSq](http://docs.google.com/java/awt/geom/Line2D.html#ptSegDistSq(double,%20double,%20double,%20double,%20double,%20double)), [ptSegDistSq](http://docs.google.com/java/awt/geom/Line2D.html#ptSegDistSq(java.awt.geom.Point2D)), [relativeCCW](http://docs.google.com/java/awt/geom/Line2D.html#relativeCCW(double,%20double)), [relativeCCW](http://docs.google.com/java/awt/geom/Line2D.html#relativeCCW(double,%20double,%20double,%20double,%20double,%20double)), [relativeCCW](http://docs.google.com/java/awt/geom/Line2D.html#relativeCCW(java.awt.geom.Point2D)), [setLine](http://docs.google.com/java/awt/geom/Line2D.html#setLine(java.awt.geom.Line2D)), [setLine](http://docs.google.com/java/awt/geom/Line2D.html#setLine(java.awt.geom.Point2D,%20java.awt.geom.Point2D)) |

| **Methods inherited from class java.lang.**[**Object**](http://docs.google.com/java/lang/Object.html) |
| --- |
| [equals](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)), [finalize](http://docs.google.com/java/lang/Object.html#finalize()), [getClass](http://docs.google.com/java/lang/Object.html#getClass()), [hashCode](http://docs.google.com/java/lang/Object.html#hashCode()), [notify](http://docs.google.com/java/lang/Object.html#notify()), [notifyAll](http://docs.google.com/java/lang/Object.html#notifyAll()), [toString](http://docs.google.com/java/lang/Object.html#toString()), [wait](http://docs.google.com/java/lang/Object.html#wait()), [wait](http://docs.google.com/java/lang/Object.html#wait(long)), [wait](http://docs.google.com/java/lang/Object.html#wait(long,%20int)) |

| **Field Detail** |
| --- |

### x1

public double **x1**

The X coordinate of the start point of the line segment.

**Since:** 1.2

### y1

public double **y1**

The Y coordinate of the start point of the line segment.

**Since:** 1.2

### x2

public double **x2**

The X coordinate of the end point of the line segment.

**Since:** 1.2

### y2

public double **y2**

The Y coordinate of the end point of the line segment.

**Since:** 1.2

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

### Line2D.Double

public **Line2D.Double**()

Constructs and initializes a Line with coordinates (0, 0) -> (0, 0).

**Since:** 1.2

### Line2D.Double

public **Line2D.Double**(double x1,  
 double y1,  
 double x2,  
 double y2)

Constructs and initializes a Line2D from the specified coordinates.

**Parameters:**x1 - the X coordinate of the start pointy1 - the Y coordinate of the start pointx2 - the X coordinate of the end pointy2 - the Y coordinate of the end point**Since:** 1.2

### Line2D.Double

public **Line2D.Double**([Point2D](http://docs.google.com/java/awt/geom/Point2D.html) p1,  
 [Point2D](http://docs.google.com/java/awt/geom/Point2D.html) p2)

Constructs and initializes a Line2D from the specified Point2D objects.

**Parameters:**p1 - the start Point2D of this line segmentp2 - the end Point2D of this line segment**Since:** 1.2

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

### getX1

public double **getX1**()

Returns the X coordinate of the start point in double precision.

**Specified by:**[getX1](http://docs.google.com/java/awt/geom/Line2D.html#getX1()) in class [Line2D](http://docs.google.com/java/awt/geom/Line2D.html) **Returns:**the X coordinate of the start point of this Line2D object.**Since:** 1.2

### getY1

public double **getY1**()

Returns the Y coordinate of the start point in double precision.

**Specified by:**[getY1](http://docs.google.com/java/awt/geom/Line2D.html#getY1()) in class [Line2D](http://docs.google.com/java/awt/geom/Line2D.html) **Returns:**the Y coordinate of the start point of this Line2D object.**Since:** 1.2

### getP1

public [Point2D](http://docs.google.com/java/awt/geom/Point2D.html) **getP1**()

Returns the start Point2D of this Line2D.

**Specified by:**[getP1](http://docs.google.com/java/awt/geom/Line2D.html#getP1()) in class [Line2D](http://docs.google.com/java/awt/geom/Line2D.html) **Returns:**the start Point2D of this Line2D.**Since:** 1.2

### getX2

public double **getX2**()

Returns the X coordinate of the end point in double precision.

**Specified by:**[getX2](http://docs.google.com/java/awt/geom/Line2D.html#getX2()) in class [Line2D](http://docs.google.com/java/awt/geom/Line2D.html) **Returns:**the X coordinate of the end point of this Line2D object.**Since:** 1.2

### getY2

public double **getY2**()

Returns the Y coordinate of the end point in double precision.

**Specified by:**[getY2](http://docs.google.com/java/awt/geom/Line2D.html#getY2()) in class [Line2D](http://docs.google.com/java/awt/geom/Line2D.html) **Returns:**the Y coordinate of the end point of this Line2D object.**Since:** 1.2

### getP2

public [Point2D](http://docs.google.com/java/awt/geom/Point2D.html) **getP2**()

Returns the end Point2D of this Line2D.

**Specified by:**[getP2](http://docs.google.com/java/awt/geom/Line2D.html#getP2()) in class [Line2D](http://docs.google.com/java/awt/geom/Line2D.html) **Returns:**the end Point2D of this Line2D.**Since:** 1.2

### setLine

public void **setLine**(double x1,  
 double y1,  
 double x2,  
 double y2)

Sets the location of the end points of this Line2D to the specified double coordinates.

**Specified by:**[setLine](http://docs.google.com/java/awt/geom/Line2D.html#setLine(double,%20double,%20double,%20double)) in class [Line2D](http://docs.google.com/java/awt/geom/Line2D.html) **Parameters:**x1 - the X coordinate of the start pointy1 - the Y coordinate of the start pointx2 - the X coordinate of the end pointy2 - the Y coordinate of the end point**Since:** 1.2

### getBounds2D

public [Rectangle2D](http://docs.google.com/java/awt/geom/Rectangle2D.html) **getBounds2D**()

Returns a high precision and more accurate bounding box of the Shape than the getBounds method. Note that there is no guarantee that the returned [Rectangle2D](http://docs.google.com/java/awt/geom/Rectangle2D.html) is the smallest bounding box that encloses the Shape, only that the Shape lies entirely within the indicated Rectangle2D. The bounding box returned by this method is usually tighter than that returned by the getBounds method and never fails due to overflow problems since the return value can be an instance of the Rectangle2D that uses double precision values to store the dimensions.

**Specified by:**[getBounds2D](http://docs.google.com/java/awt/Shape.html#getBounds2D()) in interface [Shape](http://docs.google.com/java/awt/Shape.html) **Returns:**an instance of Rectangle2D that is a high-precision bounding box of the Shape.**Since:** 1.2 **See Also:**[Shape.getBounds()](http://docs.google.com/java/awt/Shape.html#getBounds())

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/Line2D.Double.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/geom/Line2D.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/geom/Line2D.Float.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/geom/Line2D.Double.html)    [**NO FRAMES**](http://docs.google.com/Line2D.Double.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: [NESTED](#2et92p0) | [FIELD](#tyjcwt) | [CONSTR](#3dy6vkm) | [METHOD](#1t3h5sf) | DETAIL: [FIELD](#17dp8vu) | [CONSTR](#1ksv4uv) | [METHOD](#3j2qqm3) |

[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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