| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/TreeModel.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/javax/swing/tree/TreeCellRenderer.html)   [**NEXT CLASS**](http://docs.google.com/javax/swing/tree/TreeNode.html) | [**FRAMES**](http://docs.google.com/index.html?javax/swing/tree/TreeModel.html)    [**NO FRAMES**](http://docs.google.com/TreeModel.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | CONSTR | [METHOD](#3znysh7) | DETAIL: FIELD | CONSTR | [METHOD](#2et92p0) |

## **javax.swing.tree**

Interface TreeModel

**All Known Implementing Classes:** [DefaultTreeModel](http://docs.google.com/javax/swing/tree/DefaultTreeModel.html)

public interface **TreeModel**

The model used by JTree.

JTree and its related classes make extensive use of TreePaths for indentifying nodes in the TreeModel. If a TreeModel returns the same object, as compared by equals, at two different indices under the same parent than the resulting TreePath objects will be considered equal as well. Some implementations may assume that if two TreePaths are equal, they identify the same node. If this condition is not met, painting problems and other oddities may result. In other words, if getChild for a given parent returns the same Object (as determined by equals) problems may result, and it is recommended you avoid doing this.

Similarly JTree and its related classes place TreePaths in Maps. As such if a node is requested twice, the return values must be equal (using the equals method) and have the same hashCode.

For further information on tree models, including an example of a custom implementation, see [How to Use Trees](http://java.sun.com/docs/books/tutorial/uiswing/components/tree.html) in *The Java Tutorial.*

**See Also:**[TreePath](http://docs.google.com/javax/swing/tree/TreePath.html)

| **Method Summary** | |
| --- | --- |
| void | [**addTreeModelListener**](http://docs.google.com/javax/swing/tree/TreeModel.html#addTreeModelListener(javax.swing.event.TreeModelListener))([TreeModelListener](http://docs.google.com/javax/swing/event/TreeModelListener.html) l)            Adds a listener for the TreeModelEvent posted after the tree changes. |
| [Object](http://docs.google.com/java/lang/Object.html) | [**getChild**](http://docs.google.com/javax/swing/tree/TreeModel.html#getChild(java.lang.Object,%20int))([Object](http://docs.google.com/java/lang/Object.html) parent, int index)            Returns the child of parent at index index in the parent's child array. |
| int | [**getChildCount**](http://docs.google.com/javax/swing/tree/TreeModel.html#getChildCount(java.lang.Object))([Object](http://docs.google.com/java/lang/Object.html) parent)            Returns the number of children of parent. |
| int | [**getIndexOfChild**](http://docs.google.com/javax/swing/tree/TreeModel.html#getIndexOfChild(java.lang.Object,%20java.lang.Object))([Object](http://docs.google.com/java/lang/Object.html) parent, [Object](http://docs.google.com/java/lang/Object.html) child)            Returns the index of child in parent. |
| [Object](http://docs.google.com/java/lang/Object.html) | [**getRoot**](http://docs.google.com/javax/swing/tree/TreeModel.html#getRoot())()            Returns the root of the tree. |
| boolean | [**isLeaf**](http://docs.google.com/javax/swing/tree/TreeModel.html#isLeaf(java.lang.Object))([Object](http://docs.google.com/java/lang/Object.html) node)            Returns true if node is a leaf. |
| void | [**removeTreeModelListener**](http://docs.google.com/javax/swing/tree/TreeModel.html#removeTreeModelListener(javax.swing.event.TreeModelListener))([TreeModelListener](http://docs.google.com/javax/swing/event/TreeModelListener.html) l)            Removes a listener previously added with addTreeModelListener. |
| void | [**valueForPathChanged**](http://docs.google.com/javax/swing/tree/TreeModel.html#valueForPathChanged(javax.swing.tree.TreePath,%20java.lang.Object))([TreePath](http://docs.google.com/javax/swing/tree/TreePath.html) path, [Object](http://docs.google.com/java/lang/Object.html) newValue)            Messaged when the user has altered the value for the item identified by path to newValue. |

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

### getRoot

[Object](http://docs.google.com/java/lang/Object.html) **getRoot**()

Returns the root of the tree. Returns null only if the tree has no nodes.

**Returns:**the root of the tree

### getChild

[Object](http://docs.google.com/java/lang/Object.html) **getChild**([Object](http://docs.google.com/java/lang/Object.html) parent,  
 int index)

Returns the child of parent at index index in the parent's child array. parent must be a node previously obtained from this data source. This should not return null if index is a valid index for parent (that is index >= 0 && index < getChildCount(parent)).

**Parameters:**parent - a node in the tree, obtained from this data source **Returns:**the child of parent at index index

### getChildCount

int **getChildCount**([Object](http://docs.google.com/java/lang/Object.html) parent)

Returns the number of children of parent. Returns 0 if the node is a leaf or if it has no children. parent must be a node previously obtained from this data source.

**Parameters:**parent - a node in the tree, obtained from this data source **Returns:**the number of children of the node parent

### isLeaf

boolean **isLeaf**([Object](http://docs.google.com/java/lang/Object.html) node)

Returns true if node is a leaf. It is possible for this method to return false even if node has no children. A directory in a filesystem, for example, may contain no files; the node representing the directory is not a leaf, but it also has no children.

**Parameters:**node - a node in the tree, obtained from this data source **Returns:**true if node is a leaf

### valueForPathChanged

void **valueForPathChanged**([TreePath](http://docs.google.com/javax/swing/tree/TreePath.html) path,  
 [Object](http://docs.google.com/java/lang/Object.html) newValue)

Messaged when the user has altered the value for the item identified by path to newValue. If newValue signifies a truly new value the model should post a treeNodesChanged event.

**Parameters:**path - path to the node that the user has alterednewValue - the new value from the TreeCellEditor

### getIndexOfChild

int **getIndexOfChild**([Object](http://docs.google.com/java/lang/Object.html) parent,  
 [Object](http://docs.google.com/java/lang/Object.html) child)

Returns the index of child in parent. If either parent or child is null, returns -1. If either parent or child don't belong to this tree model, returns -1.

**Parameters:**parent - a node in the tree, obtained from this data sourcechild - the node we are interested in **Returns:**the index of the child in the parent, or -1 if either child or parent are null or don't belong to this tree model

### addTreeModelListener

void **addTreeModelListener**([TreeModelListener](http://docs.google.com/javax/swing/event/TreeModelListener.html) l)

Adds a listener for the TreeModelEvent posted after the tree changes.

**Parameters:**l - the listener to add**See Also:**[removeTreeModelListener(javax.swing.event.TreeModelListener)](http://docs.google.com/javax/swing/tree/TreeModel.html#removeTreeModelListener(javax.swing.event.TreeModelListener))

### removeTreeModelListener

void **removeTreeModelListener**([TreeModelListener](http://docs.google.com/javax/swing/event/TreeModelListener.html) l)

Removes a listener previously added with addTreeModelListener.

**Parameters:**l - the listener to remove**See Also:**[addTreeModelListener(javax.swing.event.TreeModelListener)](http://docs.google.com/javax/swing/tree/TreeModel.html#addTreeModelListener(javax.swing.event.TreeModelListener))

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/TreeModel.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/javax/swing/tree/TreeCellRenderer.html)   [**NEXT CLASS**](http://docs.google.com/javax/swing/tree/TreeNode.html) | [**FRAMES**](http://docs.google.com/index.html?javax/swing/tree/TreeModel.html)    [**NO FRAMES**](http://docs.google.com/TreeModel.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| 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.

Copyright 2006 Sun Microsystems, Inc. All rights reserved. Use is subject to [license terms](http://docs.google.com/legal/license.html). Also see the [documentation redistribution policy](http://java.sun.com/docs/redist.html).