
NSTreeNode Class Reference

Data Management: Data Types & Collections



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NSTreeNode Class Reference

Inherits from	NSObject
Conforms to	NSObject (NSObject)
Framework	/System/Library/Frameworks/AppKit.framework
Availability	Available in Mac OS X v10.5 and later.
Companion guide	Cocoa Bindings Programming Topics
Declared in	NSTreeNode.h
Related sample code	AbstractTree DragNDropOutlineView SourceView

Overview

`NSTreeNode` simplifies the creation and management of trees of objects. Each tree node represents a model object. A tree node with `nil` as its parent node is considered the root of the tree.

Tasks

Creating Tree Nodes

- + [treeNodeWithRepresentedObject:](#) (page 6)
Creates and returns a tree node that represents the specified object.
- [initWithRepresentedObject:](#) (page 8)
Initializes a newly allocated tree node that represents the specified object.

Getting Information About a Node

- [representedObject](#) (page 9)
Returns the object the tree node represents.
- [indexPath](#) (page 7)
Returns the position of the receiver relative to its root parent.

- [isLeaf](#) (page 8)
Returns whether the receiver is a leaf node.
- [childNodes](#) (page 7)
Returns an array containing receiver's child nodes.
- [mutableChildNodes](#) (page 8)
Returns a mutable array that provides read-write access to the receiver's child nodes.
- [descendantNodeAtIndexPath:](#) (page 7)
Returns the receiver's descendent at the specified index path.
- [parentNode](#) (page 9)
Returns the receiver's parent node.

Sorting the Subtree

- [sortWithSortDescriptors:recursively:](#) (page 10)
Sorts the receiver's subtree using the values of the represented objects with the specified sort descriptors.

Class Methods

treeNodeWithRepresentedObject:

Creates and returns a tree node that represents the specified object.

```
+ (id)treeNodeWithRepresentedObject:(id)modelObject
```

Parameters

modelObject

The object the tree node represents.

Return Value

An initialized tree node that represents *modelObject*.

Availability

Available in Mac OS X v10.5 and later.

Related Sample Code

DragNDropOutlineView

Declared In

NSTreeNode.h

Instance Methods

childNodes

Returns an array containing receiver's child nodes.

```
- (NSArray *)childNodes
```

Return Value

An array containing the receiver's child nodes.

Availability

Available in Mac OS X v10.5 and later.

Related Sample Code

DragNDropOutlineView

Declared In

NSTreeNode.h

descendantNodeAtIndex:

Returns the receiver's descendent at the specified index path.

```
- (NSTreeNode *)descendantNodeAtIndex:(NSIndexPath *)indexPath
```

Parameters

indexPath

An index path specifying a descendent of the receiver.

Return Value

A tree node, or `nil` if the node does not exist.

Availability

Available in Mac OS X v10.5 and later.

Declared In

NSTreeNode.h

indexPath

Returns the position of the receiver relative to its root parent.

```
- (NSIndexPath *)indexPath
```

Return Value

An index path that represents the receiver's position relative to the tree's root node.

Availability

Available in Mac OS X v10.5 and later.

Related Sample Code

AbstractTree

SourceView

Declared In

NSTreeNode.h

initWithRepresentedObject:

Initializes a newly allocated tree node that represents the specified object.

- (id)initWithRepresentedObject:(id)modelObject

Parameters*modelObject*

The object the tree node represents.

Return ValueAn initialized tree node that represents *modelObject*.**Availability**

Available in Mac OS X v10.5 and later.

Declared In

NSTreeNode.h

isLeaf

Returns whether the receiver is a leaf node.

- (BOOL)isLeaf

Return Value

YES if the receiver is a leaf node (has no child nodes), otherwise NO.

Availability

Available in Mac OS X v10.5 and later.

Declared In

NSTreeNode.h

mutableChildNodes

Returns a mutable array that provides read-write access to the receiver's child nodes.

- (NSMutableArray *)mutableChildNodes

Return Value

A mutable array that provides read-write access to the receiver's child nodes.

Discussion

Nodes that are inserted into this array have their parent nodes set to the receiver. Nodes that are removed from this array automatically have their parent node set to `nil`. The array that is returned is observable using key-value observing.

Availability

Available in Mac OS X v10.5 and later.

Related Sample Code

DragNDropOutlineView

Declared In

NSTreeNode.h

parentNode

Returns the receiver's parent node.

- (NSTreeNode *)parentNode

Return Value

The receiver's parent node.

Availability

Available in Mac OS X v10.5 and later.

Related Sample Code

AbstractTree

DragNDropOutlineView

SourceView

Declared In

NSTreeNode.h

representedObject

Returns the object the tree node represents.

- (id)representedObject

Return Value

The object the tree node represents.

Availability

Available in Mac OS X v10.5 and later.

Related Sample Code

DragNDropOutlineView

Declared In

NSTreeNode.h

sortWithSortDescriptors:recursively:

Sorts the receiver's subtree using the values of the represented objects with the specified sort descriptors.

```
- (void)sortWithSortDescriptors:(NSArray *)sortDescriptors  
    recursively:(BOOL)recursively
```

Parameters

sortDescriptors

Array of sort descriptors specifying how to sort the represented objects.

recursively

A Boolean that specifies whether the child nodes should be sorted recursively.

Discussion

All the represented objects in the child nodes must be key-value coding compliant for the keys specified in the sort descriptors.

Availability

Available in Mac OS X v10.5 and later.

Related Sample Code

DragNDropOutlineView

Declared In

NSTreeNode.h

Document Revision History

This table describes the changes to *NSTreeNode Class Reference*.

Date	Notes
2006-07-13	New document that describes the class used to manage a tree of objects.

REVISION HISTORY

Document Revision History