NSTreeNode Class Reference

Cocoa > Data Management

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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

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 7)
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 6)
Returns an array containing receiver's child nodes.

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- `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 8)
  Returns the receiver's parent node.

Sorting the Subtree

- `sortWithSortDescriptors:recursively:` (page 9)
  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.

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.

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Availability
Available in Mac OS X v10.5 and later.

Declared In
`NSTreeNode.h`

descendantNodeAtIndexPath:

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

```
- (NSTreeNode *)descendantNodeAtIndexPath:(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.

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 Value
An initialized tree node that represents *modelObject*.

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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.

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.

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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.

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.

Declared In
NSTreeNode.h

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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.

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