
NSOutlineView Class Reference

User Experience: Data Presentation





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Apple Inc.
1 Infinite Loop
Cupertino, CA 95014
408-996-1010

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NSOutlineView Class Reference

Inherits from	NSTableView : NSControl : NSView : NSResponder : NSObject
Conforms to	NSUserInterfaceValidations (NSTableView) NSTextViewDelegate (NSTableView) NSAnimatablePropertyContainer (NSView) NSCoding (NSResponder) NSObject (NSObject)
Framework	/System/Library/Frameworks/AppKit.framework
Availability	Available in Mac OS X v10.0 and later.
Declared in	NSOutlineView.h
Companion guides	Outline View Programming Topics for Cocoa Drag and Drop Programming Topics for Cocoa
Related sample code	ColorSyncDevices-Cocoa DragNDropOutlineView PhotoSearch QTKitMovieShuffler SGDevices

Overview

`NSOutlineView` is a subclass of `NSTableView` that uses a row-and-column format to display hierarchical data that can be expanded and collapsed, such as directories and files in a file system. A user can expand and collapse rows, edit values, and resize and rearrange columns.

Important: Like a table view, an outline view does not store its own data, instead it retrieves data values as needed from a data source to which it has a weak reference (see [Communicating With Objects](#)). See the `NSOutlineViewDataSource` protocol, which declares the methods that an `NSOutlineView` object uses to access the contents of its data source object.

An outline view has the following features:

- A user can expand and collapse rows.
- Each item in the outline view must be unique. In order for the collapsed state to remain consistent between reloads the item's pointer must remain the same.
- The view gets data from a data source (see the `NSOutlineViewDataSource` informal protocol).

- The view retrieves only the data that needs to be displayed.

The following are commonly-used methods:

<code>numberOfRows</code>	Returns the number of rows in the receiver.
<code>collapseItem:</code> (page 10)	Collapses a given item.
<code>expandItem:</code> (page 12)	Expands a given item.
<code>reloadItem:reloadChildren:</code> (page 18)	Reloads a given item and, optionally, its children.

Delegation

The `NSOutlineView` provides a number of customization features through delegation. The majority of the delegate methods are declared in the `NSOutlineViewDelegate` Protocol protocol. However, due to an error in the transition, some delegate methods are still an informal protocol and appear in this document as delegate methods. All these methods are `NSNotificationCenter` oriented and are the following methods:

- `outlineViewColumnDidMove:` (page 24)
- `outlineViewColumnDidResize:` (page 24)
- `outlineViewItemDidCollapse:` (page 24)
- `outlineViewItemDidExpand:` (page 25)
- `outlineViewItemWillCollapse:` (page 25)
- `outlineViewItemWillExpand:` (page 25)
- `outlineViewSelectionDidChange:` (page 26)
- `outlineViewSelectionIsChanging:` (page 26)

These methods will migrate to the `NSOutlineViewDelegate` Protocol protocol in the version of Mac OS X following Mac OS X v 10.6.

Tasks

Setting the Data Source

- `setDataSource:` (page 21)
Sets the receiver's data source to a given object.
- `dataSource` (page 12)
Returns the object that provides the data displayed by the receiver.

Working with Expandability

- [isExpandable:](#) (page 15)
Returns a Boolean value that indicates whether a given item is expandable.
- [isItemExpanded:](#) (page 15)
Returns a Boolean value that indicates whether a given item is expanded.
- [outlineViewItemWillExpand:](#) (page 25) *delegate method*
Invoked when *notification* is posted—that is, whenever the user is about to expand an item in the outline view.
- [outlineViewItemDidExpand:](#) (page 25) *delegate method*
Invoked when *notification* is posted—that is, whenever the user expands an item in the outline view.
- [outlineViewItemWillCollapse:](#) (page 25) *delegate method*
Invoked when *notification* is posted—that is, whenever the user is about to collapse an item in the outline view.
- [outlineViewItemDidCollapse:](#) (page 24) *delegate method*
Invoked when *notification* is posted—that is, whenever the user collapses an item in the outline view.

Monitoring Selection Changes

- [outlineViewSelectionIsChanging:](#) (page 26) *delegate method*
Invoked when *notification* is posted—that is, whenever the outline view's selection changes.
- [outlineViewSelectionDidChange:](#) (page 26) *delegate method*
Invoked when *notification* is posted—that is, immediately after the outline view's selection has changed.

Expanding and Collapsing the Outline

- [expandItem:](#) (page 12)
Expands a given item.
- [expandItem:expandChildren:](#) (page 13)
Expands a specified item and, optionally, its children.
- [collapseItem:](#) (page 10)
Collapses a given item.
- [collapseItem:collapseChildren:](#) (page 11)
Collapses a given item and, optionally, its children.

Redisplaying Information

- [reloadItem:](#) (page 18)
Reloads and redisplays the data for *item*.
- [reloadItem:reloadChildren:](#) (page 18)
Reloads a given item and, optionally, its children.

Converting Between Items and Rows

- [itemAtRow:](#) (page 15)
Returns the item associated with a given row.
- [rowForItem:](#) (page 19)
Returns the row associated with a given item.

Working with the Outline Column

- [setOutlineTableColumn:](#) (page 23)
Sets the table column in which hierarchical data is displayed.
- [outlineTableColumn](#) (page 17)
Returns the table column in which hierarchical data is displayed.
- [autoresizesOutlineColumn](#) (page 9)
Returns a Boolean value that indicates whether the receiver automatically resizes its outline column when the user expands or collapses items.
- [setAutoresizesOutlineColumn:](#) (page 19)
Sets whether the receiver automatically resizes its outline column when the user expands or collapses an item.
- [outlineViewColumnDidMove:](#) (page 24) *delegate method*
Invoked when *notification* is posted—that is, whenever the user moves a column in the outline view.
- [outlineViewColumnDidResize:](#) (page 24) *delegate method*
Invoked when *notification* is posted—that is, whenever the user resizes a column in the outline view.

Working with Indentation

- [levelForItem:](#) (page 16)
Returns the indentation level for a given item.
- [levelForRow:](#) (page 16)
Returns the indentation level for a given row.
- [setIndentationPerLevel:](#) (page 22)
Sets the per-level indentation.
- [indentationPerLevel](#) (page 14)
Returns the current indentation per level.
- [setIndentationMarkerFollowsCell:](#) (page 22)
Sets whether the indentation marker symbol displayed in the outline column should be indented along with the cell contents, or always displayed left-justified in the column.
- [indentationMarkerFollowsCell](#) (page 14)
Returns a Boolean value that indicates whether the indentation marker symbol displayed in the outline column should be indented along with the cell contents, or always displayed left-justified in the column.

Working with Persistence

- [autosaveExpandedItems](#) (page 10)
Returns a Boolean value that indicates whether the expanded items in the receiver are automatically saved.
- [setAutosaveExpandedItems:](#) (page 20)
Sets whether the expanded items in the receiver are automatically saved.

Supporting Drag and Drop

- [setDropItem:dropChildIndex:](#) (page 21)
Used to “retarget” a proposed drop.
- [shouldCollapseAutoExpandedItemsForDeposited:](#) (page 23)
Returns a Boolean value that indicates whether autoexpanded items should return to their original collapsed state.

Getting the Parent for an Item

- [parentForItem:](#) (page 17)
Returns the parent for a given item.

Getting the Frame for a Cell

- [frameOfOutlineCellAtRow:](#) (page 13)
Returns the frame of the outline cell for a given row.

Getting and Setting the Delegate

- [delegate](#) (page 12)
Returns the receiver’s delegate.
- [setDelegate:](#) (page 21)
Sets the receiver’s delegate.

Instance Methods

autoresizesOutlineColumn

Returns a Boolean value that indicates whether the receiver automatically resizes its outline column when the user expands or collapses items.

- (BOOL)autoresizesOutlineColumn

Return Value

YES if the outline column is automatically resized, otherwise NO.

Discussion

The outline column contains the cells with the expansion symbols and is generally the first column. The default is YES.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [setAutoresizesOutlineColumn:](#) (page 19)

Declared In

NSOutlineView.h

autosaveExpandedItems

Returns a Boolean value that indicates whether the expanded items in the receiver are automatically saved.

- (BOOL)autosaveExpandedItems

Return Value

YES if when an item is expanded, the outline view displays the previous expanded state of its contained items, otherwise NO.

Discussion

The outline view information is saved separately for each user and for each application that user uses. Note that if `autosaveName` returns `nil`, this setting is ignored, and outline information isn't saved.

Special Considerations

Starting in Mac OS X version 10.5, the value for `autosaveExpandedItems` is saved out in the nib file. The default value is NO.

Availability

Available in Mac OS X v10.0 and later.

See Also

- `autosaveName` (NSTableView)
 - `autosaveTableColumns` (NSTableView)
 - [setAutosaveExpandedItems:](#) (page 20)

Declared In

NSOutlineView.h

collapseItem:

Collapses a given item.

- (void)collapseItem:(id)item

Parameters*item*

An item in the receiver.

DiscussionIf *item* is not expanded or not expandable, does nothing

If collapsing takes place, posts item collapse notification.

Availability

Available in Mac OS X v10.0 and later.

See Also- [expandItem:](#) (page 12)**Related Sample Code**

DragNDropOutlineView

Declared In

NSOutlineView.h

collapseItem:collapseChildren:

Collapses a given item and, optionally, its children.

- (void)collapseItem:(id)*item* collapseChildren:(BOOL)*collapseChildren***Parameters***item*

An item in the receiver.

Starting in Mac OS X version 10.5, passing 'nil' will collapse each item under the root in the outline view.

*collapseChildren*If YES, recursively collapses *item* and its children. If NO, collapses *item* only (identical to [collapseItem:](#) (page 10)).**Discussion**For example, this method is invoked with the *collapseChildren* parameter set to YES when a user Option-clicks the disclosure triangle for an item in the outline view (to collapse the item and all its contained items).

For each item collapsed, posts an item collapsed notification.

Availability

Available in Mac OS X v10.0 and later.

See Also- [collapseItem:](#) (page 10)- [expandItem:expandChildren:](#) (page 13)**Declared In**

NSOutlineView.h

dataSource

Returns the object that provides the data displayed by the receiver.

```
- (id < NSOutlineViewDataSource >)dataSource
```

Return Value

The object that provides the data displayed by the receiver.

Discussion

See Writing an Outline View Data Source and the NSOutlineViewDataSource Protocol Reference informal protocol specification for more information.

Availability

Available in Mac OS X v10.6 and later.

See Also

- [setDataSource:](#) (page 21)

Declared In

NSOutlineView.h

delegate

Returns the receiver's delegate.

```
- (id < NSOutlineViewDelegate >)delegate
```

Return Value

The receiver's delegate.

Availability

Available in Mac OS X v10.6 and later.

See Also

- [setDelegate:](#) (page 21)

Declared In

NSOutlineView.h

expandItem:

Expands a given item.

```
- (void)expandItem:(id) item
```

Parameters

item

An item in the receiver.

Discussion

If *item* is not expandable or is already expanded, does nothing.

If expanding takes place, posts an item expanded notification.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [collapseItem:](#) (page 10)

Related Sample Code

DragNDropOutlineView

Declared In

NSOutlineView.h

expandItem:expandChildren:

Expands a specified item and, optionally, its children.

```
- (void)expandItem:(id)item expandChildren:(BOOL)expandChildren
```

Parameters

item

An item in the receiver.

Starting in Mac OS X version 10.5, passing 'nil' will expand each item under the root in the outline view.

expandChildren

If YES, recursively expands *item* and its children. If NO, expands *item* only (identical to [expandItem:](#) (page 12)).

Discussion

For example, this method is invoked with the *expandChildren* parameter set to YES when a user Option-clicks the disclosure triangle for an item in the outline view (to expand the item and all its contained items).

For each item expanded, posts an item expanded notification.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [collapseItem:collapseChildren:](#) (page 11)

- [expandItem:](#) (page 12)

Declared In

NSOutlineView.h

frameOfOutlineCellAtRow:

Returns the frame of the outline cell for a given row.

```
- (NSRect)frameOfOutlineCellAtRow:(NSInteger)row
```

Parameters

row

The index of the row for which to return the frame.

Return Value

The frame of the outline cell for the row at index *row*, considering the current indentation and the value returned by [indentationMarkerFollowsCell](#) (page 14). If the row at index *row* is not an expandable row, returns `NSZeroRect`.

Discussion

You can override this method in a subclass to return a custom frame for the outline button cell. If your override returns an empty rect, no outline cell is drawn for that row. You might do that, for example, so that the disclosure triangle will not be shown for a row that should never be expanded.

Availability

Available in Mac OS X v10.5 and later.

Declared In

`NSOutlineView.h`

indentationMarkerFollowsCell

Returns a Boolean value that indicates whether the indentation marker symbol displayed in the outline column should be indented along with the cell contents, or always displayed left-justified in the column.

- (BOOL)indentationMarkerFollowsCell

Return Value

YES if the indentation marker is indented along with the cell contents, otherwise NO.

Discussion

The default is YES.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [setIndentationMarkerFollowsCell:](#) (page 22)

Declared In

`NSOutlineView.h`

indentationPerLevel

Returns the current indentation per level.

- (CGFloat)indentationPerLevel

Return Value

The current indentation per level, in points.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [setIndentationPerLevel:](#) (page 22)

Declared In

NSOutlineView.h

isExpandable:

Returns a Boolean value that indicates whether a given item is expandable.

- (BOOL)isExpandable:(id) *item***Parameters***item*

An item in the receiver.

Return ValueYES if *item* is expandable—that is, *item* can contain other items, otherwise NO.**Availability**

Available in Mac OS X v10.0 and later.

See Also

- [expandItem:](#) (page 12)
- [isItemExpanded:](#) (page 15)

Declared In

NSOutlineView.h

isItemExpanded:

Returns a Boolean value that indicates whether a given item is expanded.

- (BOOL)isItemExpanded:(id) *item***Parameters***item*

An item in the receiver.

Return ValueYES if *item* is expanded, otherwise NO.**Availability**

Available in Mac OS X v10.0 and later.

See Also

- [expandItem:](#) (page 12)
- [isExpandable:](#) (page 15)

Declared In

NSOutlineView.h

itemAtRow:

Returns the item associated with a given row.

- (id)itemAtRow:(NSInteger)row

Parameters

row

The index of a row in the receiver.

Return Value

The item associated with *row*.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [rowForItem:](#) (page 19)

Related Sample Code

DragNDropOutlineView

PhotoSearch

SourceView

Declared In

NSOutlineView.h

levelForItem:

Returns the indentation level for a given item.

- (NSInteger)levelForItem:(id)item

Parameters

item

An item in the receiver.

Return Value

The indentation level for *item*. If *item* is *nil* (which is the root item), returns -1.

Discussion

The levels are zero-based—that is, the first level of displayed items is level 0.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [indentationPerLevel](#) (page 14)

- [levelForRow:](#) (page 16)

Declared In

NSOutlineView.h

levelForRow:

Returns the indentation level for a given row.

- (NSInteger)levelForRow:(NSInteger)row

Parameters

row

The index of a row in the receiver.

Return Value

The indentation level for *row*. For an invalid row, returns -1.

Discussion

The levels are zero-based—that is, the first level of displayed items is level 0.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [indentationPerLevel](#) (page 14)

- [levelForItem:](#) (page 16)

Declared In

NSOutlineView.h

outlineTableColumn

Returns the table column in which hierarchical data is displayed.

- (NSTableColumn *)outlineTableColumn

Return Value

The table column in which hierarchical data is displayed.

Discussion

Each level of hierarchical data is indented by the amount specified by [indentationPerLevel](#) (page 14) (the default is 16.0), and decorated with the indentation marker (disclosure triangle) on rows that are expandable.

Special Considerations

Starting in Mac OS X version 10.5, outline table column data is saved in `encodeWithCoder:` and restored in `initWithCoder:`.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [setOutlineTableColumn:](#) (page 23)

Declared In

NSOutlineView.h

parentForItem:

Returns the parent for a given item.

- (id)parentForItem:(id)item

Parameters

item

The item for which to return the parent.

Return Value

The parent for *item*, or *nil* if the parent is the root.

Availability

Available in Mac OS X v10.5 and later.

Declared In

NSOutlineView.h

reloadItem:

Reloads and redisplay the data for *item*.

- (void)reloadItem:(id)item

Parameters

item

The item to reload and display

Discussion

This method may cause the outline view to change its selection unexpectedly.

Special Considerations

In Mac OS X v 10.6 and earlier, this method will not invoke the [outlineViewSelectionDidChange:](#) (page 26) delegate method.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [reloadItem:reloadChildren:](#) (page 18)

Related Sample Code

NewsReader

Declared In

NSOutlineView.h

reloadItem:reloadChildren:

Reloads a given item and, optionally, its children.

- (void)reloadItem:(id)item reloadChildren:(BOOL)reloadChildren

Parameters*item*

An item in the receiver.

Starting in Mac OS X version 10.5, passing 'nil' will reload everything under the root in the outline view.

reloadChildren

If YES, recursively reloads *item* and its children. If NO, reloads *item* only (identical to [reloadItem:](#) (page 18)).

It is not necessary, or efficient, to reload children if the item is not expanded.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [reloadItem:](#) (page 18)

Related Sample Code

PhotoSearch

Declared In

NSOutlineView.h

rowForItem:

Returns the row associated with a given item.

```
- (NSInteger)rowForItem:(id)item
```

Parameters*item*

An item in the receiver.

Return Value

The row associated with *item*, or -1 if *item* is nil or cannot be found.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [itemAtRow:](#) (page 15)

Related Sample Code

DragNDropOutlineView

Declared In

NSOutlineView.h

setAutoresizesOutlineColumn:

Sets whether the receiver automatically resizes its outline column when the user expands or collapses an item.

- (void)setAutoresizesOutlineColumn:(BOOL)*resize*

Parameters

resize

YES if the outline column is automatically resized, otherwise NO.

Discussion

The outline column contains the cells with the expansion symbols and is generally the first column. The default is YES.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [autoresizesOutlineColumn](#) (page 9)

Declared In

NSOutlineView.h

setAutosaveExpandedItems:

Sets whether the expanded items in the receiver are automatically saved.

- (void)setAutosaveExpandedItems:(BOOL)*flag*

Discussion

If *flag* is different from the current value, this method also reads in the saved information and sets the outline view's options to match. YES indicates that when an item is expanded, the outline view displays the previous expanded state of its contained items.

The outline information is saved separately for each user and for each application that user uses.

If `autosaveName` returns `nil` or if you haven't implemented the data source methods `outlineView:itemForPersistentObject:` and `outlineView:persistentObjectForItem:`, this setting is ignored, and expanded item information isn't saved.

Note that you can have separate settings for [autosaveExpandedItems](#) (page 10) and `autosaveTableColumns`, so you could, for example, save expanded item information, but not table column positions.

Special Considerations

Starting in Mac OS X version 10.5, the value for `autosaveExpandedItems` is saved out in the nib file. The default value is NO.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [autosaveExpandedItems](#) (page 10)
- `setAutosaveTableColumns:` (NSTableView)

Declared In

NSOutlineView.h

setDataSource:

Sets the receiver's data source to a given object.

```
- (void)setDataSource:(id < NSOutlineViewDataSource >)anObject
```

Parameters

anObject

The data source for the receiver. The object must implement the appropriate methods of the NSOutlineViewDataSource Protocol Reference informal protocol.

Discussion

The receiver maintains a weak reference to the data source (see Communicating With Objects). After setting the data source, this method invokes `tile`.

This method raises an `NSInternalInconsistencyException` if *anObject* doesn't respond to all of `outlineView:child:ofItem:`, `outlineView:isItemExpandable:`, `outlineView:numberOfChildrenOfItem:`, and `outlineView:objectValueForTableColumn:byItem:`.

Availability

Available in Mac OS X v10.6 and later.

See Also

- [dataSource](#) (page 12)

Declared In

NSOutlineView.h

setDelegate:

Sets the receiver's delegate.

```
- (void)setDelegate:(id < NSOutlineViewDelegate >)anObject
```

Parameters

anObject

The delegate for the receiver. The delegate must conform to the NSOutlineViewDelegate Protocol protocol.

Availability

Available in Mac OS X v10.6 and later.

See Also

- [delegate](#) (page 12)

Declared In

NSOutlineView.h

setDropItem:dropChildIndex:

Used to "retarget" a proposed drop.

```
- (void)setDropItem:(id)item dropChildIndex:(NSInteger)index
```

Discussion

For example, to specify a drop on an item *l*, you specify *item* as 1 and *index* as `NSOutlineViewDropOnItemIndex`. To specify a drop between child 2 and 3 of item *l*, you specify *item* as *l* and *index* as 3 (children are a zero-based index). To specify a drop on an unexpandable item 1, you specify *item* as *l* and *index* as `NSOutlineViewDropOnItemIndex`.

Availability

Available in Mac OS X v10.0 and later.

Related Sample Code

`DragNDropOutlineView`

Declared In

`NSOutlineView.h`

setIndentationMarkerFollowsCell:

Sets whether the indentation marker symbol displayed in the outline column should be indented along with the cell contents, or always displayed left-justified in the column.

```
- (void)setIndentationMarkerFollowsCell:(BOOL)drawInCell
```

Discussion

The default is YES, the indentation marker is indented along with the cell contents.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [indentationMarkerFollowsCell](#) (page 14)

Declared In

`NSOutlineView.h`

setIndentationPerLevel:

Sets the per-level indentation.

```
- (void)setIndentationPerLevel:(CGFloat)newIndentLevel
```

Parameters

newIndentLevel

The indentation per level, in points.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [indentationPerLevel](#) (page 14)

Declared In

`NSOutlineView.h`

setOutlineTableColumn:

Sets the table column in which hierarchical data is displayed.

```
- (void)setOutlineTableColumn:(NSTableColumn *)outlineTableColumn
```

Parameters

outlineTableColumn

The table column in which hierarchical data is displayed.

Special Considerations

Starting in Mac OS X version 10.5, outline table column data is saved in `encodeWithCoder:` and restored in `initWithCoder:`.

Availability

Available in Mac OS X v10.0 and later.

See Also

- [outlineTableColumn](#) (page 17)

Declared In

NSOutlineView.h

shouldCollapseAutoExpandedItemsForDeposited:

Returns a Boolean value that indicates whether autoexpanded items should return to their original collapsed state.

```
- (BOOL)shouldCollapseAutoExpandedItemsForDeposited:(BOOL)deposited
```

Return Value

YES if autoexpanded items should return to their original collapsed state, otherwise NO.

Discussion

Override this method to provide custom behavior. *deposited* tells whether or not the drop terminated due to a successful drop.

This method is called in a variety of situations. For example, it is sent shortly after `outlineView:acceptDrop:item:childIndex:` is processed and also if the drag exits the outline view (exiting the view is treated the same as a failed drop).

Availability

Available in Mac OS X v10.0 and later.

Declared In

NSOutlineView.h

Delegate Methods

outlineViewColumnDidMove:

Invoked when *notification* is posted—that is, whenever the user moves a column in the outline view.

```
- (void)outlineViewColumnDidMove:(NSNotification *)notification
```

Discussion

This method is invoked as a result of posting an [NSOutlineViewColumnDidMoveNotification](#) (page 27).

Availability

Available in Mac OS X v10.0 and later.

Declared In

NSOutlineView.h

outlineViewColumnDidResize:

Invoked when *notification* is posted—that is, whenever the user resizes a column in the outline view.

```
- (void)outlineViewColumnDidResize:(NSNotification *)notification
```

Discussion

This method is invoked as a result of posting an [NSOutlineViewColumnDidResizeNotification](#) (page 27).

Availability

Available in Mac OS X v10.0 and later.

Declared In

NSOutlineView.h

outlineViewItemDidCollapse:

Invoked when *notification* is posted—that is, whenever the user collapses an item in the outline view.

```
- (void)outlineViewItemDidCollapse:(NSNotification *)notification
```

Discussion

This method is invoked as a result of posting an [NSOutlineViewItemDidCollapseNotification](#) (page 27).

Availability

Available in Mac OS X v10.0 and later.

Declared In

NSOutlineView.h

outlineViewItemDidExpand:

Invoked when *notification* is posted—that is, whenever the user expands an item in the outline view.

```
- (void)outlineViewItemDidExpand:(NSNotification *)notification
```

Discussion

This method is invoked as a result of posting an [NSOutlineViewItemDidExpandNotification](#) (page 28).

Availability

Available in Mac OS X v10.0 and later.

Declared In

NSOutlineView.h

outlineViewItemWillCollapse:

Invoked when *notification* is posted—that is, whenever the user is about to collapse an item in the outline view.

```
- (void)outlineViewItemWillCollapse:(NSNotification *)notification
```

Discussion

This method is invoked as a result of posting an [NSOutlineViewItemWillCollapseNotification](#) (page 28).

Availability

Available in Mac OS X v10.0 and later.

Declared In

NSOutlineView.h

outlineViewItemWillExpand:

Invoked when *notification* is posted—that is, whenever the user is about to expand an item in the outline view.

```
- (void)outlineViewItemWillExpand:(NSNotification *)notification
```

Discussion

This method is invoked as a result of posting an [NSOutlineViewItemWillExpandNotification](#) (page 28).

Availability

Available in Mac OS X v10.0 and later.

Declared In

NSOutlineView.h

outlineViewSelectionDidChange:

Invoked when *notification* is posted—that is, immediately after the outline view’s selection has changed.

```
- (void)outlineViewSelectionDidChange:(NSNotification *)notification
```

Discussion

This method is invoked as a result of posting an [NSNotification](#) (page 29).

Availability

Available in Mac OS X v10.0 and later.

Declared In

NSOutlineView.h

outlineViewSelectionIsChanging:

Invoked when *notification* is posted—that is, whenever the outline view’s selection changes.

```
- (void)outlineViewSelectionIsChanging:(NSNotification *)notification
```

Discussion

This method is invoked as a result of posting an [NSNotification](#) (page 29).

Availability

Available in Mac OS X v10.0 and later.

Declared In

NSOutlineView.h

Constants

Drop on Item Index

This constant defines an index that allows you to drop an item directly on a target.

```
enum {
    NSOutlineViewDropOnItemIndex = -1
};
```

Constants

NSOutlineViewDropOnItemIndex

May be used as a valid child index of a drop target item.

In this case, the drop will happen directly on the target item.

Available in Mac OS X v10.0 and later.

Declared in NSOutlineView.h.

Declared In

NSOutlineView.h

Notifications

NSNotification

Posted whenever a column is moved by user action in an `NSNotification` object.

The notification object is the `NSNotification` object in which a column moved. The `userInfo` dictionary contains the following information:

Key	Value
@ <code>NSOldColumn</code>	An <code>NSNumber</code> object containing the integer value of the column's original index
@ <code>NSNewColumn</code>	An <code>NSNumber</code> object containing the integer value of the column's present index

Availability

Available in Mac OS X v10.0 and later.

See Also

- `moveColumn:toColumn:` (`NSTableView`)

Declared In

`NSNotification.h`

NSNotification

Posted whenever a column is resized in an `NSNotification` object.

The notification object is the `NSNotification` object in which a column was resized. The `userInfo` dictionary contains the following information:

Key	Value
@ <code>NSTableColumn</code>	The column that was resized.
@ <code>NSOldWidth</code>	An <code>NSNumber</code> object containing the column's original width

Availability

Available in Mac OS X v10.0 and later.

Declared In

`NSNotification.h`

NSNotification

Posted whenever an item is collapsed in an `NSNotification` object.

The notification object is the `NSOutlineView` object in which an item was collapsed. A collapsed item's children lose their status as being selected. The `userInfo` dictionary contains the following information:

Key	Value
@"NSObject"	The item that was collapsed (an id)

Availability

Available in Mac OS X v10.0 and later.

Declared In

`NSOutlineView.h`

NSOutlineViewItemDidExpandNotification

Posted whenever an item is expanded in an `NSOutlineView` object.

The notification object is the `NSOutlineView` object in which an item was expanded. The `userInfo` dictionary contains the following information:

Key	Value
@"NSObject"	The item that was expanded (an id)

Availability

Available in Mac OS X v10.0 and later.

Declared In

`NSOutlineView.h`

NSOutlineViewItemWillCollapseNotification

Posted before an item is collapsed (after the user clicks the arrow but before the item is collapsed).

The notification object is the `NSOutlineView` object that contains the item about to be collapsed. A collapsed item's children will lose their status as being selected. The `userInfo` dictionary contains the following information:

Key	Value
@"NSObject"	The item about to be collapsed (an id)

Availability

Available in Mac OS X v10.0 and later.

Declared In

`NSOutlineView.h`

NSOutlineViewItemWillExpandNotification

Posted before an item is expanded (after the user clicks the arrow but before the item is collapsed).

The notification object is the outline view that contains an item about to be expanded. The *userInfo* dictionary contains the following information:

Key	Value
@"NSObject"	The item that is to be expanded (an id)

Availability

Available in Mac OS X v10.0 and later.

Declared In

NSOutlineView.h

NSNotificationSelectionDidChangeNotification

Posted after the outline view's selection changes.

The notification object is the outline view whose selection changed. This notification does not contain a *userInfo* dictionary.

Availability

Available in Mac OS X v10.0 and later.

Declared In

NSOutlineView.h

NSNotificationSelectionIsChangingNotification

Posted as the outline view's selection changes (while the mouse button is still down).

The notification object is the outline view whose selection is changing. This notification does not contain a *userInfo* dictionary.

Availability

Available in Mac OS X v10.0 and later.

Declared In

NSOutlineView.h

Document Revision History

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

Date	Notes
2009-11-17	Clarified that delegates are mixed with the class and protocol. Added warning to <code>reloadItem:</code> about selection bug.
2009-05-29	Updated for Mac OS X v10.6. Delegate methods moved to <i>NSOutlineViewDelegate Protocol Reference</i> .
2009-02-04	Added documentation for method <code>outlineView:selectionIndexesForProposedSelection:</code> .
2007-07-26	Clarified definitions for several methods.
	Noted changes for Mac OS version 10.5 in the following methods: <code>autosaveExpandedItems</code> (page 10), <code>setAutosaveExpandedItems:</code> (page 20), <code>collapseItem:collapseChildren:</code> (page 11), <code>expandItem:expandChildren:</code> (page 13), <code>reloadItem:reloadChildren:</code> (page 18), <code>outlineTableColumn</code> (page 17), <code>setOutlineTableColumn:</code> (page 23), <code>frameOfOutlineCellAtRow:</code> (page 13), <code>outlineView:shouldCollapseItem:</code> and <code>setDelegate:</code> (page 21).
2006-11-07	Added note about equality of items in an <i>NSOutlineView</i> object.
2006-06-28	Added a definition of data source methods.
2006-05-23	First publication of this content as a separate document.
	Added information regarding how items are expanded and collapsed to the following method descriptions: <code>autosaveExpandedItems</code> (page 10), <code>setAutosaveExpandedItems:</code> (page 20), <code>collapseItem:collapseChildren:</code> (page 11), and <code>expandItem:expandChildren:</code> (page 13).

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