Documentation

Language: Swift

AppKit / NSTableViewDataSource

Protocol

NSTableViewDataSource

A set of methods that a table view uses to provide data to a table view and to allow the editing of the table view's data source object.

macOS

```
protocol NSTableViewDataSource : NSObjectProtocol
```

Overview

Some of the methods in this protocol, such as `tableView(_:objectValueFor:row:)` and `numberOfRows(in:)` along with other methods that return data, are called frequently, so they must be efficient.

> **Note**
>
> View-based table views must not use the `tableView(_:setObjectValue:for:row:)` method for setting values. Instead the views must explicitly set the values for the fields, or use Cocoa bindings. Likewise, use target/action for editing. See Table View Programming Guide for Mac for more information on populating view-based and cell-based table views.

If you're not using Cocoa bindings to provide data to the table view, the following methods are required:

- `numberOfRows(in:)`
- `tableView(_:objectValueFor:row:)`
- `tableView(_:setObjectValue:for:row:)` (cell-based tables only)

To learn more about Cocoa bindings, see Cocoa Bindings Programming Topics.

Topics

Getting Values

func numberOfRows(in: NSTableView) -> Int

Returns the number of records managed for `aTableView` by the data source object.

func tableView(NSTableView, objectValueFor: NSTableColumn?, row: Int) -> Any?

Called by the table view to return the data object associated with the specified row and column.

Setting Values

func tableView(NSTableView, setObjectValue: Any?, for: NSTableColumn?, row: Int)

Sets the data object for an item in the specified row and column.

Implementing Pasteboard Support

func tableView(NSTableView, pasteboardWriterForRow: Int) -> (any NSPasteboardWriting)?

Called to allow the table to support multiple item dragging.

Drag and Drop

{} Supporting Table View Drag and Drop Through File Promises

Share data between macOS apps during drag and drop by using an item provider.

func tableView(NSTableView, acceptDrop: any NSDraggingInfo, row: Int, dropOperation: NSTableView.DropOperation) -> Bool

Called by `aTableView` when the mouse button is released over a table view that previously decided to allow a drop.

~~func tableView(NSTableView, namesOfPromisedFilesDroppedAtDestination: URL, forDraggedRowsWith: IndexSet) -> [String]~~

Returns an array of filenames that represent the `indexSet` rows for a drag to `dropDestination`.

Deprecated

`func tableView(NSTableView, validateDrop: any NSDraggingInfo, proposedRow: Int, proposedDropOperation: NSTableView.DropOperation) -> NSDragOperation`

Used by `aTableView` to determine a valid drop target.

~~`func tableView(NSTableView, writeRowsWith: IndexSet, to: NSPasteboard) -> Bool`~~

Returns a Boolean value that indicates whether a drag operation is allowed.

Deprecated

`func tableView(NSTableView, draggingSession: NSDraggingSession, willBeginAt: NSPoint, forRowIndexes: IndexSet)`

Implement this method to determine when a dragging session will begin.

`func tableView(NSTableView, updateDraggingItemsForDrag: any NSDraggingInfo)`

Implement this method to allow the table to update dragging items as they are dragged over a view.

`func tableView(NSTableView, draggingSession: NSDraggingSession, endedAt: NSPoint, operation: NSDragOperation)`

Implement this method to determine when a dragging session has ended.

Sorting

`func tableView(NSTableView, sortDescriptorsDidChange: [NSSortDescriptor])`

Called by `aTableView` to indicate that sorting may need to be done.

Relationships

Inherits From

`NSObjectProtocol`

Conforming Types

`NSTableViewDiffableDataSource`, `NSTableViewDiffableDataSourceReference`

See Also

Management

`protocol NSTableViewDelegate`

A set of optional methods you implement in a table view delegate to customize the behavior of the table view.

`class NSTableViewDiffableDataSource`

The object you use to manage data and provide items for a table view.