# NSObjectController Class Reference

Cocoa > Data Management



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# NSObjectController Class Reference

Inherits from Conforms to	NSController : NSObject NSCoding (NSController) NSObject (NSObject)
Framework Availability	/System/Library/Frameworks/AppKit.framework Available in Mac OS X v10.3 and later.
Declared in	NSObjectController.h
Companion guides	Cocoa Bindings Programming Topics Predicate Programming Guide Core Data Programming Guide
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# **Overview**

NSObjectController is a Cocoa bindings-compatible controller class. Properties of the content object of an instance of this class can be bound to user interface elements to access and modify their values.

By default, the content of an NSObjectController instance is an NSMutableDictionary object. This allows a single NSObjectController instance to be used to manage many different properties referenced by key value paths. The default content object class can be changed by calling setObjectClass: (page 20), which subclassers must override.

# Tasks

# Initializing an Object Controller

- initWithContent: (page 13)

Initializes and returns an NSObjectController object with the given content.

# **Managing Content**

- setContent: (page 18)

Sets the receiver's content object.

- content (page 10)

Returns the receiver's content object.

- setAutomaticallyPreparesContent: (page 17)

Sets whether the receiver automatically creates and inserts new content objects automatically when loading from a nib file.

- automaticallyPreparesContent (page 9)

Returns a Boolean value that indicates whether the receiver automatically prepares its content when it is loaded from a nib.

- prepareContent (page 15)

Typically overridden by subclasses that require additional control over the creation of new objects.

# Setting the Content Class

- setObjectClass: (page 20)

Sets the object class to use when creating new objects.

objectClass (page 14)
 Returns the class used when creating new non-Core Data objects.

# **Managing Objects**

- newObject (page 14)

Creates and returns a new object of the appropriate class.

- addObject: (page 8)

Sets the receiver's content object.

- removeObject: (page 16)
   Removes a given object from the receiver's content.
- add: (page 8)

Creates a new object and sets it as the receiver's content object.

- canAdd (page 9)

Returns a Boolean value that indicates whether an object can be added to the receiver using add: (page 8).

- remove: (page 15)

Removes the receiver's content object.

- canRemove (page 10)

Returns a Boolean value that indicates whether an object can be removed from the receiver.

# **Managing Editing**

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- setEditable: (page 18)

Sets whether the receiver allows adding and removing objects.

- isEditable (page 13)

Returns a Boolean value that indicates whether the receiver allows adding and removing objects.

# **Core Data Support**

- entityName (page 11)
   Returns the entity name used by the receiver to create new objects.
- setEntityName: (page 19)

Sets the entity name used by the receiver to create new objects.

- fetch: (page 11)

Causes the receiver to fetch the data objects specified by the entity name and fetch predicate.

- setUsesLazyFetching: (page 20)

Sets whether the receiver uses lazy fetching.

- usesLazyFetching (page 21)
   Returns a Boolean indicating whether the receiver uses lazy fetching.
- defaultFetchRequest (page 10)

Returns the default fetch request used by the receiver.

- fetchPredicate (page 12) Returns the receiver's fetch predicate.
- setFetchPredicate: (page 19)
   Sets the receiver's fetch predicate.
- managedObjectContext (page 13)
   Returns the receiver's managed object context.
- setManagedObjectContext: (page 20)
   Sets the receiver's managed object context.
- fetchWithRequest:merge:error: (page 12)

Subclasses should override this method to customize a fetch request, for example to specify fetch limits.

# **Obtaining Selections**

- selectedObjects (page 16)
   Returns an array of all objects to be affected by editing.
- selection (page 17)

Returns a proxy object representing the receiver's selection.

# Validating User Interface Items

validateUserInterfaceItem: (page 21)
 Returns whether the receiver can handle the action method for a user interface item.

# **Instance Methods**

## add:

Creates a new object and sets it as the receiver's content object.

- (void)add:(id)sender

### Parameters

sender

Typically the object that invoked this method.

### Discussion

Creates a new object of the appropriate entity (specified by entityName (page 11)) or class (specified by objectClass (page 14))—see newObject (page 14)—and sets it as the receiver's content object using addObject: (page 8).

### **Special Considerations**

Beginning with Mac OS X v10.4 the result of this method is deferred until the next iteration of the runloop so that the error presentation mechanism can provide feedback as a sheet.

#### Availability

Available in Mac OS X v10.3 and later.

#### See Also

- canAdd (page 9)
- remove: (page 15)

#### **Declared In**

NSObjectController.h

# addObject:

Sets the receiver's content object.

```
- (void)addObject:(id)object
```

#### Parameters

```
object
```

The content object for the receiver.

#### Discussion

If the receiver's content is bound to another object or controller through a relationship key, the relationship of the "master" object is changed.

#### Availability

Available in Mac OS X v10.3 and later.

#### See Also

- removeObject: (page 16)

Declared In NSObjectController.h

# automaticallyPreparesContent

Returns a Boolean value that indicates whether the receiver automatically prepares its content when it is loaded from a nib.

- (BOOL)automaticallyPreparesContent

#### **Return Value**

YES if the receiver automatically prepares its content when loaded from a nib, otherwise N0.

#### Discussion

See setAutomaticallyPreparesContent: (page 17) for a full explanation of "automatically prepares
content."

The default is NO.

# Availability

Available in Mac OS X v10.3 and later.

#### See Also

- setAutomaticallyPreparesContent: (page 17)

- prepareContent (page 15)

# Declared In

NSObjectController.h

# canAdd

Returns a Boolean value that indicates whether an object can be added to the receiver using add: (page 8).

- (BOOL)canAdd

#### **Return Value**

YES if an object can be added to the receiver using add: (page 8), otherwise NO.

#### Discussion

Bindings can use this method to control the enabling of user interface objects.

This property is observable using key-value observing.

#### Availability

Available in Mac OS X v10.3 and later.

#### See Also

- canRemove (page 10)
- add: (page 8)

Declared In NSObjectController.h

### canRemove

Returns a Boolean value that indicates whether an object can be removed from the receiver.

- (BOOL)canRemove

#### **Return Value**

YES if an object can be removed from the receiver using remove: (page 15), otherwise NO.

#### Discussion

Bindings can use this method to control the enabling of user interface objects.

This property is observable using key-value observing.

#### Availability

Available in Mac OS X v10.3 and later.

#### See Also

- canAdd (page 9)
- remove: (page 15)

#### Declared In

NSObjectController.h

### content

Returns the receiver's content object.

```
- (id)content
```

**Return Value** The receiver's content object.

#### Discussion

This property is observable using key-value observing.

#### Availability

Available in Mac OS X v10.3 and later.

See Also
- setContent: (page 18)

Related Sample Code Aperture Edit Plugin - Borders & Titles

Declared In NSObjectController.h

# defaultFetchRequest

Returns the default fetch request used by the receiver.

```
- (NSFetchRequest *)defaultFetchRequest
```

**Return Value** The default NSFetchResult used by the receiver.

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

### See Also

- setUsesLazyFetching: (page 20)
- usesLazyFetching (page 21)

Declared In NSObjectController.h

# entityName

Returns the entity name used by the receiver to create new objects.

- (NSString \*)entityName

### **Return Value** The entity name used by the receiver to create new objects.

**Availability** Available in Mac OS X v10.4 and later.

```
See Also
- setEntityName: (page 19)
```

### Declared In

NSObjectController.h

# fetch:

Causes the receiver to fetch the data objects specified by the entity name and fetch predicate.

```
- (void)fetch:(id)sender
```

### Parameters

sender

Typically the object that invoked this method.

### **Special Considerations**

Beginning with Mac OS X v10.4 the result of this method is deferred until the next iteration of the runloop so that the error presentation mechanism can provide feedback as a sheet.

### Availability

Available in Mac OS X v10.4 and later.

### See Also

- setFetchPredicate: (page 19)
- fetchPredicate (page 12)

Declared In NSObjectController.h

# fetchPredicate

Returns the receiver's fetch predicate.

- (NSPredicate \*)fetchPredicate

**Return Value** The receiver's fetch predicate.

**Availability** Available in Mac OS X v10.4 and later.

#### See Also

- fetch: (page 11)
- setFetchPredicate: (page 19)

Declared In NSObjectController.h

### fetchWithRequest:merge:error:

Subclasses should override this method to customize a fetch request, for example to specify fetch limits.

```
- (BOOL)fetchWithRequest:(NSFetchRequest *)fetchRequest merge:(BOOL)merge
error:(NSError **)error
```

### Parameters

fetchRequest

The fetch request to use for the fetch. Pass nil to use the default fetch request.

merge

If YES, the receiver merges the existing content with the fetch result, otherwise the receiver replaces the entire content with the fetch result.

error

If an error occurs, upon return contains an NSError object that describes the problem.

#### **Return Value**

YES if the fetch completed successfully, otherwise NO.

### Discussion

This method performs a number of actions that you cannot reproduce. To customize this method, you should therefore create your own fetch request and then invoke super's implementation with the new fetch request.

#### Availability

Available in Mac OS X v10.4 and later.

#### See Also

- fetch: (page 11)

Declared In NSObjectController.h

# initWithContent:

Initializes and returns an NSObjectController object with the given content.

- (id)initWithContent:(id)content

### Parameters

content

The content for the receiver.

**Return Value** The initialized object controller, with its content object set to *content*.

**Availability** Available in Mac OS X v10.3 and later.

Declared In NSObjectController.h

# **isEditable**

Returns a Boolean value that indicates whether the receiver allows adding and removing objects.

- (BOOL)isEditable

#### **Return Value**

YES if the receiver allows adding and removing objects, otherwise NO.

#### Discussion

This property is observable using key-value observing.

#### Availability

Available in Mac OS X v10.3 and later.

See Also
- setEditable: (page 18)

Declared In NSObjectController.h

# managedObjectContext

Returns the receiver's managed object context.

- (NSManagedObjectContext \*)managedObjectContext

### **Return Value**

The receiver's managed object context.

#### Availability

Available in Mac OS X v10.4 and later.

#### See Also

- setManagedObjectContext: (page 20)

### Declared In

NSObjectController.h

# newObject

Creates and returns a new object of the appropriate class.

```
- (id)newObject
```

### **Return Value**

A new object of the appropriate class. The returned object is implicitly retained, the sender is responsible for releasing it (with either release or autorelease).

If an entity name is set (see setEntityName: (page 19)), the object created is an instance of the class specified for that entity (and the object is inserted into the receiver's managed object context). Otherwise the object created is an instance of the class returned by objectClass (page 14).

#### Discussion

This method is called when adding and inserting objects if automaticallyPreparesContent (page 9) is YES.

The default implementation assumes the class returned by <code>objectClass</code> (page 14) has a standard init method without arguments. If the object class being controlled is <code>NSManagedObject</code> (or a subclass thereof) its designated initializer (initWithEntity:insertIntoManagedObjectContext:) is called instead, using the entity and managed object context specified for the receiver.

### Availability

Available in Mac OS X v10.3 and later.

#### See Also

- setObjectClass: (page 20)
- objectClass (page 14)
- setEntityName: (page 19)
- entityName (page 11)

#### **Declared In**

NSObjectController.h

# objectClass

Returns the class used when creating new non-Core Data objects.

```
- (Class)objectClass
```

#### **Return Value**

The object class used when creating new non-Core Data objects (that is, if no entity has been set)—see newObject (page 14).

#### Discussion

If an entity has been set, then the class returned by this method does not automatically reflect the class for the entity.

The default class is NSMutableDictionary.

This property is observable using key-value observing.

#### Availability

Available in Mac OS X v10.3 and later.

#### See Also

- setObjectClass: (page 20)
- entityName (page 11)
- managedObjectContext (page 13)

### **Declared** In

NSObjectController.h

### prepareContent

Typically overridden by subclasses that require additional control over the creation of new objects.

```
- (void)prepareContent
```

### Discussion

Subclasses that implement this method are responsible for creating the new content object and setting it as the receiver's content object. This method is only called if <a href="https://www.automaticallyPreparesContent">automaticallyPreparesContent</a> (page 9) has been set to YES.

#### Availability

Available in Mac OS X v10.3 and later.

See Also
- automaticallyPreparesContent (page 9)
- setAutomaticallyPreparesContent: (page 17)

**Related Sample Code** QTMetadataEditor

Declared In NSObjectController.h

### remove:

Removes the receiver's content object.

- (void)remove:(id)sender

#### Parameters

sender

Typically the object that invoked this method.

#### Discussion

Removes the receiver's content object using removeObject: (page 16).

#### **Special Considerations**

Beginning with Mac OS X v10.4 the result of this method is deferred until the next iteration of the runloop so that the error presentation mechanism can provide feedback as a sheet.

### Availability

Available in Mac OS X v10.3 and later.

### See Also

- canRemove (page 10)

- add: (page 8)

Declared In NSObjectController.h

### removeObject:

Removes a given object from the receiver's content.

```
- (void)removeObject:(id)object
```

### Parameters

object

The object to remove from the receiver.

#### Discussion

If *object* is the receiver's content object, the receiver's content is set to nil. If the receiver's content is bound to another object or controller through a relationship key, the relationship of the 'master' object is cleared.

### Availability

Available in Mac OS X v10.3 and later.

See Also

- addObject: (page 8)

#### Declared In

NSObjectController.h

### selectedObjects

Returns an array of all objects to be affected by editing.

- (NSArray \*)selectedObjects

#### **Return Value**

An array of all objects to be affected by editing. If the receiver supports a selection mechanism, the array contains key value coding compliant proxies of the selected objects; otherwise proxies for all content objects are returned. If the receiver is a concrete instance of NSObjectController, returns an array containing the receiver's content object.

#### Discussion

You should avoid registering for key-value observing changes for key paths that pass *through* this method, (for example, selectedObjects.firstName). Using the proxy returned by the selection (page 17) method is better for performance.

This property is observable using key-value observing.

#### **Availability** Available in Mac OS X v10.3 and later.

See Also - selection (page 17)

Declared In NSObjectController.h

# selection

Returns a proxy object representing the receiver's selection.

- (id)selection

### **Return Value**

A proxy object representing the receiver's selection. This object is fully key-value coding compliant, but note that it is a proxy and so does not provide the full range of functionality that might be available in the source object.

### Discussion

If a value requested from the selection proxy using key-value coding returns multiple objects, the controller has no selection, or the proxy is not key-value coding compliant for the requested key, the appropriate marker (NSMultipleValuesMarker, NSNoSelectionMarker or NSNotApplicableMarker) is returned. Otherwise, the value of the key is returned.

This property is observable using key-value observing.

### Availability

Available in Mac OS X v10.3 and later.

See Also

- selectedObjects (page 16)

Declared In NSObjectController.h

# setAutomaticallyPreparesContent:

Sets whether the receiver automatically creates and inserts new content objects automatically when loading from a nib file.

- (void)setAutomaticallyPreparesContent:(BOOL)flag

### Parameters

flag

A flag that specifies whether the receiver automatically prepares its content.

#### Discussion

If flag is YES and the receiver is not using a managed object context, prepareContent (page 15) is used to create the content object. If flag is YES and a managed object context is set, the initial content is fetched from the managed object context using the current fetch predicate. The default is N0.

Setting *flag* to YES is the same as checking the "Automatically Prepares Content" option in the Interface Builder controller inspector.

#### Availability

Available in Mac OS X v10.3 and later.

#### See Also

- automaticallyPreparesContent (page 9)

- prepareContent (page 15)

### Declared In

NSObjectController.h

### setContent:

Sets the receiver's content object.

```
- (void)setContent:(id)content
```

### Parameters

content

The content object for the receiver.

**Availability** Available in Mac OS X v10.3 and later.

See Also - content (page 10)

### Declared In

NSObjectController.h

### setEditable:

Sets whether the receiver allows adding and removing objects.

- (void)setEditable:(BOOL)flag

#### Parameters

flag

YES if the the receiver should allow adding and removing objects, otherwise NO.

**Discussion** The default is YES. **Availability** Available in Mac OS X v10.3 and later.

See Also - isEditable (page 13)

**Declared In** NSObjectController.h

# setEntityName:

Sets the entity name used by the receiver to create new objects.

- (void)setEntityName:(NSString \*)entityName

#### Parameters

entityName

The entity name used by the receiver to create new objects.

**Availability** Available in Mac OS X v10.4 and later.

See Also - entityName (page 11)

Declared In NSObjectController.h

# setFetchPredicate:

Sets the receiver's fetch predicate.

- (void)setFetchPredicate:(NSPredicate \*)predicate

#### Parameters

```
predicate
```

The fetch predicate for the receiver.

#### Discussion

The receiver uses *predicate* when fetching its content, for example in fetch: (page 11). If you need to customize the fetching behavior further, you can override fetchWithRequest:merge:error: (page 12).

#### Availability

Available in Mac OS X v10.4 and later.

#### See Also

- fetch: (page 11)
- fetchPredicate (page 12)
- fetchWithRequest:merge:error: (page 12)

Declared In NSObjectController.h

### setManagedObjectContext:

Sets the receiver's managed object context.

- (void)setManagedObjectContext:(NSManagedObjectContext \*)managedObjectContext

#### Parameters

*managedObjectContext* 

The managed object context for the receiver.

**Availability** Available in Mac OS X v10.4 and later.

See Also

- managedObjectContext (page 13)

Declared In NSObjectController.h

## setObjectClass:

Sets the object class to use when creating new objects.

```
- (void)setObjectClass:(Class)objectClass
```

#### Parameters

objectClass

The object class to use when creating new objects.

#### Discussion

*NSObjectController*'s default implementation assumes that instances of *objectClass* are initialized using a standard init method that takes no arguments.

If an entity name has been set (see setEntityName: (page 19)), this method has no effect.

#### Availability

Available in Mac OS X v10.3 and later.

#### See Also

- objectClass (page 14)
- setEntityName: (page 19)
- managedObjectContext (page 13)

### Declared In

NSObjectController.h

### setUsesLazyFetching:

Sets whether the receiver uses lazy fetching.

```
- (void)setUsesLazyFetching:(BOOL)enabled
```

#### Parameters

enabled

Boolean value that indicates whether the receiver uses lazy fetching.

#### Discussion

When enabled the controller uses a number of techniques that typically make managing large data sets more efficient. As with all optimizations, you should use suitable performance analysis tools (such as Instruments) to determine the best solution.

**Note:** Setting setUsesLazyFetching: to YES will cause an exception if the receiving controller is not bound to a managed object context.

```
Availability
```

Available in Mac OS X v10.5 and later.

```
See Also
```

- defaultFetchRequest (page 10)

```
- usesLazyFetching (page 21)
```

```
Declared In
```

NSObjectController.h

# usesLazyFetching

Returns a Boolean indicating whether the receiver uses lazy fetching.

```
- (BOOL)usesLazyFetching
```

#### **Return Value**

YES if the receiver uses lazy fetching, otherwise NO.

### Availability

Available in Mac OS X v10.5 and later.

#### See Also

defaultFetchRequest (page 10)

```
- setUsesLazyFetching: (page 20)
```

```
Declared In
```

NSObjectController.h

# validateUserInterfaceItem:

Returns whether the receiver can handle the action method for a user interface item.

- (BOOL)validateUserInterfaceItem:(id < NSValidatedUserInterfaceItem >)item

#### Parameters

item

The user interface item to validate. You can send *item* the action and tag messages.

### **Return Value**

YES if the receiver can handle the action method; N0 if it cannot.

### Availability

Available in Mac OS X v10.5 and later.

### **Declared In**

NSObjectController.h

# **Document Revision History**

This table describes the changes to NSObjectController Class Reference.

Date	Notes
2007-12-11	Updated newObject description with more memory information. Added exception warning to setUsesLazyFetching:.
2007-05-16	Updated to include new API introduced in Mac OS X v10.5. Corrected default value of automaticallyPreparesContent:.
2006-07-24	Clarified use of fetchWithRequest:merge:error:.
2006-05-23	First publication of this content as a separate document.

### **REVISION HISTORY**

**Document Revision History** 

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