
NSInvocationOperation Class Reference

Data Management: Event Handling



2009-08-19



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Inherits from	NSOperation : NSObject
Conforms to	NSObject (NSObject)
Framework	/System/Library/Frameworks/Foundation.framework
Availability	Available in Mac OS X v10.5 and later.
Companion guide	Threading Programming Guide
Declared in	NSOperation.h

Overview

The `NSInvocationOperation` class is a concrete subclass of `NSOperation` that manages the execution of a single encapsulated task specified as an invocation. You can use this class to initiate an operation that consists of invoking a selector on a specified object. This class implements a non-concurrent operation.

For more information on concurrent versus non-concurrent operations, see *NSOperation Class Reference*.

Tasks

Initialization

- [initWithTarget:selector:object:](#) (page 6)
Returns an `NSInvocationOperation` object initialized with the specified target and selector.
- [initWithInvocation:](#) (page 6)
Returns an `NSInvocationOperation` object initialized with the specified invocation object.

Getting Attributes

- [invocation](#) (page 7)
Returns the receiver's invocation object.
- [result](#) (page 7)
Returns the result of the invocation or method.

Instance Methods

initWithInvocation:

Returns an `NSInvocationOperation` object initialized with the specified invocation object.

```
- (id)initWithInvocation:(NSInvocation *)inv
```

Parameters

inv

The invocation object identifying the target object, selector, and parameter objects.

Return Value

An initialized `NSInvocationOperation` object or `nil` if the object could not be initialized.

Discussion

This method is the designated initializer. The receiver tells the invocation object to retain its arguments.

Availability

Available in Mac OS X v10.5 and later.

Declared In

`NSOperation.h`

initWithTarget:selector:object:

Returns an `NSInvocationOperation` object initialized with the specified target and selector.

```
- (id)initWithTarget:(id)target selector:(SEL)sel object:(id)arg
```

Parameters

target

The object defining the specified selector.

sel

The selector to invoke when running the operation. The selector may take 0 or 1 parameters; if it accepts a parameter, the type of that parameter must be `id`. The return type of the method may be `void`, a scalar value, or an object that can be returned as an `id` type.

arg

The parameter object to pass to the selector. If the selector does not take an argument, specify `nil`.

Return Value

An initialized `NSInvocationOperation` object or `nil` if the target object does not implement the specified selector.

Discussion

If you specify a selector with a non-void return type, you can get the return value by calling the [result](#) (page 7) method after the operation finishes executing. The receiver tells the invocation object to retain its arguments.

Availability

Available in Mac OS X v10.5 and later.

Declared In

NSOperation.h

invocation

Returns the receiver's invocation object.

- (NSInvocation *)invocation

Return Value

The invocation object identifying the target object, selector, and parameters to use to execute the operation's task.

Availability

Available in Mac OS X v10.5 and later.

See Also

- [initWithTarget:selector:object:](#) (page 6)
- [initWithInvocation:](#) (page 6)

Declared In

NSOperation.h

result

Returns the result of the invocation or method.

- (id)result

Return ValueThe object returned by the method or an `NSValue` object containing the return value if it is not an object. If the method or invocation is not finished executing, this method returns `nil`.**Discussion**If an exception was raised during the execution of the method or invocation, this method raises that exception again. If the operation was cancelled or the invocation or method has a `void` return type, calling this method raises an exception; see “[Result Exceptions](#)” (page 7).**Availability**

Available in Mac OS X v10.5 and later.

Declared In

NSOperation.h

Constants

Result Exceptions

Names of exceptions raised by `NSInvocationOperation` if there is an error when calling the `result` (page 7) method.

```
extern NSString * const NSInvocationOperationVoidResultException;  
extern NSString * const NSInvocationOperationCancelledException;
```

Constants

`NSInvocationOperationVoidResultException`

The name of the exception raised if the `result` method is called for an invocation method with a `void` return type.

Available in Mac OS X v10.5 and later.

Declared in `NSOperation.h`.

`NSInvocationOperationCancelledException`

The name of the exception raised if the `result` method is called after the operation was cancelled.

Available in Mac OS X v10.5 and later.

Declared in `NSOperation.h`.

Declared In

`NSOperation.h`

Document Revision History

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

Date	Notes
2009-08-19	Added information about the return type of the selector used for the operation.
2007-04-12	New document describing an invocation-based implementation of the NSOperation class.

REVISION HISTORY

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