
NSEnumerator Class Reference

Data Management: Data Types & Collections



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

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NSEnumerator Class Reference

Inherits from	NSObject
Conforms to	NSFastEnumeration NSObject (NSObject)
Framework	/System/Library/Frameworks/Foundation.framework
Availability	Available in Mac OS X v10.0 and later.
Companion guide	Collections Programming Topics
Declared in	NSEnumerator.h
Related sample code	CoreRecipes LSMSmartCategorizer SimpleScriptingPlugin SimpleStickies SourceView

Overview

`NSEnumerator` is an abstract class, instances of whose subclasses enumerate collections of other objects, such as arrays and dictionaries.

All creation methods are defined in the collection classes—such as `NSArray`, `NSSet`, and `NSDictionary`—which provide special `NSEnumerator` objects with which to enumerate their contents. For example, `NSArray` has two methods that return an `NSEnumerator` object: `objectEnumerator` and `reverseObjectEnumerator`. `NSDictionary` also has two methods that return an `NSEnumerator` object: `keyEnumerator` and `objectEnumerator`. These methods let you enumerate the contents of a dictionary by key or by value, respectively.

You send `nextObject` (page 6) repeatedly to a newly created `NSEnumerator` object to have it return the next object in the original collection. When the collection is exhausted, `nil` is returned. You cannot “reset” an enumerator after it has exhausted its collection. To enumerate a collection again, you need a new enumerator.

The enumerator subclasses used by `NSArray`, `NSDictionary`, and `NSSet` retain the collection during enumeration. When the enumeration is exhausted, the collection is released.

Note: It is not safe to modify a mutable collection while enumerating through it. Some enumerators may currently allow enumeration of a collection that is modified, but this behavior is not guaranteed to be supported in the future.

Tasks

Getting the Enumerated Objects

- [allObjects](#) (page 6)
Returns an array of objects the receiver has yet to enumerate.
- [nextObject](#) (page 6)
Returns the next object from the collection being enumerated.

Instance Methods

allObjects

Returns an array of objects the receiver has yet to enumerate.

```
- (NSArray *)allObjects
```

Return Value

An array of objects the receiver has yet to enumerate.

Discussion

Put another way, the array returned by this method does not contain objects that have already been enumerated with previous [nextObject](#) (page 6) messages.

Invoking this method exhausts the enumerator's collection so that subsequent invocations of [nextObject](#) return `nil`.

Availability

Available in Mac OS X v10.0 and later.

Declared In

`NSEnumerator.h`

nextObject

Returns the next object from the collection being enumerated.

```
- (id)nextObject
```

Return Value

The next object from the collection being enumerated, or `nil` when all objects have been enumerated.

Discussion

The following code illustrates how this method works using an array:

```
NSArray *anArray = // ... ;
NSEnumerator *enumerator = [anArray objectEnumerator];
id object;

while ((object = [enumerator nextObject])) {
    // do something with object...
}
```

Availability

Available in Mac OS X v10.0 and later.

Related Sample Code

DeskPictAppDockMenu

QTAudioExtractionPanel

SimpleCalendar

SimpleStickies

STUCAuthoringDeviceCocoaSample

Declared In

NSEnumerator.h

Document Revision History

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

Date	Notes
2007-02-23	Revised task heading.
2006-05-23	First publication of this content as a separate document.

REVISION HISTORY

Document Revision History