

encodeWithCoder:

NSObject autorelease

initWithCoder:

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description

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init

class (NSObject protocol)

conformsToProtocol:

description

init, class (NSObject protocol)

methodForSelector:

respondsToSelector:, forwardInvocation:

init, + alloc, + allocWithZone:

superclass

If a replacement takes place, the implementation of `awakeAfterUsingCoder:` is responsible for releasing the object.  
`initWithCoder:(NSCoding protocol)`

`(Class)classForArchiver`

Identifies the class to be used during archiving. `NSObject`'s implementation returns the object returned by `classForCoder`.

`(Class)classForCoder`

Identifies the class to be used during coding. An `NSObject` returns its own class by default.  
`class (NSObject protocol)`

`(void)dealloc`

Deallocates the memory occupied by the receiver. Subsequent messages to the object will generate an exception. The exception is not generated if a message was sent to a freed object (provided that the freed memory hasn't been reused yet).

You never send a `dealloc` message directly. Instead, an object's `dealloc` method is invoked indirectly by the `dealloc` method of the object's superclass. See the introduction to the Foundation Kit for more details on the use of these methods.

Subclasses must implement their own versions of `dealloc` to allow the deallocation of any additional memory allocated by the object, such as dynamically allocated storage for data, or other objects that are tightly coupled to the object and are of no use without it. After performing the class-specific deallocation, the subclass method calls the superclass version of `dealloc` through a message to `super`:

`release (NSObject protocol)`, `autorelease (NSObject protocol)`

`(NSString *)description`

Returns a string object that represents the contents of the receiver. The debugger's `print-object` command uses this method to produce a textual description of an object.

`NSObject`'s implementation of this method simply prints the name of the receiver's class and the hash code of the receiver.

`(void)doesNotRecognizeSelector:(SEL)aSelector`

forwardInvocation:

(void)forwardInvocation:(NSInvocation \*)anInvocation

Implemented by subclasses to forward messages to other objects. When an object is sent a message corresponding method, the run-time system gives the receiver an opportunity to delegate the message. It does this by creating an NSInvocation object representing the message and sending the receiver a message containing this NSInvocation as the argument. The receiver's forwardInvocation: method forwards the message to another object. (If the delegated receiver can't respond to the message either, it has a chance to forward it.)

The forwardInvocation: message thus allows an object to establish relationships with other objects. Messages, act on its behalf. The forwarding object is, in a sense, able to "inherit" some of the characteristics it forwards the message to.

A forwardInvocation: message is generated only if the message encoded in anInvocation isn't implemented by the receiving object's class or by any of the classes it inherits from.

An implementation of the forwardInvocation: method has two tasks:

- To locate an object that can respond to the message encoded in anInvocation. This need not be the original object or the object that sent the messages.
- To dispatch the message to that object.

In the simple case, in which an object forwards messages to just one destination (such as the hypothetical object in the example below), a forwardInvocation: method could be as simple as this:

doesNotRecognizeSelector:

(unsigned int)hash

Returns an unsigned integer that can be used as a table address in a hash table structure. For NSObject, the hash value is based on the object's id. If two objects are equal (as determined by the isEqual: method), the

An init message is generally coupled with an anoc or anocWithZone. message in the same file or



`(IMP)methodForSelector:(SEL)aSelector`

Locates and returns the address of the receiver's implementation of the aSelector method, so that it can be called as a function. If the receiver is an instance, aSelector should refer to an instance method if the receiver responds to it, or refer to a class method.

aSelector must be a valid, non-NULL selector. If in doubt, use the respondsToSelector: method to check if the receiver responds to the selector to methodForSelector:.

IMP is defined as a pointer to a function that returns an id and takes a variable number of arguments. The first two "hidden" arguments are self and \_cmd that are passed to every method implementation):

`(NSMethodSignature *)methodSignatureForSelector:(SEL)aSelector`

Returns an NSMethodSignature object that contains a description of the aSelector method, or nil if the method can't be found. When the receiver is an instance, aSelector should be an instance method when the receiver responds to it, or should be a class method. This method is mostly used in the implementation of protocols.

`(id)replacementObjectForArchiver:(NSArchiver *)anArchiver`

Allows an object to substitute another object for itself during archiving. NSObject's implementation returns self. The object returned by replacementObjectForCoder:.

`replacementObjectForCoder:(NSCoder *)encoder`

