

# MiscStack

Inherits From:	NSObject
Conforms To:	NSCoding, NSCopying NSObject (NSObject)
Declared In:	MiscStack.h

## Class Description

The MiscStack class provides the abstract interface for classes which store objects in a stack data structure.

## Subclassing MiscStack

Subclasses of MiscStack must implement the primitive methods **-isEmpty**, **-pop**, and **-pushObject**: to have the semantics described below.

## Creating a MiscStack Object

- + (MiscStack \*)**stack** Creates and returns an empty (and autoreleased) MiscStack.
- + (MiscStack \*)**stackWithArray:(NSArray \*)***anArray* Creates a MiscStack with the objects from *anArray* on it. The last object in the array will be the topmost stack element.
- + (MiscStack \*)**stackWithObjects:(id \*)***objects*  
**count:(unsigned int)***count* Creates a MiscStack with *count* objects from *objects* on it. The *count*-th object will be the topmost stack element (and the first object will be on the bottom of the stack).
- + (MiscStack \*)**stackWithObjects:(id)***firstObj*, ... Creates a MiscStack with the objects listed. The variable-length

argument list must have **nil** as its last element. The last object will be the topmost stack element (and the first object will be on the bottom of the stack).

+ (MiscStack \*)**stackWithReversedArray:**(NSArray \*)*anArray*

Creates a MiscStack with the objects from *anArray* on it. The first object in the array will be the topmost stack element.

- (id)**init**

Initializes a newly allocated MiscStack to be empty. This method is the designated initializer of MiscStack instances.

- (id)**initWithEnumerator:**(NSEnumerator \*)*enumerator*

Initializes a newly allocated MiscStack with all the objects returned by *enumerator*. The first object will be on the bottom of the stack, the last object on top.

- (id)**initWithObjects:**(id \*)*objects*  
**count:**(unsigned int)*count*

Initializes a newly allocated MiscStack with *count* objects from *objects* on it. The *count*-th object will be the topmost stack element (and the

first object will be on the bottom of the stack).

- (id)**initWithObjects:**(id)*firstObj*, ...

Initializes a newly allocated `MiscStack` with the objects listed. The variable-length argument list must have **nil** as its last element. The last object will be the topmost stack element (and the first object will be on the bottom of the stack).

## Getting Information About a `MiscStack`

- (unsigned int)**count**

Returns the number of objects stored on the stack.

- (BOOL)**isEmpty**

Returns YES if there are no objects on the stack. This is a primitive method that all subclasses must implement.

- (BOOL)**isEqualToStack:**(`MiscStack *`)*otherStack*

Returns YES if *otherStack* has the same objects (and in the same order) stored in it as the receiver.

- (id)**top**

Returns the topmost object on the stack, without removing it. If the

stack is empty, **nil** is returned.

## Accessing Objects on a MiscStack

- (NSArray \*)**multipop**:(unsigned int)*number*

Removes *number* objects from the receiver, and returns them in an NSArray. The topmost element from the stack is the first element in the array. An NSRangeException exception is raised if *number* is greater than the number of objects on the stack.

- (id)**npop**:(unsigned int)*number*

Removes *number* objects from the receiver, and returns the last object popped. If *number* is zero, **nil** is returned. An NSRangeException exception is raised if *number* is greater than the number of objects on the stack.

- (id)**pop**

Removes the topmost object from the receiver and returns it. If the stack is empty, an NSRangeException exception is raised. This is a primitive method that all subclasses must implement.

- (void)**popAllObjects** Removes all objects from the stack.
- (void)**pushObject:(id)***anObject* Adds *anObject* to the receiving stack, as the topmost object. This is a primitive method that all subclasses must implement.
- (void)**pushStack:(MiscStack \*)***aStack* Pushes the objects on *aStack* onto the receiver. The topmost element of *aStack* will be the topmost element of the receiver after this operation.
- (void)**pushWithEnumerator:(NSEnumerator \*)***enumerator* Pushes all the objects returned by *enumerator* onto the receiver. The first object will be on the bottom of the stack, the last object on top.

## Describing MiscStacks

- (NSString \*)**description** Returns a string describing the contents of the receiving stack.
- (NSString \*)**descriptionWithLocale:(NSDictionary \*)***localeDictionary* Returns a string representation of receiver (see **description**). Included

are the key and values that represent the locale data from *localeDictionary*.