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# NSMutableIndexSet Class Reference

[Cocoa](#) > [Data Management](#)



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# NSMutableIndexSet Class Reference

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<b>Inherits from</b>	NSIndexSet : NSObject
<b>Conforms to</b>	NSCoding (NSIndexSet) NSCopying (NSIndexSet) NSMutableCopying (NSIndexSet) NSObject (NSObject)
<b>Framework</b>	/System/Library/Frameworks/Foundation.framework
<b>Availability</b>	Available in Mac OS X v10.3 and later.
<b>Companion guide</b>	Collections Programming Topics for Cocoa
<b>Declared in</b>	NSIndexSet.h
<b>Related sample code</b>	Core Data HTML Store MyPhoto

## Overview

The `NSMutableIndexSet` class represents a mutable collection of unique unsigned integers, known as **indexes** because of the way they are used. This collection is referred to as a **mutable index set**.

The values in a mutable index set are always sorted, so the order in which values are added is irrelevant.

You must not subclass the `NSMutableIndexSet` class.

## Tasks

### Adding Indexes

- [addIndex:](#) (page 6)  
Adds an index to the receiver.
- [addIndexes:](#) (page 6)  
Adds the indexes in an index set to the receiver.
- [addIndexesInRange:](#) (page 7)  
Adds the indexes in an index range to the receiver.

## Removing Indexes

- [removeIndex:](#) (page 8)  
Removes an index from the receiver.
- [removeIndexes:](#) (page 8)  
Removes the indexes in an index set from the receiver.
- [removeAllIndexes](#) (page 7)  
Removes the receiver's indexes.
- [removeIndexesInRange:](#) (page 8)  
Removes the indexes in an index range from the receiver.

## Shifting Index Groups

- [shiftIndexesStartingAtIndex:by:](#) (page 9)  
Shifts a group of indexes to the left or the right within the receiver.

## Instance Methods

### addIndex:

Adds an index to the receiver.

```
- (void)addIndex:(NSUInteger) index
```

#### Parameters

*index*

Index to add.

#### Availability

Available in Mac OS X v10.3 and later.

#### See Also

- [addIndexes:](#) (page 6)
- [addIndexesInRange:](#) (page 7)

#### Related Sample Code

Core Data HTML Store

#### Declared In

NSIndexSet.h

### addIndexes:

Adds the indexes in an index set to the receiver.

```
- (void)addIndexes:(NSIndexSet *) indexSet
```

### Parameters

*indexSet*

Index set to add.

### Availability

Available in Mac OS X v10.3 and later.

### See Also

- [addIndex:](#) (page 6)
- [addIndexesInRange:](#) (page 7)

### Declared In

NSIndexSet.h

## addIndexesInRange:

Adds the indexes in an index range to the receiver.

- (void)addIndexesInRange:(NSRange) *indexRange*

### Parameters

*indexRange*

Index range to add. Must include only indexes representable as unsigned integers.

### Discussion

This method raises an `NSRangeException` when *indexRange* would add an index that exceeds the maximum allowed value for unsigned integers.

### Availability

Available in Mac OS X v10.3 and later.

### See Also

- [addIndex:](#) (page 6)
- [addIndexes:](#) (page 6)

### Declared In

NSIndexSet.h

## removeAllIndexes

Removes the receiver's indexes.

- (void)removeAllIndexes

### Availability

Available in Mac OS X v10.3 and later.

### See Also

- [removeIndex:](#) (page 8)
- [removeIndexes:](#) (page 8)
- [removeIndexesInRange:](#) (page 8)

**Declared In**

NSIndexSet.h

**removeIndex:**

Removes an index from the receiver.

```
- (void)removeIndex:(NSUInteger) index
```

**Parameters***index*

Index to remove.

**Availability**

Available in Mac OS X v10.3 and later.

**See Also**

- [removeAllIndexes](#) (page 7)
- [removeIndexes:](#) (page 8)
- [removeIndexesInRange:](#) (page 8)

**Declared In**

NSIndexSet.h

**removeIndexes:**

Removes the indexes in an index set from the receiver.

```
- (void)removeIndexes:(NSIndexSet *) indexSet
```

**Parameters***indexSet*

Index set to remove.

**Availability**

Available in Mac OS X v10.3 and later.

**See Also**

- [removeIndex:](#) (page 8)
- [removeAllIndexes](#) (page 7)
- [removeIndexesInRange:](#) (page 8)

**Declared In**

NSIndexSet.h

**removeIndexesInRange:**

Removes the indexes in an index range from the receiver.

```
- (void)removeIndexesInRange:(NSRange) indexRange
```

**Parameters***indexRange*

Index range to remove.

**Availability**

Available in Mac OS X v10.3 and later.

**See Also**

- [removeIndex:](#) (page 8)
- [removeIndexes:](#) (page 8)
- [removeAllIndexes](#) (page 7)

**Declared In**

NSIndexSet.h

**shiftIndexesStartingAtIndex:by:**

Shifts a group of indexes to the left or the right within the receiver.

```
- (void)shiftIndexesStartingAtIndex:(NSUInteger)startIndex by:(NSInteger)delta
```

**Parameters***startIndex*

Head of the group of indexes to shift.

*delta*

Amount and direction of the shift. Positive integers shift the indexes to the right. Negative integers shift the indexes to the left.

**Discussion**The group of indexes shifted is made up by *startIndex* and the indexes that follow it in the receiver.A left shift deletes the indexes in the range (*startIndex-delta, delta*) from the receiver.A right shift inserts empty space in the range (*indexStart, delta*) in the receiver.**Availability**

Available in Mac OS X v10.3 and later.

**Declared In**

NSIndexSet.h



# Document Revision History

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

Date	Notes
2006-05-23	First publication of this content as a separate document.

**REVISION HISTORY**

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