NSSpellChecker Class Reference

Cocoa > Text & Fonts

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NSSpellChecker Class Reference

Inherits from	NSObject
Conforms to	NSObject (NSObject)
Framework	/System/Library/Frameworks/AppKit.framework
Availability	Available in Mac OS X v10.0 and later.
Companion guide	Spell Checking
Declared in	NSSpellChecker.h
Related sample code	SpellingChecker CarbonCocoa Bundled SpellingChecker-CarbonCocoa SpellingChecker-CocoaCarbon

Overview

The `NSSpellChecker` class provides an interface to the Cocoa spell-checking service. To handle all its spell checking, an application needs only one instance of `NSSpellChecker`, known as the **spell checker**. Through the spell checker you manage the **Spelling panel**, in which the user can specify decisions about words that are suspect.

The spell checker also offers the ability to provide word completions to augment the text completion system in Mac OS X v10.3.

Tasks

Getting the Spell Checker

`+ sharedSpellChecker` (page 9)
Returns the NSSpellChecker (one per application).

`+ sharedSpellCheckerExists` (page 9)
Returns whether the application's NSSpellChecker has already been created.

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Configuring Spell Checkers

- `availableLanguages` (page 11)
  Provides the languages preferred by the user.
- `language` (page 16)
  Returns the current language used in spell checking.
- `setLanguage:` (page 17)
  Sets the language to use in spell checking to *`language`*.

Managing the Spelling Panel

- `accessoryView` (page 10)
  Returns the Spelling panel's accessory NSView object.
- `setAccessoryView:` (page 16)
  Makes an NSView object an accessory of the Spelling panel by making it a subview of the panel's content view.
- `spellingPanel` (page 18)
  Returns the spell checker's panel.
- `updateSpellingPanelWithGrammarString:detail:` (page 18)
  Specifies a grammar-analysis detail to highlight in the Spelling panel.

Using Spell Checkers

- `countWordsInString:language:` (page 14)
  Returns the number of words in *`stringToCount`*.
- `checkSpellingOfString:startingAt:` (page 12)
  Starts the search for a misspelled word in *`stringToCheck`* starting at *`startingOffset`* within the string object.
- `checkSpellingOfString:startingAt:language:wrap:inSpellDocumentWithTag:wordCount:` (page 12)
  Starts the search for a misspelled word in a string starting at specified offset within the string.
- `guessesForWord:` (page 14)
  Returns an array of suggested spellings for the misspelled word *`word`*.
- `checkGrammarOfString:startingAt:language:wrap:inSpellDocumentWithTag:details:` (page 11)
  Initiates a grammatical analysis of a given string.

Managing the Spell-Checking Process

+ `uniqueSpellDocumentTag` (page 10)
  Returns a guaranteed unique tag to use as the spell-document tag for a document.
- `closeSpellDocumentWithTag:` (page 13)
  Notifies the receiver that the user has finished with the ignored-word document identified by *`tag`*, causing it to throw that dictionary away.

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- `ignoreWord:inSpellDocumentWithTag:` (page 15)
  Instructs the spell checker to ignore all future occurrences of *wordToIgnore* in the document identified by *tag*.
- `ignoredWordsInSpellDocumentWithTag:` (page 15)
  Returns the array of ignored words for a document identified by *tag*.
- `setIgnoredWords:inSpellDocumentWithTag:` (page 17)
  Initializes the ignored-words document (a dictionary identified by *tag* with *someWords*), an array of words to ignore.
- `setWordFieldStringValue:` (page 18)
  Sets the string that appears in the misspelled word field, using the string object *aString*.
- `updateSpellingPanelWithMisspelledWord:` (page 19)
  Causes the spell checker to update the Spelling panel's misspelled-word field to reflect *word*.
- `completionsForPartialWordRange:inString:language:inSpellDocumentWithTag:` (page 13)
  Provides a list of complete words that the user might be trying to type based on a partial word in a given string.
- `hasLearnedWord:` (page 15)
  Indicates whether the spell checker has learned a given word.
- `unlearnWord:` (page 18)
  Tells the spell checker to unlearn a given word.

Class Methods

sharedSpellChecker

Returns the NSSpellChecker (one per application).

```
+ (NSSpellChecker *)sharedSpellChecker
```

Availability
Available in Mac OS X v10.0 and later.

See Also
`+ sharedSpellCheckerExists` (page 9)

Related Sample Code
SpellingChecker CarbonCocoa Bundled
SpellingChecker-CarbonCocoa
SpellingChecker-CocoaCarbon

Declared In
`NSSpellChecker.h`

sharedSpellCheckerExists

Returns whether the application's NSSpellChecker has already been created.

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```
+ (BOOL)sharedSpellCheckerExists
```

Availability
Available in Mac OS X v10.0 and later.

See Also
+ sharedSpellChecker (page 9)

Declared In
NSSpellChecker.h

uniqueSpellDocumentTag

Returns a guaranteed unique tag to use as the spell-document tag for a document.

```
+ (NSInteger)uniqueSpellDocumentTag
```

Discussion
Use this method to generate tags to avoid collisions with other objects that can be spell checked.

Availability
Available in Mac OS X v10.0 and later.

Related Sample Code
SpellingChecker CarbonCocoa Bundled
SpellingChecker-CarbonCocoa
SpellingChecker-CocoaCarbon

Declared In
NSSpellChecker.h

Instance Methods

accessoryView

Returns the Spelling panel's accessory NSView object.

```
- (NSView *)accessoryView
```

Availability
Available in Mac OS X v10.0 and later.

See Also
- setAccessoryView: (page 16)

Declared In
NSSpellChecker.h

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availableLanguages

Provides the languages preferred by the user.

```
- (NSArray *)availableLanguages
```

Return Value
List of language names.

Availability
Available in Mac OS X v10.5 and later.

Declared In
`NSSpellChecker.h`

checkGrammarOfString:startingAt:language:wrap:inSpellDocumentWithTag:details:

Initiates a grammatical analysis of a given string.

```
- (NSRange)checkGrammarOfString:(NSString *)string startingAt:(NSInteger)start
    language:(NSString *)language wrap:(BOOL)wrap
    inSpellDocumentWithTag:(NSInteger)documentTag details:(NSArray **)outDetails
```

Parameters

string
: String to analyze.

start
: Location within *string* at which to start the analysis.

language
: Language use in *string*. When `nil`, the language selected in the Spelling panel is used.

wrap
: `YES` to specify that the analysis continue to the beginning of string when the end is reached.

  `NO` to have the analysis stop at the end of string.

documentTag
: Identifies the spell document with ignored words to use.

outDetails
: On output, dictionaries describing grammar-analysis details within the flagged grammatical unit. See the `NSSpellServer` class for information about these dictionaries.

Return Value
Location of the first flagged grammatical unit.

Availability
Available in Mac OS X v10.5 and later.

Declared In
`NSSpellChecker.h`

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checkSpellingOfString:startingAt:

Starts the search for a misspelled word in *stringToCheck* starting at *startingOffset* within the string object.

```
- (NSRange)checkSpellingOfString:(NSString *)stringToCheck
    startingAt:(NSInteger)startingOffset
```

Discussion
Returns the range of the first misspelled word. Wrapping occurs, but no ignored-words dictionary is used.

Availability
Available in Mac OS X v10.0 and later.

Related Sample Code
SpellingChecker CarbonCocoa Bundled
SpellingChecker-CarbonCocoa
SpellingChecker-CocoaCarbon

Declared In
NSSpellChecker.h

checkSpellingOfString:startingAt:language:wrap:inSpellDocumentWithTag:wordCount:

Starts the search for a misspelled word in a string starting at specified offset within the string.

```
- (NSRange)checkSpellingOfString:(NSString *)stringToCheck
    startingAt:(NSInteger)startingOffset
    language:(NSString *)language
    wrap:(BOOL)wrapFlag
    inSpellDocumentWithTag:(NSInteger)tag
    wordCount:(NSInteger *)wordCount
```

Parameters

stringToCheck
The string object containing the words to spellcheck.

startingOffset
The offset within *stringToCheck* at which to begin spellchecking.

language
The language of the words in the string. If *language* is `nil`, or if you obtain the value by sending `language` (page 16) to `self`, the current selection in the Spelling panel's pop-up menu is used. Do not pass in an empty string for *language*.

wrapFlag
`YES` to indicate that spell checking should continue at the beginning of the string when the end of the string is reached; `NO` to indicate that spellchecking should stop at the end of the document.

tag
An identifier unique within the application used to inform the spell checker which document (actually, a dictionary) of ignored words to use.

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wordCount

Returns by indirection a count of the words spell-checked up to and including the first error (if any), or -1 if the spell checker fails or does not support word counting. Specify `NULL` if you do not want this word count.

Return Value
The range of the first misspelled word and optionally (and by reference) the count of words spellchecked in the string in *wordCount*.

Availability
Available in Mac OS X v10.0 and later.

Related Sample Code
SpellingChecker CarbonCocoa Bundled
SpellingChecker-CarbonCocoa
SpellingChecker-CocoaCarbon

Declared In
`NSSpellChecker.h`

closeSpellDocumentWithTag:

Notifies the receiver that the user has finished with the ignored-word document identified by *tag*, causing it to throw that dictionary away.

```
- (void)closeSpellDocumentWithTag:(NSInteger)tag
```

Availability
Available in Mac OS X v10.0 and later.

Related Sample Code
SpellingChecker CarbonCocoa Bundled
SpellingChecker-CarbonCocoa
SpellingChecker-CocoaCarbon

Declared In
`NSSpellChecker.h`

completionsForPartialWordRange:inString:language:inSpellDocumentWithTag:

Provides a list of complete words that the user might be trying to type based on a partial word in a given string.

```
- (NSArray *)completionsForPartialWordRange:(NSRange)partialWordRange
    inString:(NSString *)string language:(NSString *)language
    inSpellDocumentWithTag:(NSInteger)spellDocumentTag
```

Parameters

partialWordRange

Range that identifies a partial word in *string*.

string

String with the partial word from which to generate the result.

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language
Language to used in *string*. When nil, this method uses the language selected in the Spelling panel.

spellDocumentTag
Identifies the spell document with ignored words to use.

Return Value
List of complete words from the spell checker dictionary in the order they should be presented to the user.

Availability
Available in Mac OS X v10.3 and later.

Declared In
NSSpellChecker.h

countWordsInString:language:

Returns the number of words in *stringToCount*.

```
- (NSInteger)countWordsInString:(NSString *)stringToCount language:(NSString
    *)language
```

Discussion
The *language* argument specifies the language used in the string. If *language* is nil, the current selection in the Spelling panel's pop-up menu is used.

Availability
Available in Mac OS X v10.0 and later.

Declared In
NSSpellChecker.h

guessesForWord:

Returns an array of suggested spellings for the misspelled word *word*.

```
- (NSArray *)guessesForWord:(NSString *)word
```

Discussion
If *word* contains all capital letters, or its first letter is capitalized, the suggested words are capitalized in the same way.

Availability
Available in Mac OS X v10.0 and later.

Related Sample Code
SpellingChecker CarbonCocoa Bundled
SpellingChecker-CarbonCocoa
SpellingChecker-CocoaCarbon

Declared In
NSSpellChecker.h

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hasLearnedWord:

Indicates whether the spell checker has learned a given word.

```
- (BOOL)hasLearnedWord:(NSString *)word
```

Parameters

word

Word in question.

Return Value

`YES` when the spell checker has learned word, `NO` otherwise.

Availability

Available in Mac OS X v10.5 and later.

Declared In

`NSSpellChecker.h`

ignoredWordsInSpellDocumentWithTag:

Returns the array of ignored words for a document identified by *tag*.

```
- (NSArray *)ignoredWordsInSpellDocumentWithTag:(NSInteger)tag
```

Discussion

Invoke this method before `closeSpellDocumentWithTag:` (page 13) if you want to store the ignored words.

Availability

Available in Mac OS X v10.0 and later.

See Also

`- setIgnoredWords:inSpellDocumentWithTag:` (page 17)

Related Sample Code

SpellingChecker CarbonCocoa Bundled

SpellingChecker-CarbonCocoa

SpellingChecker-CocoaCarbon

Declared In

`NSSpellChecker.h`

ignoreWord:inSpellDocumentWithTag:

Instructs the spell checker to ignore all future occurrences of *wordToIgnore* in the document identified by *tag*.

```
- (void)ignoreWord:(NSString *)wordToIgnore inSpellDocumentWithTag:(NSInteger)tag
```

Discussion

You should invoke this method from within your implementation of the NSIgnoreMisspelledWords protocol's `ignoreSpelling:` method.

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Availability
Available in Mac OS X v10.0 and later.

Related Sample Code
SpellingChecker CarbonCocoa Bundled
SpellingChecker-CarbonCocoa
SpellingChecker-CocoaCarbon

Declared In
`NSSpellChecker.h`

language

Returns the current language used in spell checking.

```
- (NSString *)language
```

Discussion
The result string specifies the language using the language and regional designations described in Language and Locale Designations in *Internationalization Programming Topics*.

Availability
Available in Mac OS X v10.0 and later.

See Also
`- setLanguage:` (page 17)

Declared In
`NSSpellChecker.h`

setAccessoryView:

Makes an NSView object an accessory of the Spelling panel by making it a subview of the panel's content view.

```
- (void)setAccessoryView:(NSView *)aView
```

Discussion
This method posts an `NSWindowDidResizeNotification` with the Spelling panel object to the default notification center.

Availability
Available in Mac OS X v10.0 and later.

See Also
`- accessoryView` (page 10)

Declared In
`NSSpellChecker.h`

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setIgnoredWords:inSpellDocumentWithTag:

Initializes the ignored-words document (a dictionary identified by *tag* with *someWords*), an array of words to ignore.

```
- (void)setIgnoredWords:(NSArray *)someWords inSpellDocumentWithTag:(NSInteger)tag
```

Availability
Available in Mac OS X v10.0 and later.

See Also
- ignoredWordsInSpellDocumentWithTag: (page 15)

Related Sample Code
SpellingChecker CarbonCocoa Bundled
SpellingChecker-CarbonCocoa
SpellingChecker-CocoaCarbon

Declared In
NSSpellChecker.h

setLanguage:

Sets the language to use in spell checking to *language*.

```
- (BOOL)setLanguage:(NSString *)language
```

Discussion
Returns whether the Language pop-up list in the Spelling panel lists *language*.

Listing 1 shows how languages can be specified in language. If the language specified is listed in the user's list of preferred languages, the spell checker uses that language to accomplish its task.

Listing 1 Specifying the spell checker language

```
NSSpellChecker* spell_checker = [NSSpellChecker sharedSpellChecker];

[spell_checker setLanguage:@"fr"];     // Sets language to French. The language
 method returns "fr".

[spell_checker setLanguage:@"NL"];     // Sets language to the one spoken in
Netherlands (English). The language method returns "en".

[spell_checker setLanguage:@"en_GB"]   // Sets language to British English. The
 language method returns "en_GB".

[spell_checker setLanguage:@"German"]; // Sets language to German. The language
 method returns "de".
```

To learn about the strings you can use to specify a language in *language*, see Language and Locale Designations in *Internationalization Programming Topics*.

Availability
Available in Mac OS X v10.0 and later.

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See Also
- language (page 16)

Declared In
NSSpellChecker.h

setWordFieldStringValue:

Sets the string that appears in the misspelled word field, using the string object *aString*.

```
- (void)setWordFieldStringValue:(NSString *)aString
```

Availability
Available in Mac OS X v10.0 and later.

Declared In
NSSpellChecker.h

spellingPanel

Returns the spell checker's panel.

```
- (NSPanel *)spellingPanel
```

Availability
Available in Mac OS X v10.0 and later.

Declared In
NSSpellChecker.h

unlearnWord:

Tells the spell checker to unlearn a given word.

```
- (void)unlearnWord:(NSString *)word
```

Parameters

word

Word to unlearn.

Availability
Available in Mac OS X v10.5 and later.

Declared In
NSSpellChecker.h

updateSpellingPanelWithGrammarString:detail:

Specifies a grammar-analysis detail to highlight in the Spelling panel.

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```
- (void)updateSpellingPanelWithGrammarString:(NSString *)problemString
    detail:(NSDictionary *)detail
```

Parameters

problemString

Problematic grammatical unit identified by `chechGrammarOfString:startingAt:language:wrap:inSpellingDocumentWithTag:details:` (page 11).

detail

One of the grammar-analysis details provided by `chechGrammarOfString:startingAt:language:wrap:inSpellingDocumentWithTag:details:` (page 11).

Availability
Available in Mac OS X v10.5 and later.

Declared In
`NSSpellChecker.h`

updateSpellingPanelWithMisspelledWord:

Causes the spell checker to update the Spelling panel's misspelled-word field to reflect *word*.

```
- (void)updateSpellingPanelWithMisspelledWord:(NSString *)word
```

Discussion
You are responsible for highlighting *word* in the document and for extracting it from the document using the range returned by the `checkSpelling:...` methods. Pass the empty string as *word* to have the system beep, indicating no misspelled words were found.

Availability
Available in Mac OS X v10.0 and later.

Declared In
`NSSpellChecker.h`

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Document Revision History

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

Date	Notes
2007-04-27	Updated for Mac OS X v10.5.
	Clarified the use of language identifiers in the `language` (page 16) and `setLanguage:` (page 17) methods.
2006-05-23	First publication of this content as a separate document.

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